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THE EARLY IRON AGE CEMETERY AT TORONE

VOLUME 1: TEXT

BY

JOHN K. PAPADOPOULOS

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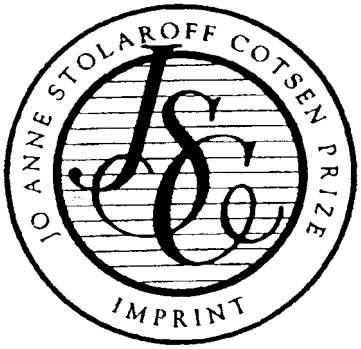
UNIVERSITY OF CALIFORNIA, LOS ANGELES



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The Early Iron Age Cemetery at Torone

Volume 1: Text

COTSEN INSTITUTE OF
ARCHAEOLOGY AT UCLA

The Early Iron Age Cemetery at Torone

Excavations Conducted by the
Australian Archaeological Institute at Athens
in Collaboration with the
Athens Archaeological Society

Volume 1: Text

John K. Papadopoulos

With contributions by
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Sandor Bökönyi †
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Ferenc Gyulai and Kristina Kelertas
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I. K. Whitbread

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University of California, Los Angeles
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for Alexander Cambitoglou

and

in memory of

Olwen Tudor Jones

Contents

PART II. ANALYSIS OF THE MATERIAL 343

Preface

This volume publishes the Early Iron Age cemetery on Terrace V at Torone in Chalkidike in the north Aegean, Greece. The cemetery was first discovered, after a program of trial trenches, in July 1981 and excavated over several seasons through 1984. The excavations at Torone were initiated by the University of Sydney under the auspices of the Athens Archaeological Society and directed by Alexander Cambitoglou. Following the establishment of the Australian Archaeological Institute at Athens in 1981, the excavations at Torone were conducted as a collaboration between the Institute and the Athens Archaeological Society. I was privileged to work at the site for seventeen years in a variety of capacities, first as archivist, then as trench supervisor, and finally as Deputy Director.

The Early Iron Age cemetery at Torone constitutes a significant body of new material. It is important both as a starting point from which to build our knowledge of the internal situation at Torone during this period, and also for the information it has to offer for the broader cultural scene. The cemetery spans roughly the period traditionally defined as Final Mycenaean/Submycenaean down to a time contemporary with Subprotogeometric or Early Geometric in other parts of the Greek world—in absolute terms, it covers a period beginning sometime in the twelfth or eleventh century B.C. down to ca. 850 B.C. This period has also come to be known as the Greek Dark Age (Snodgrass 1971; Desborough 1972), particularly when viewed from the perspective of central and southern Greece. As will emerge, the application of the term "Dark Age" with all its attendant baggage for the cultural and material landscape of central Macedonia, particularly for a coastal site in Chalkidike such as Torone, is inappropriate.

The primary aim of this volume is essentially twofold: to present in detail the archaeological data from the Early Iron Age cemetery at Torone and, from there, attempt to (re)construct a picture of an Early Iron Age society in the north Aegean. Following a general introduction to the site and a more detailed account of the scope of this study, together with the criteria determining the selection and presentation of the data (chapter 1), the text is divided into two parts. Part I is primarily descriptive, presenting in detail the data emerging from the excavation of the cemetery. It includes an account of the excavations (chapter 2) and a catalogue of all tombs and their contents (chapter 3). Part I also presents the organic material from the cemetery, including the physical anthropology of the human remains by Jonathan Musgrave (appendix A), the animal and marine remains found in tombs by Sandor Bökönyi and Deborah Ruscillo (appendices B and C), and the plant remains by Ferenc Gyulai and Kristina Kelertas (appendix D).

Part II seeks to provide an analysis of the material and to draw some implications from it. Up to a certain point, the two parts are independent of one another inasmuch as conclusions reached in part II, many of which are inevitably hypothetical or determined on the basis of current knowledge, are not incorporated into part I. Part II is divided into five chapters, beginning with mortuary practices (chapter 4) and continues with an analysis and typology of the pottery (chapter 5), together with a contribution by Ian Whitbread and Richard Jones, presenting a petrographic and chemical analysis of the ceramics (appendix E). This is followed by the potters' marks (chapter 6), the small finds other than pottery (chapter 7), and, finally, a personal appraisal of Torone in the Early Iron Age and an attempt to see the site within the broader setting of the period based on the material presented in this volume (chapter 8).

Few sites in the north Aegean have had as long and continuous an archaeology and history as Torone. On the basis of our current knowledge, the site was first inhabited in the period of transition from the Neolithic to the Early Bronze Age. The earliest material recovered from the site so far has been assigned to the Final Neolithic period (Cambitoglou and Papadopoulos 1988; 1990; 1991; 1994). The establishment of an Early Bronze Age settlement on the promontory reflects a general

demographic trend at this time of movement of certain groups of people from inland agricultural sites to the coast, or, more accurately, an important shift in subsistence strategies. A similar trend is observed at many sites throughout the Aegean, such as Agios Kosmas in Attika, Kolona on Aigina, Agia Irini on Keos, Pefkakia Magoula in Thessaly, and Beşik Tepe in western Anatolia, to mention only a few. Moreover, the location and physical appearance of such coastal sites are very similar to those of Torone. The outward-looking and maritime character of these settlements played an important role in the economic and social developments of the Aegean in the Bronze Age (Renfrew 1972; Rutter 1993; 2001). In the case of Torone this is highlighted particularly in the Middle and early Late Bronze Ages, which witness growing links with the central and southern Aegean region as well as connections with northwest Anatolia and parts of coastal and inland Macedonia. Prior to the excavations at Torone, the earliest evidence of contact with the Mycenaean world in Macedonia was during the Late Helladic III A2/B1 phase. The discovery of imported Minyan and Early Mycenaean pottery dating to Late Helladic I and II at Torone (Cambitoglou and Papadopoulos 1993) adds a new dimension to the cultural contacts the north Aegean enjoyed at this time, predating the so-called era of colonization by almost a millennium.

The outward-looking and maritime character of the prehistoric settlement at Torone was to define the cultural and historical trajectory of the site throughout its subsequent history. The continuity of occupation from the Bronze Age into the Early Iron Age at Torone—witnessed not only by the Terrace V cemetery but also through the material recovered from the more recent excavations at the contemporary settlement at Torone—and its subsequent establishment as one of the largest and richest cities of Chalkidike in the historic era is a pattern shared by few other sites in northern Greece. The site is occupied throughout the Hellenistic and Roman periods, even though the former witnesses a significant contraction in the size of the inhabited area, into the Byzantine and post-Byzantine periods. Torone as a settlement was more or less continuously occupied for at least five thousand years.

The Early Iron Age cemetery that is the focus of this volume represents one of the few burial grounds of this period to have been excavated virtually in its entirety, yielding 134 tombs, of which 118 were cremations and 16 inhumations. It is noteworthy, particularly in the context of many contemporary sites excavated in Greece at the time, that individual tombs, however poorly preserved, were recorded in detail, and that all the direct funerary deposits, including the contents of the ash-urns and particularly those tombs yielding remains of the pyre, were water-sieved, and the retrieved faunal, floral, and human remains subjected to close scrutiny.

As an important "proto-historic" site, Early Iron Age Torone not only formed the immediate backdrop to the creation of the polis—or city-state—of Torone in the ensuing Archaic and Classical periods, it provided the necessary building blocks out of which this polis itself emerged. Consequently, Early Iron Age Torone, like so much of proto-historic Greece, occupies an ambiguous, liminal space between prehistory and history. A particular focus of the final section of this volume is the adoption of an integrated approach to prehistory and history, promoting a more sophisticated use of historical documents. Early Iron Age Torone provides a classic case where archaeology and history cannot be regarded as two separate endeavors. It is my ambition in the following pages to add some archaeological flesh to a formative era of the Aegean—one of growing complexity that continued processes that were already established in the Bronze Age and that led directly to the creation of the Greek city-state—and for a part of the Greek world that until very recently was archaeologically neglected.

Acknowledgments

A version of the present study was submitted in 1987 to the University of Sydney as my doctoral dissertation. It represents work carried out at the Torone excavation base in the 1984, 1985, and 1986 seasons; in the storerooms of the Polygyros museum—where the Torone finds are stored—during the spring and autumn months of 1983, 1984, and 1985; and, subsequently, in the Fisher Library of the University of Sydney, the Royal Library in Stockholm, the libraries of the various foreign schools of archaeology in Athens, and, most recently, the libraries of the University of California, Los Angeles, and the Getty Research Institute.

My foremost thanks must go to two people, and it is meant as no disrespect to the names that follow theirs that this debt outweighs all others. As Director of the Torone Excavations, Alexander Cambitoglou first introduced me to the site, generously entrusted the Early Iron Age material to my care, and has since given freely of his time, wisdom, and energy. I can never separate my first visit to Torone in 1979 from the presence of Olwen Tudor Jones (then Segal), and she remained part of the experience for the seventeen years we worked together in Torone. I cannot list in the limited space available all the things she has done for me—she has helped with duties ranging from the sorting of copious quantities of surface sherd material in search of stray Early Iron Age fragments, to the checking of bibliographical references and discussing the complexities of Greek painted pottery. Most of all I thank her for her constant and unfailing encouragement and support. I only regret that she did not live long enough to see the appearance of this volume.

A special debt of gratitude is owed to my collaborators. The study of the human remains from the cemetery was entrusted to Dr. Jonathan Musgrave, whose expertise has greatly enhanced this study. His analysis of the physical anthropology has shown how much significant information can be derived from the study of cremated remains. The animal bones found in tombs were studied by Sandor Bökönyi, who had read and approved an earlier version of his contribution in the summer of 1994. Following his premature death on Christmas Day 1994, Deborah Ruscillo was invited to read over Bökönyi's contribution and to make a few necessary additions and corrections. Deborah Ruscillo also penned the report on the marine remains and land mollusks from Terrace V, which has added significant information on certain aspects of the funerary ritual, and Ferenc Gyulai and Kristina Kelertas are responsible for the analysis of the plant remains. In 1989, a joint project of petrographic and chemical analysis was initiated with Ian Whitbread, then of the Massachusetts Institute of Technology, and Richard Jones, then Director of the Fitch Laboratory of the British School at Athens. Their contribution, one of the largest and most comprehensive of its type, has added significantly to our knowledge of pottery production in Early Iron Age Torone and has pointed to various potentially fruitful future avenues of enquiry. I am grateful to all of my collaborators for making this a more useful volume than it would otherwise have been, and I apologize to them for the delay in its publication.

Torone has always been a team project and to the many team members, past and present, I owe an enormous debt. The main trench supervisors on Terrace V where the Early Iron Age cemetery was uncovered were Jill Carington Smith, Marian Melnyczek, and I. The meticulous care with which the cemetery was dug and recorded is a tribute to the skill and high standards set by Alexander Cambitoglou and Jill Carington Smith, and I am particularly grateful to Carington Smith for teaching me so much in the field. Chapter 2 relies heavily on the original trench notebooks, which are housed in the Sydney offices of the Australian Archaeological Institute at Athens.

The illustrative material presented in this volume is the work of many hands. The main grid plan was prepared by the late John Harwin, and subsequent site plans incorporating additions and corrections are the work of Anthony Sprent. The trench plans and sections are the work of the excavators and the excavation architects, in successive

seasons, Peter Tonkin, Philip Thalis, Gary Hennessey, and Robyn Williams; many of their original pencil drawings were inked by Tassos Bastas. Concerning pottery, a few of the earlier finds were drawn by Tonkin and Thalis, and some of the later material by Anne Hooton and Robyn Williams. The majority, however, were drawn by Richard Temple and me, mostly working in close cooperation. To Richard Temple I am grateful for a great deal besides his skill with the pen. Drawings of small finds other than pottery are mostly the work of Anne Hooton, who also assisted in the final preparation of the illustrations. The site photography was taken by individual trench supervisors and by the excavation photographers, in successive seasons, Raymond de Berquelle, David Thomson, David Small, and Ellen Comiskey. The object photography is largely the work of Reece Scannell, with whom it has been a privilege and great pleasure to work. Among the many other Toroneans I wish to thank especially Annette Keenan, the Koukouroumas family, Denise Mackenzie, the late Tony Micklem, Stavros Paspalas, John Tidmarsh, and, for his many services and singular company, Alexandros Zapros. The excavation conservator, Patricia Johnston (with the assistance of her staff of conservators in successive seasons), not only oversaw the conservation of the small finds from the cemetery, but also was responsible for water-sieving the contents of the ash-urns of the cremation tombs; the water-sieving of deposits associated with tombs was carried out by two of my former students at the University of Sydney, Beatrice McLoughlin and Helen Nicholson.

I would also like to thank a few friends and colleagues in Los Angeles for assistance in the final preparation of this volume, particularly Patrick Finnerty for some last-minute illustrations, Robert G. Finnerty for the preparation of the map (fig. 1) and the graphic material presented in chapter 5, and Petya Hristova for editorial assistance. The graphic material accompanying chapter 4 is largely the work of Rowan Flad, a UCLA graduate student, whose contribution to illustrating Toronean mortuary practices has been significant.

For permission to work at the Polygyros museum I record my warmest thanks to the late Ioulia Vokotopoulou, then Ephor of Classical and Prehistoric Antiquities for Central Macedonia, and the staff of the Thessaloniki museum, among whom I owe especial thanks to Aikaterina Despoine and Konstantinos Sismanides. At Polygyros the then head-guard, Theodoros Kyrkoudis, and his staff permitted me access to the storerooms throughout the day and assisted in numerous ways. I am sure that Mrs. Kyrkoudis does not know how much I appreciated the afternoon cups of coffee and sweets she so generously offered.

To Ioulia Vokotopoulou I owe a great deal more: among many other things, she placed at my disposal Late Bronze and Early Iron Age finds from a number of Macedonian sites in her care, including the material from Vergina excavated by Manolis Andronikos and Photios Petsas; she generally informed me of developments in the field and always took a keen interest in my work, constantly urging me to publish. Her assistance has always been appreciated and her untimely death in 1995 has left a lacuna in the field that has still not been filled.

Numerous colleagues throughout Greece have graciously shown me material in their care, including much that is unpublished, and/or discussed various issues connected with this study. In this respect I am particularly grateful to, in addition to those already named, Angelike Andreiomenou, Stelios Andreou, the late Manolis Andronikos, Ioannis Aslanis, Francine Blondé, Nancy Bookides, Hector Catling, Richard Catling, Nicolas Coldstream, the late William Coulson, Angelika Douzougli, Ernestine Elster, Michalis Fotiadis, Walter Gauss, Dick Green, Robin Hägg, Bernard Hänsel, Alan Johnston, Ursula Knigge, Kostas Kotsakis, Chaïdo Koukouli-Chrysanthaki, Nota Kourou, Vassileios Lambrinoudakis, Susan Langdon, Irene Lemos, Claire Lyons, Lila Marangou, Wolfgang Mayr, Catherine Morgan, Ian Morris, Penelope Mountjoy, Kees Neeft, Marianna Nikolaïdou, Andreas Nitsche, Mehmet Özdogan, Jacques Perreault, the late Photios Petsas, Christopher Pfaff, the late Mervyn Popham, Bodil Bungaard Rasmussen, the late Martin Robertson, Axel Rügler, Florian Ruppenstein, Jeremy Rutter, Ewa Samuelsson, Kenneth Sheedy, Maria Sipsie-Eschbach, the late Evelyn Smithson, Carl-Gustav Styrenius, Petros Themelis, Michalis Tiverios, Ken Wardle, Berit Wells, Charles Williams II, Konstantinos Zachos, and Io Zervoudaki.

There are some final debts of gratitude. My four years as a graduate student working on Early Iron Age Torone were made possible by a University of Sydney Special Projects PhD Grant, which I held from 1983 to 1986. I am particularly grateful to Merrillee Robb for bringing this grant to the attention of those who needed to know and for helping out so many stray graduate students. As examiners of the original dissertation, Jean-Paul Descoeudres, Robin Hägg, and Anthony Snodgrass made useful suggestions that have greatly improved the current volume. The errors that remain are my own doing. My parents, Anna and Jack, quietly supported and assisted me in every way possible, and my wife, Sarah Morris, in addition to reading various chapters of this study, has graciously endured living with this volume for too long. My final debt of gratitude I owe to Martin Robertson for introducing me to "ugly sausages" while visiting Torone and for pointing out the color of olive set against the blue of the Toronean Gulf.

Abbreviations

D	diameter
est.	estimated
ext.	extension
g	gram
H	height/high
HM	handmade
PD	preserved diameter
PH	preserved height
PL	preserved length
PW	preserved width
fr./frr.	fragment/s
kg	kilogram
KP	kiln pot
L	long/length
m	meter
max.	maximum
min.	minimum
mm	millimeter
no.	number
n./nn.	note/s
N/R	not recoverable
S.F.	special find
TH	thick/thickness
TR	trench
W	width/wide
WM	wheelmade
WT	weight

Tables

Illustrations

Graphs (Volume 1)

Figures (in Volume 2)

PLATES (IN VOLUME 2)

Part I
The Material

1
Introduction

Prologue: With Thucydides in hand

In the early 1920s a young Benjamin Meritt visited Chalkidike (**figs. 1–3**) in order to identify several important Chalkidian cities mentioned by Thucydides in his account of the Peloponnesian War. The results were published in the short article "Scione, Mende and Torone" (Meritt 1923). Having identified the ancient cities of Mende and Skione, and having photographed and sketched maps of both, Meritt sailed from Pallene toward Sithonia across the Toronean Gulf. The passage, on January 4, 1922—eight months before the Asia Minor crisis (Llewellyn Smith 1973), that was to alter the demography of Chalkidike—was described as rough, and the fishermen with whom Meritt sailed were forced to spend half an hour making a safe approach (Meritt 1923:453, n. 4). Following in the path of Colonel William Leake (1835:119), who had visited the region almost a century earlier, Meritt first distinguished the landlocked harbor near the southern end of Sithonia as the *kophos limen* of the ancients: "The name *kophos* is preserved by the little collection of houses on the edge of the bay, which constitute one of the many 'kalyvia' of Sykia. They are used largely for summer residence" (Meritt 1923:453–454).

As to the location of Torone, he noted there was more uncertainty and "an especial divergence of opinion" (Meritt 1923:451, 454). In his attempt to identify the site of the ancient city (see below), Meritt (1923:452, fig. 5) sketched a map of Torone and its vicinity that is remarkable for its accuracy (**fig. 4**). He went on to note: "There is marked on the sketch map the group of houses that are usually called *kalyvia*, and sometimes Τορῶνι, but there is no fixed habitation and the place is usually deserted in winter" (Meritt 1923:459).

Having arrived in the dead of winter, Meritt not only inadvertently recorded certain aspects of a way of life in this part of southern Sithonia in the early twentieth century, he followed in the tradition of all the early travelers who preceded him, as did most who subsequently visited the place. He approached the site of Torone from the particular perspective of the fifth-century B.C. Athenian historian Thucydides, following a vision of a literary topos much more alive in Meritt's time than the blatant physicality of the place, the latter all but lost to the western world in the early twentieth century (cf. Papadopoulos 1999). The archaeology of Torone has been largely determined and defined by the ancient literary sources, particularly Thucydides' account of the battle fought there between the Athenians and Spartans in 424/3 B.C. and in the summer of 422. It is appropriate to begin with the Torone of Thucydides, as Torone without Thucydides would have been just another archaeological site. It is unclear whether Thucydides actually visited Torone, but other travelers have described and mapped cities and entire landscapes without firsthand knowledge (Harvey 2000), and the great Colonel Leake himself correctly identified Torone without getting off his boat.

The archaeological site of Torone

The Classical city of Torone was located on a spectacular cape (**figs. 5–7**; **pls. 1–4**) near the southern tip of Sithonia (**pls. 5–6**), on the west coast and immediately to the north of modern-day Porto Koupho (the *kophos limen* of the ancients: Thuc. 5.2.2; Zenobios 4.68; Leake 1835:119), near the modern hamlet known today as Torone. Described by its name as the hollow or deaf—and hence the hidden or secret—harbor, Kophos offers an excellent retreat in time of

storm and provides one of the few all-weather anchorages along the entire Macedonian coastline (Livy 45.30.4; Meritt 1923:453–454; Bérard 1960:85; Oberhummer 1937:1795–1796) (**pls. 6–8**). As Meritt showed, few scholars and travelers had ventured into this part of Macedonia in the course of the nineteenth and early twentieth centuries, and among the handful that did there was some uncertainty as to the location of the site. Two alternatives prevailed: the first, proposed by Leake (1835:155) and followed by Kinch (1894:147; also 1893) and Demitsas (1896:616; also 1870), placed the ancient city of Torone near the modern settlement of the same name. The modern settlement at that time, although known as Torone, was usually referred to as Kalyvia ("huts"), being one of the many summer hamlets used by the villagers of Sykia (Meritt 1923:454; Oberhummer 1937:1797).[1] The second alternative, put forward by Struck (1907:62), and which earlier appeared in Kiepert (1894: map XVI), placed the site near the Bay of Vathy some 10 kilometers due north. It is worth elaborating that the site of Torone was something of a moving target on Kiepert's maps. On the detailed map XVI the site is placed too far north. On map X, which shows the entire Mediterranean and Black Seas as well as all Europe and England, Torone is correctly located; on map XVII the site is placed more-or-less halfway between where it was shown on maps X and XVI. This ambivalence with regard to the precise location of Torone continues to this day, and many modern authors have misplaced Torone on their maps (e.g., Lemos 2002:208, map 4). It should be noted, however, that of the early travelers only Kinch and Demitsas appear to have actually walked over the site of Torone-near-Kophos. Neither Kinch nor Demitsas photographed the site, nor did they attempt to render any image of it.

In any case, by 1923 Meritt (1923:453–460) had established the location of Torone at the site first proposed by Leake. As already stated, Meritt's guide was Thucydides, and his method was to compare Thucydides' account with a careful survey of the region as it was in January 1922. In several passages Thucydides provides a wealth of information on the topography of the ancient city in the later fifth century B.C. (Thuc. 4.110–116; 5.2–3). In addition to his topographical notes on Torone, Meritt published the first photographs of the site. These included two views, from the south and NE (Meritt 1923:455–456, figs. 7, 8), as well as a detail of stone masonry in situ, which Meritt (1923:457, fig. 9) took to be the remains of the Dioskoureion mentioned by Thucydides. Perhaps the most haunting of all his photographs was the one Meritt (1923:458, fig. 10) chose as his final illustration. Taken from the acropolis of Torone, the image shows Promontory 1 in the center and a vista of the Classical city all round.

Although the location of the Classical site of Torone was established in 1923, it was not until 1939 that the existence of a prehistoric settlement on Promontory 1 was first reported by Kotzias on the evidence of surface pottery (Makaronas 1940:493; Walter 1940:278–282; Dunbabin 1944: 93). Despite this potentially significant evidence, Torone, like coastal Chalkidike in general, failed to stir the interest of Aegean prehistorians. Part of the problem was the inaccessibility of the site, though an equally influential factor was cultural (see pp. 7–12). The earliest formal excavations conducted at Torone were initiated in the early 1970s at the site of the Late Roman and Byzantine basilica of Agios Athanasios, immediately to the north of the ancient settlement area, by the Byzantine Ephoreia of Chalkidike under the direction of Nikonanos (1973–1974:770–771, 776). Among the earliest and largest of the excavated early Christian churches of Chalkidike, the basilica added a further important chronological dimension to the site.

The site of Torone consists of a series of four small promontories (**figs. 5–6**; **pls. 1–2**)—of which only Promontory 1 (the Lekythos) (**pls. 9–13**) and Promontory 2 bear conspicuous evidence on the surface of ancient occupation—as well as several hills. The name Lekythos appears in Thucydides (4.113; see further Gomme 1956:590–591) and must refer to the Greek word for an oil flask or bottle, which the promontory presumably resembled. The promontory is today referred to locally as *kastro* (or *to kastro*, less commonly *kastella*). The highest hill, Hill 1, 225 m above sea level and known locally as Vigla, commands an impressive view on all sides, particularly of all approaches by land or by sea (**pls. 2–4**, **6–7**). To the south of Hill 1 the ground slopes sharply down to the entrance of Kophos, while to the west the upper part of the hill presents a near vertical cliff face. To the north

the gradient, though steep, is rather more gentle down to Hills 2 and 3, and from there, in a westerly direction, down to the sea. Hill 1, with its advantages of height and terrain, was the fortified acropolis of the Early Hellenistic defense system. It replaced the earlier *anotato phylakterion* referred to by Thucydides (4.110.2), which Meritt (1923: 456; cf. Cambitoglou 1978:80–84) first equated with the summit of Hill 2 in the early 1920s. Rising to a height of 89.52 m above sea level, Hill 2 is today referred to locally as Anemomylos (windmill) (**figs. 5–6**; **pl. 9**). Hill 3, 29.0 m above sea level and today known locally as Asmanis, is perhaps to be equated with Thucydides' (5.2.4) *proasteion*, or else it lies near to the area where the suburbs of the city may have been in the fifth century B.C. (Meritt 1923).

In the area between Hills 1, 2, and 3 is a low saddle, which provides the only natural route between Torone and the harbor of Kophos. It would appear, however, judging from Thucydides' account and its proximity to the ancient settlement area, that the main harbor of Torone during the Classical period was the small sandy cove immediately to the north and east of Promontory 1, used today by local fishermen (**pl. 11**). Gomme (1956: 631) rightly points out that the passage in Thucydides (5.2.2) does not refer to Kophos as the "city harbor" but as "belonging to Torone" and within its territory. To the north of the site and beyond the small knoll known as *tis kalogrias to aloni*, and the adjacent valley known as Perdikosykia, stretches flat ground on which the modern village is located (**pls. 9**, **14**). This small fertile plain, once watered by a small creek, would have served as part of the agricultural area of the ancient settlement, as it does today.[2] Prior to the installation of town water in 1986, modern drinking water was obtained principally from wells, as much of it also seems to have been in antiquity, supplemented by water gathered in cisterns; there is no natural water supply within the area of the fortified ancient city.[3] Perdikosykia, the smaller stretch of flat ground immediately to the north of the ancient city, is the site of the Basilica of Agios Athanasios.

The most conspicuous ruins on the site today are the late fortifications on Promontory 1, which date to the Byzantine and post-Byzantine periods, and the many contemporary remains of buildings enclosed therein (**fig. 7**; **pls. 10–12**).[4] An evocative illustration from the seventeenth century of the Promontory 1 fortifications with associated buildings extending outside the walls and onto the Isthmus area, in is provided by Vincenzo Coronelli (**fig. 8**).[5] Much of the late circuit enclosing Promontory 1 was built of blocks reused from the earlier Archaic/Classical and Early Hellenistic fortifications. The preponderance of large granodiorite blocks reused in the late encircling wall suggests that most of the stone was taken from the nearby Wall **C** of the Archaic/Classical fortification system. Providing a ready and comparatively accessible source of worked granodiorite and limestone blocks, the ancient fortification systems, and any other monuments that may have existed above ground level were systematically dismantled and the stone (and subsequent lime) used in the construction of roads in Thessaloniki and Istanbul sometime toward the end of the nineteenth century (Cambitoglou 1975:106; Papangelos 1981: 157–160). The many limekilns scattered all over the site provide a constant reminder of this irreparable damage. The one substantial inscription on stone from Torone was itself recovered from a limekiln in 1964 (Thessaloniki Museum inv. 4396; *SEG* XXIV:574; Karamanole-Siganidou 1966:151–157, pl. 54). It should also be noted that the ancient blocks were continually used by the local Toroneans well into the 1970s, the granodiorite primarily for construction of houses, whereas the limestone was largely melted down.

The dismantling of the ancient fortification systems and the dense undergrowth covering most of the site in 1975 meant that very little of the lines of the ancient city walls was visible above the surface. Clearance of the undergrowth was begun in 1975 in order to define the ancient city boundaries, and the task proved particularly laborious given the extent of the fortifications (Cambitoglou 1975:111–115; Cambitoglou, Papadopoulos, and Tudor Jones 2001:65–88). The siting of the trenches in the later part of the first season was largely dictated by surface observation of the wall lines. Despite the poorly preserved state of the ancient fortification systems, enough evidence was preserved to warrant the dating of the various walls to either the Archaic/Classical period or the Early Hellenistic system. More recent geophysical fieldwork during the 1993

and 1994 seasons in the vicinity of the Isthmus has brought to light sufficient evidence for the existence of even earlier walls across the neck of the Isthmus. Remnants of one better preserved and one partially collapsed wall are visible in the eroded scarps on both the north and south sides of the Isthmus, with the possibility of even more walls. The continuation of both walls running NE–SW across the middle of the Isthmus was verified by a variety of geophysical techniques (Papadopoulos et al. 1999). Both walls were built almost exclusively of schist in dry-rubble technique, with only a very minor admixture of other types of stone, whereas the later fortification walls were built of granodiorite or limestone. Although it is clear that both walls are overlaid by the continuation of the Archaic/Classical Wall C, their date cannot be determined more precisely than pre-Archaic/Classical until excavations are conducted in the area.

A full account of the various fortification systems is presented in *Torone I* (Cambitoglou, Papadopoulos, and Tudor Jones 2001). The earlier Archaic/Classical fortification system (consisting of Walls A, B, and C) defines a roughly triangular city plan **(figs. 5–7)**. Hill 2 is of focal importance as an upper stronghold from which Walls A and B descend. This enceinte incorporated Promontories 1 and 2 and the entire terraced north slope of Hill 2 and must represent the basic lines of the city walls referred to by Thucydides. It is on one of the lower terraces of Hill 2 that the Early Iron Age cemetery was located, and the prominent position of this terrace in relationship to the Early Iron Age settlement on Promontory 1 (**pl. 13**) is discussed in chapter 4.

Any ancient fortification system on Promontory 1 is now completely obscured by the later Byzantine and post-Byzantine remains. The same visible remains largely explain the partial destruction of the Early Iron Age settlement. It is clear from Thucydides' account, however, that apart from a defensive line across the neck of Promontory 1, it is unlikely there was ever an encircling wall around the promontory in the Classical period. On the analogy of the Early Iron Age promontory settlement at Zagora, a fortification wall across the isthmus would have sufficed (Cambitoglou et al. 1981:23–34). Thucydides (4.113.2) describes Lekythos as a fort, projecting into the sea and connected to the mainland by a narrow isthmus. His description clearly underlines the importance of the promontory in terms of defense and security. Whereas by the Archaic and Classical periods it was located at the extremity of the city, in the Early Iron Age it was the defensible center of the settlement. In relating the battle between the Athenians and Spartans, Thucydides (4.115.2) refers to the Athenian defenses of Lekythos, which consisted of a poorly constructed wall and buildings with wooden parapets. This evidence would suggest that by the fifth century B.C., any earlier—prehistoric or Early Iron Age—fortifications across the neck of the Isthmus were no longer visible, or else that the prehistoric wall across the neck of the Isthmus (Papadopoulos et al. 1999) was, in fact, the poorly constructed fortifications that Thucydides mentions. Thucydides (4.116.2) also refers to a Temple of Athena on Lekythos, now shown to have been a Doric temple built in the sixth century B.C. (Cambitoglou and Papadopoulos 1994). The other temple mentioned by Thucydides, the Dioskoureion, is said to be at a distance of three stades from the city.[6]

A comparison of the extant remains of the earlier fortification system accords well with the topographical details provided by Thucydides in his account of the Spartan assault on the city in the winter of 424/3 B.C. and the Athenian recapture in 422. On the basis of this evidence it is clear that the basic lines of Walls A, B, and C must have been built before the attack of 424/3, and the fact that Thucydides notes that part of the wall was in the process of being rebuilt may imply that the walls stood for some time prior to the Spartan and Athenian assaults. However, the question of when the system was first built remains for the time being a matter of speculation. The Early Hellenistic fortification system that replaced the earlier fortifications was built almost exclusively of limestone quarried locally and, wherever preserved, in a fairly consistent masonry technique. Several kilometers in circumference, this fortification system comprises Walls H, K1–K3, P, O, N1–N2, l, and the Hill 1 circuit (**fig. 5**). A full description of this system, together with dating evidence for its construction, is presented in *Torone I* (Cambitoglou, Papadopoulos, and Tudor Jones 2001:76–88; for a summary see Cambitoglou 2002). This massive

fortification system, which encompasses much of the landscape beyond the immediate area of the settlement, may have caused the destruction of substantial earlier remains.

The literary and epigraphical testimonia referring to Torone have been collected in summary form by Oberhummer (1937), while the history of the city in the Classical period and its role in the Chalkidic League have been noted by a number of able commentators (West 1914; 1918; Hampl 1935a; 1935b; Kahrstedt 1936; Oberhummer 1937; Salvo 1968; Zahrnt 1971; Cambitoglou 1975:103–111; Cambitoglou and Papadopoulos 1988), and a more general overview of the history of the city is presented in the introduction to *Torone 1* (Cambitoglou, Papadopoulos, and Tudor Jones 2001:37–65). Perhaps the most salient characteristics of the site reflected in the literary sources are its comparative wealth and its strategic position towards the southern tip of Sithonia, coupled with its fine harbor. For any north- or south-bound ships hugging the Thrakian coastline, Torone offers one of the most conspicuous anchorages, as both Leake and Meritt discovered, and is ideally situated with regard to the potentially hazardous circumnavigation of the southern tip of Akte (**pl. 5**). It was here, in 492 B.C., that Darius's fleet was wrecked by the storm vividly related by Herodotos (6.44), an event that led to Xerxes' decision to cut a canal through the neck of the peninsula in 483–481 B.C. in order to avoid the passage round Mount Athos (Papadopoulos 1989b:78–81). But more than a safe anchorage, Torone offers a spectacular vista. On a clear day the entire Toronean Gulf and the peninsula of Pallene are in clear view; Mount Olympos may sometimes be seen behind Pallene, while from Hill 1 the summit of Mount Athos can be seen rising above the Sithonian hills to the east of Torone. Mount Ossa, on the border between Thessaly and Macedonia can also be seen when Olympos is visible, as can Pelion. On a particularly clear day it is possible to see as far as the north Sporades.

The geographical setting of Torone with regard to the Aegean, and to the Mediterranean and Black Seas beyond, is of critical importance when considering the significance of the site during various periods. In this, Torone differs from many Macedonian settlements that often were situated with greater regard to available land and inland communications than to the sea (Boardman 1980:230). The strategic importance of Torone continues into later periods (Cambitoglou, Papadopoulos, and Tudor Jones 2001).

PREHISTORIC AND CLASSICAL CHALKIDIKE IN MODERN SCHOLARSHIP: THE CHOICE OF SITE AND THE ARCHAEOLOGICAL PROBLEM

Although the discoveries of Meritt and Kotzias indicated that Torone was one of the longest occupied settlements in Macedonia, the site, like Chalkidike in general, was overlooked by both Aegean prehistorians and Classical archaeologists. This scholarly neglect of Sithonia, Pallene, and Akte has been a feature of the archaeology of Macedonia in terms of both Classical archaeology and Aegean prehistory. Although many sites in mainland Chalkidike were explored, especially at the head of the Toronean Gulf in the vicinity of Olynthos, and some excavated by Heurtley and later published in *Prehistoric Macedonia* (1939), the sites were exclusively in mainland Chalkidike. It has to be stressed that the majority of sites investigated by Heurtley, and even earlier by Wace (1913–1914; Wace and Thompson 1909:159–164), were inland mound settlements situated with regard to available arable land and inland communications. Indeed, prehistorians have concentrated on the rich agricultural plains of Macedonia, well watered by rivers such as the Axios, Strymon, Gallikos, Haliakmon, and Nestos. These rivers, particularly the Axios (Vardar) and Strymon (Struma), providing both irrigation and a natural means of communication, have been seen as the bridge between the Aegean and southern Greece on the one hand and the Balkans and the Danube valley on the other (Wardle 1988b:30), although some scholars have cogently questioned the "logic of the river" (Fotiadis 2001:124–129).

At about the same time (1920s–1930s), the excavations at the Classical city of Olynthos under the direction of Robinson were well under way (published as *Excavations at Olynthus I–XIV* [1929–1952]: Mylonas 1929; D. Robinson 1930; 1931a; 1931b; 1933a; 1933b; 1933c; 1941; 1942; 1946; 1950; 1952;

Robinson and Clement 1938; Robinson and Graham 1938). Despite this activity, the peninsulas of Chalkidike drew a blank as far as ancient settlements were concerned (Heurtley 1939:xxii–xxiii, sites C1–C9). In 1972 not a single site appeared on any of the three "fingers" of Chalkidike in Hammond's standard textbook on Macedonia (1972: 236–237, 278–279, 324–325, maps 20–22):

> The Greek cities of the peninsulas of Chalcidice were remote from Macedonia. They lived in the world of seafaring, which was entirely alien to the land-loving Macedonians; they had a culture and a political form which stemmed from an entirely different background; and they were familiar with the sophisticated kind of capitalism, which was unknown to the Macedonians until Philip and Alexander led them into a wider world. (Hammond 1972:192)

Four years later, and for reasons never explicitly stated, Chalkidic Torone was completely overlooked in the *Princeton Encyclopedia of Classical Sites* (Stillwell 1976).[7] Moreover, Macedonia and Thrake were not included in Hope Simpson's and Dickinson's (1979) gazetteer of sites in the Bronze Age, for reasons outlined in their introduction. Despite the fact that there were no systematic excavations in peninsular Chalkidike, the region came to be regarded as peripheral to the Aegean Bronze Age. The fact that Torone has now yielded the earliest Mycenaean pottery outside the Peloponnese has not altered this situation (Cambitoglou and Papadopoulos 1993; Graziadio 1998; Vagnetti 1999).

In many ways the three peninsulas of Chalkidike represent, archaeologically, the most neglected part of a region—Macedonia—that already in the early twentieth century occupied a peculiar place in the consciousness of prehistorians (Fotiadis 2001). As Andreou, Fotiadis, and Kotsakis (1996:560) put it: "[Macedonia] was discussed in terms of what it had *not* been as often as in terms of what it was, in terms of deficiency as much as in terms of importance. It was considered, for example, a key province for the study of European prehistory, but also (especially its western part) a backward area in itself, with 'a native tendency to isolation.'" Walter Heurtley finished his general overview of prehistoric Macedonia with the following:

> Thus the cultural level of Macedonia was evidently never very high. We get the impression of a race of stolid peasants, largely self-contained and with a tendency to prefer isolation, permitting but not encouraging the exploitation of their forests by the enterprising Southerners, and unconsciously beginning to fulfill their traditional role of a screen between Hellenism and barbarism. The screen has been sometimes pierced, but the role has invariably been resumed. At the present time the Macedonia with which we are concerned has recovered its true orientation and forms once more a part of the Greek world." (Heurtley 1939: 132)

Andreou, Fotiadis, and Kotsakis (1996:561) discuss the vision of Macedonia's "otherness" as taking form in the context of the late nineteenth- and early twentieth-century quests for identity—for nations, races, and their origins, phenomena driven by the geopolitical concerns of the era—a legacy that continues to exert its influence on the present. The scholarly neglect of the region is not limited, however, to its archaeology. Anthropologists have been reluctant to study the modern communities of Chalkidike, an area of modern Greece relatively removed and isolated from the social, economic, and political influences of Athens and Thessaloniki, at least into the early 1970s, and especially the comparatively more remote regions such as Sithonia. As Andreou, Fotiadis, and Kotsakis (1996:562) remark, the first chair of prehistory at the University of Thessaloniki was created in 1964, but was occupied by a Minoan archaeologist. It was only in the mid-1970s and later that courses in the prehistory of northern Greece were regularly offered as part of the curriculum. As far as I know, no course on the (post–early hominid) anthropology of Chalkidike has ever been taught, but this is hardly surprising given the weak link between archaeology and sociocultural anthropology in Greece, an issue effectively explored by Herzfeld (1987:1), who notes the "curious silence" that "enfolds the connection between modern Greek culture and the practice of anthropology."

On the positive side, the fundamental archaeological site survey of Chalkidike remains that of French (1967), readily available but never published, except for brief summaries (French 1966; also 1964, 1973). As part of a larger survey project, French visited Torone in 1965 with the late Bakalakis. Focusing only on Promontory 1, he collected and catalogued sixty-one surface sherds now in the Collection of the University of Thessaloniki. A number of these sherds were assigned by French to the Early, Middle, and Late phases of the Bronze Age, others to the Geometric through Hellenistic periods, and the group as a whole also included "medieval" glazed and plain wares (French 1967:35–66). Few of the other sites in central Macedonia visited by French yielded such a varied and chronologically continuous collection of surface pottery. Following French, a milestone in the history of scholarship on the Chalkidike was the publication of Zahrnt's (1971) *Olynth und die Chalkidier*, which filled a vast lacuna (see also Flensted-Jensen 1998). Zahrnt brought together in detail the literary testimonia for Chalkidic settlements in the Archaic and Classical periods, and he also suggested the location of a number of cities, including those of Akte, hitherto known only from our ancient sources (Zahrnt 1971; Bürchner 1899:2069–2076 is still useful). There are also the more recent entries by Zahrnt on the cities of the Chalkidike in the *Lexicon der historischen Stätten von den Anfängen bis zur Gegenwart* (Lauffer 1989), and this lead was followed in the third edition of the *Oxford Classical Dictionary* (Hornblower and Spawforth 1996). Both of these volumes are, however, primarily concerned with the Classical cities of Chalkidike and the philological evidence for them. Most recently the prehistory of Sithonia has been put on a firmer footing with the appearance of Smagas's (2000) overview of sites on the peninsula.

Since the 1970s there has been increased activity in the archaeology of Macedonia generally, with much of the popular interest sparked by the rich finds of the so-called royal tombs at Vergina (Andronikos 1977b:5–53; 1987; Andronikos et al. 1988) and, more recently, the graves of the Archaic and Classical cemetery at Sindos (Vokotopoulou et al. 1985; Moschonissiotou 1988) and elsewhere.[8] The political prominence of the "Macedonian issue" (Danforth 1995) has fueled archaeological activity, particularly at the larger sites connected with Philip II and Alexander the Great, such as Vergina, Pella, and Dion, and has radically altered the archaeological landscape of the north Aegean. This has given rise in certain quarters to a "nationalist archaeology," closely linked to nationalist history, not only in Greece but also in many of its neighbors (Hamilakis and Yalouri 1996). Such an archaeology has been used to bolster pride, morale, and even political aspirations. As Trigger (1989:174) noted: "Nationalist archaeology tends to emphasize the more recent past rather than the Paleolithic period and draws attention to the political and cultural achievements of indigenous ancient civilizations." For Greek Macedonia and the Former Yugoslav Republic of Macedonia, the focus has been on the achievements of Philip II and especially Alexander the Great, and the symbol for which is the "Macedonian star" (K. Brown 1994).

Despite the recent focus on the Classical and Hellenistic eras, earlier periods have also received attention, and it should be noted that many of the methodologically rigorous excavations in the north Aegean were initiated before the Macedonian issue gained any prominence. For the Bronze and Early Iron Ages, significant advances have been made with the excavations at Vergina by the late Andronikos and others (Petsas 1961–62a; Andronikos 1969; Radt 1974; Andronikos et al. 1990); at Kastanas by Hänsel (1979a; 1979b; 1989; Hochstetter 1984; 1987) and, more recently, at Agios Mamas; and at Assiros Toumba by Wardle (1980; 1983; 1987; 1988a; 1989). Earlier periods, particularly the Neolithic (for an overview see Grammenos 1991; see also Ridley and Wardle 1979; Wardle 1980:230, nn. 13–14; Treuil 1983), have come into clearer focus with the results of the excavations at Nea Nikomedeia (Rodden 1962; 1964; 1965; Rodden and Wardle 1996), Sitagroi (Renfrew, Gimbutas, and Elster 1986; Elster and Renfrew 2003), and Dikili Tash (increasingly referred to by its Hellenized named, Dikelia, or even subsumed under the name of Philippi: see especially Deshayes 1970; 1973; Seferiadis 1983; Koukouli-Chrysanthaki, Treuil, and Malamidou 1996; Petrakos 1997:72–74 [for the name]), and the earlier Bronze Age is well treated in a number of overviews (Theocharis 1971; Grammenos 1975; 1982; Grammenos and Fotiadis 1980;

Treuil 1983; Aslanis 1985). Even earlier, the discovery of a skull of Neanderthal type in 1960 at Petralona Cave in mainland Chalkidike, where excavations were carried out in 1965–1968 and 1975, has pushed back our knowledge of the prehistory of Greece to an even more remote past (for references see Poulianos 1971; 1975). For the Bronze Age, and especially for the Classical and later periods, a vast body of material has accrued both from systematic excavations by the Greek Archaeological Service, members of the Athens Archaeological Society, and a number of foreign schools in Athens, as well as from small scale excavations and rescue digs carried out by members of the Archaeological Service, often working under difficult conditions. The greater part of this substantial body of material remains unpublished or has appeared only in preliminary reports,[9] and one would like to think that the next few decades will see the careful analysis and publication of this work. The most recent review and synthesis of the prehistory of northern Greece by Andreou, Fotiadis, and Kotsakis (1996; 2001) provides a thorough overview for the Neolithic and Bronze Ages of the region. Andreou and Kotsakis also have directed the excavations at Toumba Thessalonikis (also known as Toumba Kalamaria, or simply Toumba), an important mound site with deposits from the Early Bronze Age through the fourth century B.C. (for full references see Andreou, Fotiadis, and Kotsakis 1996:581–582, n. 323; Andreou and Kotsakis 1996).

Despite this recent archaeological activity in Macedonia, progress in Chalkidike has been comparatively slow. Although a number of sites, primarily of Classical and later date, have been explored in mainland Chalkidike since the days of Heurtley and Robinson,[10] the peninsulas continue to lag behind. Exceptions to this rule are the excavations at the Temple of Ammon Zeus and its immediate surroundings at Aphytis (Petsas 1969b:312; 1970:354–361; Gioure 1971; Michaud 1972:730–736; Misaelidou-Despotidou 1979:70–84), as well as the most recent work at Mende (and Poseidi), Polychrono, Sane, and, to a lesser extent, Poteidaia.[11] In all these cases, however, excavations were initiated as a result of tourism in the region, not as part of any preconceived research design. The excavations at Aphytis were to a large extent necessitated by the construction of the resort hotel on the site, which was named after the temple. Similarly, the excavations at Mende, Polychrono, and Sane were in part necessitated by recent construction work for resorts and holiday houses. Much of the tourist demand and exploitation of Chalkidike is the result of a more affluent modern Greek society, and especially an increase in foreign tourism, particularly from members of the European Union and the former eastern block. It should be noted that at many sites in Chalkidike surface survey is either no longer possible, or the area of the site or region greatly diminished as a result of the recent boom in construction and development. The exception is the peninsula of Akte (Mount Athos), one of the few coastal regions of the Mediterranean not to have been destroyed by modern overbuilding.

Most recently, a huge area of southern Sithonia at Kriaritsi near Sykia, incorporating some 550,000 square meters, was systematically laid bare for a new development of holiday houses (Asouchidou, Mantazi, and Tsolakis 1998:269, 282, fig. 1). This region represented pristine land that was difficult of access and had never been systematically explored archaeologically. The original "landscaping" project, which began in April 1997, involved the partial destruction of three archaeological sites. Subsequent archaeological fieldwork, initiated as a result of a report by the Syllogos Prostasias Perivallontos kai Poiotetas Zoes Sithonias (Society to Protect the Natural Environment and Quality of Life of Sithonia) showed that an additional twelve sites were located in the area under construction. The sites included a number of Classical farm houses as well as a large round tower and an Early Bronze Age funerary mound, the first of its type uncovered in Sithonia (Asouchidou, Mantazi, and Tsolakis 1998; Asouchidou 2001). The systematic destruction of this hitherto unspoiled corner of coastal Sithonia is symptomatic of the archaeology of Chalkidike since the 1970s.

Only four sites—Poseidi, Polychrono, Agios Mamas, Torone—of the Neolithic and/or Bronze Age periods are listed by Andreou, Fotiadis, and Kotsakis (1996:563, fig. 2) for peninsular Chalkidike, in contrast to numerous contemporary sites in eastern, central, and western Macedonia, as well as Thrake. Torone is included on the basis of small quantities of Final Neolithic pottery, although substantial quantities of earlier and later Bronze Age material have also been found. In the 1960s French listed the site under the old schoolhouse at

Sykia as a large Neolithic settlement, but this has never been confirmed by excavation. In addition to Torone, the only other full-scale excavations at a site in Sithonia have been those on the hill of Koukos, adjacent to the village of Sykia, initiated in the late 1980s by Carington Smith and Vokotopoulou (1988; 1989; 1990; 1992; Carington Smith 1991). The site, dating to the Early Iron Age, is located approximately five kilometers NE of Torone. As fieldwork at Koukos is still ongoing and the material in the process of being studied, it has not been possible to draw on it in any significant way, except for what has already appeared in preliminary reports. It is clear, nevertheless, that by the Classical period the area around modern Sykia was part of the greater *chora* of Torone (Zahrnt 1971:136–137, map 5). Indeed, it is highly likely that Koukos and Torone enjoyed a close relationship in the Early Iron Age, particularly in the production and exploitation of metals (**fig. 3**). In addition to Koukos, an ancient cemetery in use from the Early Iron Age into the Archaic period was uncovered at the site of Agios Yiannis, near modern Nikiti, in NW Sithonia (Trakosopoulou-Salakidou 1988), and there is the new material from Kriaritsi already noted (Asouchidou, Mantazi, and Tsolakis 1998).

Not only does the site of Torone lie in a region that until recently has been neglected by archaeologists, and even more so by anthropologists, but the Early Iron Age remains a period of study that lies in that liminal place between Aegean prehistory and Classical archaeology (I. Morris 1997; 2000:77–106).

It is against such a historical/archaeological background that the excavations at Torone should be viewed. Various factors combined in the choice of site, quite apart from its availability at the time:[12] there was the lack of any significant archaeological fieldwork in Sithonia, coupled with the physical character and setting of the site, so different from Olynthos and the many mounds in mainland Chalkidike. Foremost, however, was the ancient literary tradition, principally Thucydides, which has Torone not only as the earliest and most important of the Greek settlements in the region during the era of colonization, but also as one of the largest and richest cities of Chalkidike during the fifth century B.C. (West 1918:8; Casson 1926a: 95, map V; Meritt and West 1934:68, col. iii, line 400, 84; Meritt, Wade-Gery, and McGregor 1939–53). Added to this was the sherd material from the site noted by French, which suggested not only the presence of a prehistoric settlement, but also a long and continuous occupation history.

Systematic excavations of Torone were initiated in 1975 by the University of Sydney under the auspices of the Athens Archaeological Society and directed by Alexander Cambitoglou (Cambitoglou 1975). The most essential task of the excavations as a research project, as envisaged in 1975, was to determine the nature and extent of Torone in the Classical period and to explore the validity of the ancient literary record pertaining to the site, including the foundation of the settlement as a Chalkidian colony. The excavations were also conceived in part in response to the earlier work conducted at Olynthos by Robinson. A number of problems emerged from the results obtained at Olynthos, among them chronology (see now Cahill 2002). A further problem was the character of the relationship between that center and the various other cities of the Chalkidian League in the Classical period. These problems will be more fully addressed in a future volume on Torone in the Classical period.

The selection of Torone as a site, and the conception and design of the ensuing excavation project, followed in the tradition of Classical archaeology. The model or ideal anticipated was a combination of the excavations of the Athenian Agora and Olynthos, both initiated in the 1920s and 1930s. As with many large Classical sites, among the more pressing problems at Torone at the inception of excavations was its sheer size and extent as well as the distribution of the plentiful archaeological material among the various scholars and students involved in the project. Unfortunately, much of Classical Torone was destroyed by a modern act of vandalism, unknown or not fully appreciated in the early 1970s, although the many limekilns scattered all over the site should have provided a clue. This was the systematic dismantling, already noted, of the ancient fortifications and other Archaic and Classical monuments standing above surface in the nineteenth and earlier twentieth centuries. The best preserved occupation levels at the site proved to be of the Early Bronze Age and the post-Byzantine era, thereby confounding many of the predictions of those first involved with the site.

The discovery of the Early Iron Age cemetery on Terrace V in 1981 was entirely by chance.[13]

Among the surface sherds collected and analyzed by French, only one fragment could be assigned to the Geometric period; subsequent collections of surface pottery yielded nothing clearly of Early Iron Age date. Moreover, the results obtained during the excavations conducted in 1975, 1976, and 1978, now described in *Torone I* (Cambitoglou, Papadopoulos, and Tudor Jones 2001), suggested no significant remains of the Early Iron Age. Indeed, most of the nine sherds and two terracotta objects of the period published in *Torone I* were only identified as Early Iron Age *after* the discovery and analysis of the Terrace V cemetery. The subsequent excavation of the cemetery (see chapter 2) was a matter of urgency, for although some tombs had been damaged by Classical and/or post-Byzantine disturbance, none were ever looted.

The discovery of the Early Iron Age cemetery, and its subsequent excavation between 1981 and 1984, itself determined the more recent fieldwork at the site. Several questions remained unanswered, foremost of which was the location and nature of the Early Iron Age settlement that went with the cemetery, particularly given the dearth of settlement sites during the so-called Greek "Dark Age" (Snodgrass 1971; Desborough 1972; Coldstream 1977; Papadopoulos 1996b). This eventually led to the initiation of excavations on Promontory 1. Although stratified levels of the Early Iron Age were revealed—particularly a horizon of storage vessels (**pl. 15**)—these were among the most disturbed by the Classical and later activity on the promontory. Ironically, the best-preserved levels were those that were not substantially explored during the earlier excavation campaigns. Consequently, the excavation of Promontory 1 opened up the Pandora boxes of Bronze Age and post-Byzantine occupation of the site (Cambitoglou and Papadopoulos 1988; 1990; 1991; 1994).

SCOPE OF THE STUDY, AND SELECTION AND PRESENTATION OF THE ARCHAEOLOGICAL MATERIAL

The primary aim of this volume is to present and interpret the results of the excavations of the Early Iron Age cemetery on Terrace V. By Early Iron Age I mean the period immediately following the demise of the Mycenaean way of life in the Aegean as defined by our knowledge of the material culture, but allowing for a certain amount of chronological overlap with the later stages of the preceding period (cf. I. Morris 1987:15). This would be roughly translated into absolute terms, on the basis of the conventional chronology (Snodgrass 1971; Desborough 1972; Coldstream 1977), as ca. 1200–700 B.C. The chronological span of the Terrace V cemetery is confined to the earlier stages of this period. Its upper chronological limit may be fixed approximately as contemporary with some stage of Attic and Argive Submycenaean (Styrenius 2002), itself a chronologically nebulous entity, while the lower limit appears to be some time around ca. 850 B.C. or so—that is, roughly contemporary with the end of Athenian Early Geometric, corresponding with Lefkandian Subprotogeometric. The whole question of chronology is addressed in the introduction to chapter 5 (the Early Iron Age pottery), as it is the pottery that provides the most substantial body of material from which relative time may be gauged; this is supplemented up to a certain point by the evidence of the horizontal distribution of tombs. I have deliberately avoided the discussion of chronology as a separate chapter. The nature of the tomb material and its state of preservation does not allow for a subdivision of the period into neatly defined phases that have any real meaning. Consequently, throughout the following pages I have preferred terms such as "the early stages of the period of use of the cemetery" or the "later" or "latest" stages of that period. In the case of individual tombs that may be assigned, invariably on the basis of the style of pottery, as contemporary with stylistic trends current at other sites where chronological phases have been proposed, then the relevant designation—Submycenaean, Early Protogeometric, Late Protogeometric, and so on—is noted. The appearance of imported pottery from other regions of the Greek world, particularly Euboia, Thessaly, Athens, and the Cyclades, permits a certain cross-linking of both individual tombs at Torone and the Toronean pottery sequence, with the sequences established at these other centers, but the quantity of imports is not great and the local sequence develops along its own idiosyncratic lines. In using terms such as "Protogeometric" I mean that particular *pottery style*, not an era, nor a particular people (cf. Starr 1974), and the only

chronological significance to be attached to such labels is in terms of ceramic history, which is to say "in the period when a Protogeometric style of pottery was being produced in a given center." In order to facilitate easier reference, I have added a table of all tombs and their contents that includes chronological designations for those tombs that may be so dated (see chapter 4, table 4.1).

In a region of the Mediterranean where the painted pottery sequence has often been described or considered as a "yardstick" and even a "neatly labeled Aegean 'chest of drawers'" (Ridgway and Serra Ridgway 1992:357), such reluctance to assign a more formal or rigid system of relative chronology may seem odd. It is my conviction, however, that the nature of the material simply does not permit greater precision at this stage. Moreover, it may seem equally unwise to define a period at a site in the north Aegean on the basis of an archaeological pattern prevalent in central and southern Greece and to impose such a periodization onto a region where there are no Mycenaean "palaces" or centers, and where the transition from Bronze Age to Iron Age and the subsequent development of the Early Iron Age follow a trajectory different from that further south. To do otherwise, however, would entail a rewriting of the prehistory of the north Aegean, which is well beyond the scope of this study; the fact remains that many elements of the Toronean material record, however idiosyncratic, follow developments commensurate with practices elsewhere in the Aegean. This is particularly true for certain aspects of burial customs, the stylistic development of the local pottery, as well as the range and variety of other small finds. As a coastal site in peninsular Chalkidike, Torone was open to influences from the surrounding mainland, but particularly from the "corrupting sea" (Horden and Purcell 2000).

The text is divided into two parts. Part I is primarily descriptive: it includes chapters 2 and 3, together with appendices A to D, and presents the archaeological material in its context. Part II seeks to provide an analysis of the data and to draw implications from the material.

Chapter 2 is an account of the excavations on Terrace V. The results of the excavations are presented in the form of trench summaries that allow overall control of the archaeological material while providing an account of the development of the excavation. The summaries are preceded by an introduction, which outlines the main results, and a deposit summary. The material encountered on the terrace postdating the Early Iron Age, primarily poorly preserved Classical domestic architecture and the post-Byzantine deposit type 2, is also discussed in the relevant trench summaries. The account of this later material does not aim to be exhaustive, and there is no attempt to interpret the Classical architectural remains or to present any of the later small finds. The main value in describing the Classical walling and the various associated and later deposits—apart from being a matter of course in any report of this nature—lies in the information it provides concerning the state of preservation of the Early Iron Age cemetery, in terms of both the appearance of individual tombs as encountered in situ and for the sherd material and other Early Iron Age small finds in later deposits. The manner in which the cemetery was excavated permits the presentation of information that is often lacking in the published reports of contemporary burial grounds.

Chapter 2 also includes a brief account of the conservation of the site following the excavations, and ends with a catalogue of Early Iron Age material on the terrace not found in tombs. This catalogue of selected pottery and other small finds, fragmentary in the main, includes a total of eighty-three pieces, presented according to context. In selecting these pieces my primary aim has been to provide as representative a sample as the available material permitted, as well as to choose a number of curiosities not represented in the tomb material. All pieces of intrinsic interest, or tolerably so, have been included, while the omissions—usually little more than scraps of pottery—are listed. In addition to the material from Terrace V a small quantity of Early Iron Age finds from other parts of the site are also listed (**84–94**), with cross-references to their publication in *Torone I* (Cambitoglou, Papadopoulos, and Tudor Jones 2001). The total number of these pieces is very small, and they represent all finds that may be reasonably assigned as contemporary with the tomb material; all eleven pieces were encountered in mixed or later deposits. I have also listed separately the pottery found in the Early Iron Age kiln (**KP-1–KP-14**) in order to

facilitate cross-referencing with the publication of the kiln and the kiln pottery (Papadopoulos 1989a). Dating to the years of the middle or later eighth century B.C., and as such postdating the period of use of the cemetery, the kiln provides the most conspicuous evidence for activity on the terrace until such time, in the course of the Classical period, when this part of the site was given over to the construction of domestic dwellings (see further Papadopoulos 2000a). The Early Iron Age levels from the settlement on Promontory 1 at Torone, excavated between 1986 and 1990, will be presented separately in a monograph on the prehistoric settlement on the Lekythos.

Chapter 3, which forms the greater part of this volume, is a catalogue of all tombs and their contents. All *kterismata* (material placed in tombs), as well as vessels containing the cremated remains of the deceased in the case of Tombs 17–134, are catalogued, whatever their state of preservation. In a number of cremation tombs, primarily those located in the area of the Early Iron Age cutting (see chapter 2), a varying quantity of loose blackened earth representing the remains of the pyre was placed in the tomb pit around the ash-urn and its offerings. In almost all cases this fill contained fire-affected sherds burned during the funerary ritual. Only a selection of such sherds is catalogued under individual tombs, as many of them were preserved in minute fragments, some intensely fire affected; in every such case a count of all fragments is given, as well as a minimum figure of the number of vessels actually represented. In the catalogue of pottery and small finds both in chapters 2 and 3 I have kept to a minimum the citing of comparative material from other sites, preferring to discuss comparative material collectively under individual pottery shapes and different classes of object in chapters 5 and 7. I have, however, cited parallels in the catalogues for those pieces that are considered imports, as well as for a number of local vessels where it seemed desirable to cite comparanda in order to simplify later discussion.

The total number of objects catalogued in chapters 2 and 3 is just under five hundred. In presenting this material I have erred on the side of detail. The reasons for this are several: first, the numerically largest class of material—the locally manufactured pottery—constitutes a hitherto unknown ceramic tradition (for a definition of a ceramic tradition see Sheedy 1985:151–152), and as such it seemed desirable to describe details of fabric, shape, and decoration, as well as their variations, in more detail than would otherwise be necessary. Second, the fragmentary and poorly preserved state of much of the material, particularly the local wheelmade pottery where the paint has a pronounced tendency to flake, meant that certain features could not be adequately depicted in photographs; in other cases the drawings of painted decoration represent partial reconstruction that demanded written explanation. In the case of fire-affected sherds, such problems were exacerbated in the case of both wheelmade painted pottery and handmade burnished wares. I have similarly erred on the side of detail in chapter 2 with the account of the excavations, but in this my conscience rests more easily as, unlike the small finds that may be restudied, the excavated ground cannot be re-dug, and any sacrifice of detail here amounts, in my belief, to negligence. Anyone wishing additional detail or information beyond that presented in this volume can consult the archives of the Torone excavations housed at the Sydney offices of the Australian Archaeological Institute at Athens, or study firsthand the material stored in the Archaeological Museum at Polygyros.

The organic materials recovered from the tombs and associated deposits are presented in a series of appendices. Appendix A by Jonathan Musgrave presents the analysis of the human skeletal remains from the inhumation and cremation tombs and their anthropological assessment. This detailed report includes a comprehensive study of the cremations and inhumations, incorporating the evidence for sex, age at death, stature, consanguinity, and a variety of pathologies ranging from anemia and arthropathies to oral hygiene. Dr. Musgrave's contribution is one of the most comprehensive such reports on the physical anthropology of an excavated cemetery in Greece, not least because of the information extracted from the cremated remains.

Appendix B, by the late Professor Sandor Bökönyi with addenda by Deborah Ruscillo, presents the small quantity of animal bones found in tombs. Given the state of preservation of individ-

ual tombs, and the possibility of intrusive bone entering inhumation tombs, this study primarily focuses on animal bone remains found inside the ash-urns of cremation tombs. Some of these bones are burned while others are unaffected by fire. This careful analysis has shed considerable light on an important aspect of the funerary record.

The marine remains and land mollusks from Terrace V form the subject of appendix C by Deborah Ruscillo. The tombs and their associated deposits on Terrace V yielded approximately 2.4 kg of land and sea mollusks (some of which was fire affected), in addition to other marine remains, including one species of echinoderm (urchin), one crustacean, and three species of fish. The marine remains were recovered through both regular excavation and water-sieving. In addition to providing important evidence on various aspects of the funerary ritual in Early Iron Age Torone, the study of the marine mollusks associated with the pyre remains of a number of cremation tombs suggested the possibility that some of the cremations were actually conducted on the beach. The human remains were subsequently gathered, although rarely very systematically or comprehensively (see also appendix A), and placed into a container that was subsequently buried in the Terrace V burial ground.

The plant remains, mostly in the form of charred seeds from tombs, are presented in appendix D. Although only a small quantity of charred seeds was recovered from the process of water-sieving the pyre remains of those tombs that preserved such burned material, the variety of seeds added important insight into the domesticates and, more generally, the natural resources of the region. Included among the charred seeds were various pulses (lentil, broad bean, bitter vetch), fruit (grape and *Prunus spinosa*, a member of the plum family), and grains, primarily barley. These seeds were identified initially by Ferenc Gyulai and later studied by Kristina Kelertas, who was responsible for presenting the discussion and comparative material from other sites.

Part II comprises five chapters. Chapter 4, on mortuary practices, begins with a review of theoretical perspectives and the archaeology of death, and goes on to consider and analyze a variety of customs found in the Early Iron Age cemetery at Torone. A section on landscape and the visibility of death considers the cemetery in its spatial relationship to the settlement of the living. Topics include the extent of the cemetery, the layout and chronological distribution of tombs, and the various tomb types (urn and cist cremations, pit and cist inhumations, as well as pithos burials). This is followed by an analysis of tomb contents, the distribution of graves according to age and sex determinations, and other patterns visible spatially in the layout of tombs. It is stressed throughout this volume that the identification of age and sex is on the basis of the human remains studied by Dr. Musgrave, *not* on the basis of tomb contents. An overview of burial customs and funeral rites discusses the distinction between cremation and inhumation, the changes in rite, and the organic offerings, which provide important evidence for eating, drinking, libation, and sacrifices associated with the grave. Finally, the population of the cemetery is considered together with the social and demographic implications that can be drawn from this evidence.

Chapter 5, the Early Iron Age pottery, presents one of the most fundamental aspects of the analysis of the data; not only does pottery represent the most numerous category of material recovered from the tombs, it also provides one of the basic frameworks for the chronology of the cemetery. As already noted, chronology is discussed in the introduction to this chapter, as are the names given to vases, and the technique and relationship between the hand- and wheelmade wares. This is followed by a conspectus of the pottery, as well as a quantitative analysis of the tomb pottery. Following this, the material has been divided and presented under four main categories: (a) local wheelmade pottery, (b) local handmade pottery, (c) black- and red-slip ware, and (d) imported pottery, both wheel- and handmade. The two classes of local pottery are each prefaced by notes on their general characteristics, followed by typologies on the basis of shape. In the typologies my primary aim has been to present the main lines in the development of individual vessel forms. The pottery designated imported, which includes both wheel- and handmade wares, is listed as far as possible under the headings of the place or general region from which it is believed to have originated. The chapter concludes with a summary in which an attempt is made to define the salient

characteristics of the local style and its chronological development, as well as to assess the nature and impact of external influences, as far as the preserved material allows.

The designation of individual pots as imports was based initially on visual criteria. In my identification of an individual vessel as an import I followed the combined evidence of shape, style of decoration, technique, fabric, and feel. It is worth noting that in the case of several vessels I changed my opinion, sometimes on several occasions, and in the case of specific vessels I am still not capable of allocating them as local or imported with any degree of conviction; such is especially the case with the few examples of black- and red-slip ware. Well after the original study of the pottery was complete, I initiated a combined petrographic and chemical program of analysis of the Early Iron Age pottery from the Terrace V cemetery and kiln with Ian Whitbread and Richard Jones. Their results are presented in appendix E, which follows chapter 5. The petrographic and chemical analysis of the Early Iron Age pottery from Torone, one of the most comprehensive analyses of its kind, has contributed greatly to our understanding of the local potters' craft, including the natural resources at their disposal, and has raised a number of questions that were never considered or anticipated in the original study.

Chapters 6 and 7 are more straightforward. In chapter 6, the eight examples of potters' marks found on local handmade vessels, incised prior to firing, are brought together and discussed under the heading of "symbols not spoken," as is the body fragment of a wheelmade pot preserving a compass-incised circle. The perceived paucity of potters' marks in the wider Greek world of the Early Iron Age—a faulty notion based on preconceived ideas of illiteracy during the so-called Dark Age (Papadopoulos 1994)—warrants their separate presentation in this chapter. Chapter 7 deals with all the small finds other than pottery encountered in tombs and the few items from associated deposits on Terrace V, the quantity of which was small and their state of preservation often poor. They are presented under the heading of the material of which they were made, including terracotta, metal (bronze, iron, lead), stone, bone, glass compound/faience, and amber. In addition to jewelry and other items of personal ornament worn by the deceased, the material includes a few household implements (small blades, whetstones, stone disks), as well as a possible arrowhead.

Finding a suitable title for chapter 8 proved to be no simple matter. Originally cast as "Archaeohistorical speculations," I later settled on the shorter and more circumspect "coda," then "epilogue," before finally settling on the current title, "Early Iron Age Torone: Between archaeology and history." It is less an ending than it is the beginning of a new round of questions, questions I could not have anticipated or imagined when I first undertook the study of this cemetery. The final chapter does not aim primarily to enumerate the main results of the study as presented, nor does it provide just a sober summary. It is, rather, a personal appraisal of certain aspects of the character of Torone in the Early Iron Age, aspects that have interested me most.

NOTES

1. To this day few of the locals spend the whole year at Torone; the majority stay only for the summer months, wintering either in Sykia or, more recently, Thessaloniki. In 1981 the population of Torone was given as 150, that of Sykia as 2500 (Papangelos 1981).
2. The construction of the modern road, which was completed in 1975, required cuttings and subsequent embankments that significantly cut the natural flow of the creek from the higher hills to the east. Water from this creek used to be diverted for irrigating fields. The path of the creek is still visible today, but water flows in it only in time of heavy rain.
3. A number of ancient wells, mainly associated with structures of the Classical period, have been located and some partially excavated. One of these on Terrace V is discussed in chapter 2, Trench 47. A large double cistern of Late Byzantine date was excavated by the Byzantine Ephoreia of Chalkidike on Promontory 1 in the early 1970s (Cambitoglou 1978:91; Cambitoglou and Papadopoulos 1988: 182, ill. 7), and a large circular cistern of the Hellenistic period was excavated on the promontory in the more recent excavations (Cambitoglou and Papadopoulos 1991:149, fig. 2, pls. 21:6, 22:1). A number of other wells are listed in Cambitoglou, Papadopoulos, and Tudor Jones 2001:89–272.

4. The late fortifications on Promontory 1 are not included in Cambitoglou, Papadopoulos, and Tudor Jones 2001, as they are best understood in the light of the more recent excavations on the promontory conducted in 1986–1990 (Cambitoglou and Papadopoulos 1988; 1990; 1991; 1994).
5. The illustration was published by Coronelli in *Arcipelago* (in 8°), pl. 48, and in *Isole e città*, pl. 186. Cf. Armao 1951:38, n. 8, which cites Coronelli's statement on "Toron": "Luogo importante per essere l'ordinario ricovero delle armate turchesche e dei legni che navigano per quelle coste."
6. Thuc. 4.110.1. The location of the Dioskoureion remains uncertain; the blocks illustrated by Meritt (1923:457, fig. 9) as being those perhaps on the site of the temple, have been damaged and displaced since Meritt's day, and this site was never verified with certainty as the Dioskoureion. The most likely spot described by Meritt as the site of the Dioskoureion is the small knoll immediately to the north of the site known as *tis kalogrias to aloni*, which is certainly within the radius of three stades from the city. For further discussion on the Dioskoureion see Henry 1993.
7. In Stillwell 1976:626 reference is made to a Torone in Epiros (the modern Nitsa?), but not to Torone in Chalkidike (cf. Hammond 1967:80, 688). As far as I know, the main reference in antiquity to Torone in Epiros is in Ptolemy, where two cities of the same name are listed: In 3.13.12, under the heading of Macedonia, Ptolemy lists Chalkidic Torone and subsequently the Toronean Gulf; Torone in Epiros is listed in 3.14.5.
8. The Sindos cemetery, to the west of Thessaloniki, is only one of several Archaic and Classical cemeteries in the vicinity of the city. Excavation of the other large cemetery at Agia Paraskevi, to the east of Thessaloniki, has recently been completed by Sismanidis. For the cemetery at Thermi see Moschonissiotou 1988; for recent discoveries see the annual reports in *To Archaiologiko Ergo ste Makedonia kai Thrake*.
9. The most detailed surveys of this material include Makaronas 1940; 1941–52; Petsas 1966–67; 1969a; 1974; 1975. A useful list of excavated sites in Macedonia (with bibliography) is provided by Leekley and Efstratiou (1980:74–107); see also Andreou, Fotiadis, and Kotsakis 1996. The Early Iron Age material, up until 1983, has been meticulously gathered and presented by Syriopoulos (1983; 1984). Among the most important current excavations for the Early Iron Age, as well as the Bronze Age, in Macedonia are those conducted by the University of Thessaloniki at Toumba in Thessaloniki (Souereph 1988; 1994, with references; Andreou, Kotsakis, and Chourmouziadis 1990; Andreou and Kotsakis 1996). Another important project conducted in western Macedonia is at the Bronze Age site of Mandalo (see esp. Papaeuthymiou-Papanthimou and Pilali-Papasteriou 1988; 1990). Kanatsoulis's survey of the Macedonian city remains a store of information (underused), especially for the later periods (Kanatsoulis 1955–60; 1961–63; 1964–65). The establishment of the new journal *To Archaiologiko Ergo ste Makedonia kai Thrake* in 1987 provides a much welcome forum for the presentation of archaeological fieldwork in preliminary format in Macedonia and Thrake.
10. These include Ierissos (Akanthos), Pyrgadikia, Lakkoma, Nea Silata, Petrona, and Stratoni (Leekley and Efstratiou 1980; E. Winter 1999). For Akanthos and Sane see, most recently, Trakosopoulou-Salakidou (1996; 2001), Tsigarida (1996). More recent excavations at Olynthos have been undertaken, successively, by Romiopoulou, Vokotopoulou, and Drougou (see esp. Drougou and Vokotopoulou 1989). Trial excavations at Poteidaia were carried out by Pelekides (1950) and, more recently by Sismanidis and others (see below). Among the most exciting recent excavations in Chalkidike are those by Sismanidis at ancient Stageira, on the coast in eastern mainland Chalkidike (Sismanidis 1990; 1991; 1992; 1993; 1994, 1995; 1996; 1997; also Kiourtzoglou, Vavelidis, and Sismanidis 1999; E. Winter 1999).
11. See esp. Vokotopoulou (1987; 1988; 1989; 1990b; 1994), Vokotopoulou, Pappa, and Tsigarida (1988; 1989), and Moschonissiotou 1998. A large house of the Classical period was also excavated in the late 1980s near the deserted *metochi* south of Neos Mamaras. For Poteidaia see Pelekides (1950), Alexander (1963), Sismanidis (1989; 1990), Sismanidis and Karaïskou (1992), and Kousoulakou (1993; 1994).
12. Cambitoglou first visited Torone in 1964, but at the time he preferred to initiate excavations at Zagora on the island of Andros. It was not until excavations at the latter site were well advanced that he returned to Chalkidike and began digging at Torone. Both sites were offered to Cambitoglou as a fellow of the Athens Archaeological Society.
13. Cf. the comments in Popham and Lemos (1996:v) with regard to the accidental discovery of the Toumba cemetery at Lefkandi in 1969.

2

The excavations on Terrace V

Excavations at Torone were initiated in 1975 by the University of Sydney under the auspices of the Athens Archaeological Society; the results of the work carried out in the first three seasons (1975, 1976, 1978) have been published in preliminary reports and are treated in detail in *Torone I* (Cambitoglou, Papadopoulos, and Tudor Jones 2001). The excavations consisted of a series of trenches and tests opened over a fairly large area of the site. With the exception of the trenches at the Gate Area of the Late Classical/Early Hellenistic fortification system and at Structures 1 and 3, they were located within the fortified perimeter of the Archaic and Classical city defined by Walls A, B, and C (see **figs. 5–6**). This enceinte incorporated Promontories 1 and 2 and the entire terraced north slope of Hill 2 (the summit of which has been equated with Thucydides' *anotato phylakterion:* see chapter 1) as well as the corresponding low ground hugging the shore line of the small cove north and east of Promontory 1. The laborious task of tracing and clearing the line of the city walls in order to define the ancient city boundaries began in 1975 (Cambitoglou 1975:111–115). The three main areas of investigation within the Archaic and Classical city were the Lower City, the Isthmus, and Promontory 1 (the Lekythos). In all these areas evidence of Early Iron Age occupation was negligible: fragments of five vessels (**84–88**) were scattered throughout the Classical deposits at the Gate Area; fragments of a further two (**89**, **90**) as well as two terracotta spindlewhorls, beads, or buttons (**91**, **92**) were encountered in later deposits at Structure l; a single sherd (**93**) was recovered from the Lower City, and another (**94**) from Promontory 1, both from mixed deposits.[1]

When, in 1981, excavations resumed after a two-year study break, work at the Lower City, Isthmus, and Gate Area was extended, and two new areas were tested for the first time: Terraces IV and V on the lower north slopes of Hill 2 (Cambitoglou 1981) (**fig. 9**). The two initial test trenches on Terrace IV, Trenches 2 and 3, brought to light post-Byzantine and Late Roman tombs built over the remains of Classical houses (Cambitoglou 1981:39; Papadopoulos 1989b; **figs. 10–11**), whereas on the higher Terrace V to the south (averaging 27 m above sea level), Test Trench 1 revealed inhumation and cremation tombs dating from the Early Iron Age. These results warranted further investigation, and the excavations on both terraces were accordingly enlarged in the course of the summer.

A total of seven trenches (1, 6, 9, 12, 13, 15, 22; **figs. 9**, **12**) were opened on Terrace V in 1981; the first six were dug to natural bedrock, and Trench 22, begun late in the season, was completed in 1982 (Trenches 6 East Baulk and 12 East Baulk also were cleared). Seventy-three certain tombs were uncovered and a series of walls of a number of poorly preserved structures of the fifth and fourth centuries B.C. exposed. The preserved tops of these walls were usually exposed at a depth of a few centimeters below surface; rarely were more than one or two courses of masonry encountered, with much of the damage evidently caused by recent stone robbing (see pp. 22-23, deposit type 2).

A further nine trenches (25–29, 40, 43, 44, 46) were laid out and opened during July and August of 1982, with Trench 22 continued; Trench 26 East Baulk was also cleared (Cambitoglou 1982). All these trenches were dug to bedrock, bringing to light more Classical domestic architecture, increasing the number of Early Iron Age tombs by thirty-eight, and providing much useful information on the overall extent of the cemetery. Perhaps the most notable find of the 1982 campaign was the discovery of the remains of a collapsed kiln in the NW quarter of Trench 43 near the bank of the terrace, which on the evidence of the pottery

found within was slightly later than the latest tombs (Papadopoulos 1989a; Whitbread, Jones, and Papadopoulos 1997).

In 1984 a further campaign on the terrace was planned primarily to establish the boundaries of the cemetery area and to clear baulks between already excavated trenches (Cambitoglou 1984). As a result eight new trenches (47, 48, 55–60) were opened and nine baulks cleared (**fig. 12**), yielding a further twenty-three Early Iron Age tombs (**fig. 13**).[2] By the end of the season, however, the productiveness of some of the trenches and baulks, coupled with torrential rains in the final two weeks, prevented the excavation of remaining baulks (Trenches 9 North Baulk, 44 North Baulk, 60 East Baulk). Although the horizontal extent of the cemetery appeared to be fairly clearly defined, the possibility remained of further graves to the south and east of the excavated area. In addition to tombs, more Classical walling was uncovered, notably in Trenches 47 and 48 where the depths of associated deposits were somewhat more substantial, but even here the state of preservation was poor. Indeed, for most of the terrace bedrock was quickly revealed with the removal of topsoil, usually at a depth of 0.05–0.40 m, and it was into bedrock that the tombs, as well as most of the foundations of the later walls, were dug. Even in those parts of the area where Classical and Early Iron Age deposits underlay the topsoil, rarely were they encountered to any depth, and only at the far SW corner of the excavated area was bedrock reached at a depth greater than 1.0 m. **Plates 16–19** show views of the excavated trenches at the end of the 1981, 1982, and 1984 seasons.

The Classical buildings and walls on the terrace are only very briefly treated in the trench summaries that follow, and the state of preservation was such that an overall plan of this domestic quarter was difficult to reconstruct. Walls were oriented SW–NE or SE–NW, on account of the configuration of the land and for protection against the prevailing winter winds. The preferred south-facing aspect stated or implied by several ancient authors and seen in a number of excavated Classical houses elsewhere in the Greek world (Jones, Graham, and Sackett 1973:419) was in most cases not practical at Torone because of the location of Hills 1 and 2 to the south of the settlement area. Drainage and guttering systems were encountered in Trenches 43, 44, and 47/48; a possible well shaft (only partially excavated) in Trench 47 North Baulk; floor levels and walking surfaces, usually very poorly preserved, in Trenches 25, 25 East Baulk, 43, 44, and 47/48; and possible terrace retaining walls in Trenches 1 and 47. On the basis of the diagnostic pottery and other small finds recovered from foundation trenches and other associated fills, it appears that these structures were built in the course of the fifth and fourth centuries B.C., with evidence of at least two distinct phases of construction uncovered in Trenches 43, 44, 47/48, and probably also 22.[3]

That the Classical building activity on the terrace destroyed some tombs and disturbed others was particularly clear in the case of Tombs 8, 16, 17, 53, 119, 120, 121, and 132, but on the whole the state of preservation of most tombs was reasonable—and in many cases remarkably so. In some instances intact or well-preserved tombs were found partially beneath the lowest course of a later wall or only a few centimeters from the face of a wall, and it seems the Classical inhabitants of the terrace were, generally speaking, unaware of the cemetery below.[4] In areas where the level of bedrock lay only centimeters from the modern surface, the upper parts of tombs were damaged to varying degrees by modern plowing, but in the majority of such cases the lower parts of the tombs were sufficiently preserved to allow fairly accurate reconstruction. Damage caused by plowing was particularly evident in the case of many of the tombs located in Trenches 12, 12 East Baulk, 13, 26, 46, and 60, and as a result it was necessary to sort through all the pottery recovered from topsoil in order to locate any possible joining fragments of tomb pots. In some instances a good many fragments were recovered and subsequently reconstructed, while in others there were few or none at all. The task of locating displaced sherds was greatly facilitated by the division and excavation of most trenches into a series of smaller horizontal spits. In some cases it was also possible to determine the direction of modern plowing by the scatter of sherds from Early Iron Age tombs.[5]

The combination of Classical building activity, later stone robbing, and modern plowing would have displaced or destroyed any possible markers

placed above individual tombs, although the layout of the cemetery and the close concentration of tombs within the area used indicates a general respect for earlier graves and a knowledge of their location from some kind of marker. Many unworked or crudely worked stones, suitable as tomb markers, were encountered in topsoil or found in the immediate vicinity of tombs; such instances are noted either in the catalogue of tombs or in the relevant trench summaries. The possibility of tombs being marked by a small mound of earth, as in the Athenian cremations of the period (Styrenius 1967:33, 78, 94; Kurtz and Boardman 1971: 38), or even by a small heap of stones (Kraiker and Kübler 1939, 45 [Grab 103]; Andronikos 1961/ 1962; cf. the case of Torone Tombs 100 and 112 [see **pls. 205, 227**]) should not be overlooked.

Significantly, out of a total of 134 certain tombs, there were only five instances where either one tomb cut across another, or tombs were stratigraphically interrelated, as follows (the earlier tomb is in each case mentioned first):[6]

Tomb 3 → Tomb 18 (3 located beneath and cut across by 18)
Tomb 6 → Tomb 96 (6 located beneath but undisturbed by 96)
Tomb 11 → Tomb 10 (11 was cut across and partially damaged by 10)
Tomb 14 → Tomb 13 (14 was cut across and partially damaged by 13)
Tomb 101→ Tomb 15 (101 and 102 were cut across, partially damaged, with Tomb 102 partly dismantled, by Tomb 15)

In addition to the displaced fragments of tomb pots, the surface (and some of the Classical levels) contained fragments of Early Iron Age pottery of various shapes, which could not be assigned to any particular tomb. These may suggest the possibility of a pot having been set up over a grave as a marker (as has been noted, for instance, at Lefkandi [Popham, Sackett, and Themelis 1979–80:106, 215; cf. Andronikos 1961/62] and for two tombs of Protogeometric date in the Athenian Kerameikos [PG graves 37, 38: Kübler 1943:38–39, pl. 2; Kurtz and Boardman 1971:38]; and cf. also the case of Agora Grave C 9:5 and Nea Ionia Pyre A [Styrenius 1967:78, 95]; an amphora was the principal shape used at both sites). The variety of shapes, however, encountered in these deposits on Terrace V indicate that some of this material was associated with other aspects of burial custom, or else not associated with tombs.

Concerning the preservation of tombs, an important feature was the nature of the bedrock itself, in this part of the site an easily worked schist and mudstone susceptible to weathering. Torone lies in an area of metamorphic formations with volcanic stone to the north and south (see the geological map in R. Jones 1986:104, fig. 31a; see further appendix E). The typical reddish stone of parts of the terrace is mudstone, which results from a different stage in the cooling of the rock; the true green or silver/green schist, which occurs at some points on the terrace, is more usual on the lower terraces and at Promontory 1. Over much of the excavated area the original hard-weathered crust had been removed or was at least partially worked, leaving a layer of bedrock chips (cf. deposit type 5) that, when recompacted, was difficult to distinguish from the bedrock itself. In the case of many tombs, notably cremations, bedrock chips were used to fill the tomb pits cut into the natural rock; in some cases slightly larger, fist-sized pieces of the rock were used to chock the tomb pots into their respective positions (see **fig. 14**). Often a layer of bedrock chips was placed—or had accumulated—over a tomb with the result that it not only protected it but effectively concealed it, as the tomb appeared to be "under bedrock" as it were; a particularly well-hidden example was Cremation Tomb 57. It was therefore necessary in the final stages of the excavation of each trench to dig into bedrock (or what appeared to be bedrock) to ensure that no tomb was overlooked (a similar situation was noted in Popham, Sackett, and Themelis 1979–80:102, n. 2, and also in parts of Athens [Brouskari 1980:19; Papadopoulos and Smithson 2002:157, fig. 5]). In the case of many of the cremation tombs encountered intact, either a single stone, or sometimes more than one stone, and occasionally a pithos body fragment, was laid flat, normally directly above the ash-urn, in order to seal the tomb (see chapter 4).

No distinct cultural phase was encountered on the terrace predating the Early Iron Age cemetery, although there were a few scattered finds of

Bronze Age pottery noted in various later deposits (possible Bronze Age finds from Terrace V include **7**, **30**, **47**, **52**). Indeed, evidence of activity on the site generally during the course of the Bronze Age was limited until the more recent excavations on Promontory 1 in 1986–1990 (Cambitoglou and Papadopoulos 1988; 1990; 1991; 1994). Similarly, there is no clear evidence of occupation of the terrace in the period after the construction, and collapse, of the kiln until the time when the Classical houses were built, although a gradual increase was noted in the quantity of sherd material scattered throughout the Classical deposits and surface levels dating from the Orientalizing and Archaic periods. The only evidence of later, post-Classical activity on the terrace is the stone packing deposit type 2 associated with post-Byzantine stone robbing (see pp. 22–23), as well as a few fragments of Late Roman finewares and transport amphorai found in deposits type 1 and 2.[7]

THE DEPOSITS

By the end of the 1981 season the general character of the stratigraphy had emerged fairly clearly and the cultural layers on the terrace were comparatively predictable (**fig. 15**). The term "deposit" is here used to denote a specific type of excavated unit in the same way the term is used in the excavation report for Zagora (Cambitoglou et al. 1971: 37–39). The only exception to this rule is deposit type 3, where deposit is used to denote a chronological division, in this case the different Classical units, and deals with the various excavated units collectively in much the same way as, for instance, the term "stratum" is used in the excavation report for Saliagos (Evans and Renfrew 1968:11).

Deposit type 1

The surface deposits were of three main types. Deposit type 1a was the midbrown, fairly hard-packed plow soil, usually 0.05–0.40 m deep, with small stones and pottery, primarily of Classical date, but also with the odd sherd of Late Roman and post-Byzantine wares as well as a small quantity of Early Iron Age material. For much of the excavated area deposit type 1a directly overlay bedrock, with the earth becoming slightly lighter in color and normally assuming a reddish tinge from the increasing number of bedrock chips as the natural rock was approached. In certain areas a thin layer of humus, deposit type 1b, characterized by a rich, dark, loose-textured soil with many hair roots from one of the few pear trees or shrubs on the terrace had formed over previously plowed soils; this is best illustrated in the south and west scarp sections of Trench 46 (see **fig. 40b**).[8] Deposit type 1c was confined to the trenches in the SW quarter of the excavated area, where the level of bedrock was lower, and usually overlay the Classical layers (deposit type 3) or the Early Iron Age deposit type 4 (see sections in **figs. 23c, 29d, 39c, 44–45).** Encountered to a maximum depth of 0.45 m below deposit type 1a, deposit type 1c represents accumulated soil unaffected by plowing; it contained quantities of pottery and other small finds consistent with those of deposit type 1a, often with numerous joins noted between pottery fragments from both deposits. At certain points some difficulty was experienced in distinguishing deposits type 1a and 1c, although texture was usually the best guide. Deposit type 1c was harder and more compact than 1a; containing many small stones, deposit type 1c lacked the quantity of bedrock chips usually met in the lower passes of 1a. Subject to slight variations of color, deposit type 1c was characterized by a darker brown earth where encountered in Trenches 9, 22, 28, and 29, and by a lighter, more yellow-brown color in Trenches 44, 47, and 47 North and East Baulks.

Deposit type 2

Deposit type 2 was a stone packing, its horizontal extent depicted on **figure 16**. It was confined to the south and west parts of Trench 12, the central and northern parts of Trench 22, and over much of Trenches 25 and 25 East Baulk; it extended into the west part of Trench 22 North Baulk, the east part of Trench 25 North Baulk, and the SE corner of Trench 40. An isolated part of what appeared to be the same deposit was met in the SE corner of Trench 15 and the NE corner of Trench 57. Varying in depth from a few centimeters to 0.65 m, deposit type 2 lay below deposit type 1a and over deposits type 3 and 4. Deposit type 2 was normally confined to areas where the bedrock was at a lower level, having been previously worked in either the Early Iron Age or Classical periods, and was laid in

order to create a surface level with it (see especially the sections for Trench 12, **fig. 24b**). The deposit was characterized by a great many small to medium, predominantly fist-sized stones, and mainly limestone with a small admixture of granodiorite and schist in an interleaving of midbrown earth. Evenly distributed throughout the deposit was a copious quantity of Classical roof-tile fragments and a good deal of sherd material, predominantly fragments dating from the sixth through the fourth century B.C., with a smaller quantity of Early Iron Age material and the occasional Late Roman sherd. Of the Early Iron Age material, fragments of three vessels from this deposit have been selected and catalogued from Trench 12 (**24–26**), together with a further two fragments (**41**, **42**) and a bronze ring (**43**) from Trench 25. The latest diagnostic pottery, however, belonged to the years of the post-Byzantine period, with fragments of at least nineteen vessels of the era as well as other associated finds. In the present state of knowledge it remains difficult to date this pottery more precisely than "post-Byzantine" and thus it was not possible to fix the date of the laying of this packing more accurately.[9]

That deposit type 2 was associated with the robbing of stone from the Classical walls on the terrace was best illustrated in Trench 22 (see pp. 30–32, also the many robbed foundation trenches of Classical walls like that in the SE quarter of Trenches 13 [see **fig. 26**] and 29 [see **fig. 36a**]). It would therefore appear that the two most likely times within the period for this stone robbing was the building or rebuilding of the fortifications on Promontory 1, presumably during the sixteenth or seventeenth century A.D., or the systematic dismantling of the ancient fortification systems and other monuments in the late nineteenth century. It is also worth noting here the remains of a circular structure visible at surface level in the NW corner of the terrace, referred to locally as *pyrgos* (see **fig. 7**) although another local tradition has it as a windmill (Anemomylos is also the local name for Hill 2); both traditions remain unverified. The shape and size of the structure as visible above surface are similar to the numerous late limekilns scattered all over the site. This suggested that the feature may have been another limekiln and that it was associated with the leveling of the terrace in the form of deposit type 2 and therefore likely to be of late date. The recent geophysical work carried out on the terrace in 1993 and 1994 using fluxgate gradiometers and an earth resistance meter, however, did not provide the characteristic profile normally associated with such kilns.

Deposit type 3

Deposit type 3 is applied generically to all the various soil units of the Classical period encountered on the terrace in order to distinguish them collectively from earlier and later cultural layers (primarily deposits type 2 and 4). Included are the different units associated with the excavated structures such as foundation trenches, floor levels, occupation layers, wall tumble, tile smashes, and so on, which varied from structure to structure. The Classical deposits and the material deriving from them will be published separately. Specific units of deposit type 3 are labeled by a letter in lower case (for example, deposit type 3a, 3b), which refers to that deposit in that particular trench: deposit type 3a in Trench 43, for example, refers to a floor makeup (see Trench 43 north scarp section, **fig. 38c**), whereas in Trench 47 deposit type 3a refers to leveling fill (see Trench 47 south and west scarp sections, **figs. 44–45**).

The present account of the Classical architecture and associated deposits on the terrace does not aim to be exhaustive. As stated, the main value of describing the Classical walling and the associated units, albeit superficially, is in the information it provides concerning the state of preservation of Early Iron Age tombs and also for the Early Iron Age sherd material encountered in later deposits. In noting pottery and other small finds from the more informative Classical deposits, no attempt has been made to distinguish between local and imported varieties of Classical pottery; the material is treated in its broadest possible categories, with the black-gloss and related wares providing the primary dating evidence.[10]

Deposit type 4

Deposit type 4 was the fill of a large, roughly elliptical cutting in the bedrock, measuring about 10 m EW with a maximum depth of 0.45 m, and representing a carefully leveled surface prepared to receive tombs (both cremations and inhumations),

among which were the earliest in the cemetery. The horizontal extent of the cutting is indicated on **fig. 17**. The fill itself, cleared to a maximum preserved depth of 0.25 m, was horizontally defined to an area centered in Trench 22 and the south part of Trench 12, extending into the eastern halves of Trenches 25 and 40 and into the north part of Trench 9. It was characterized by a multicolored soil, prone to slight variances in texture, and with colors ranging from brown and yellow to gray with patches of black and pinkish-mauve, the result of ash and other burned debris. In Trench 22, where some cremation tombs were dug into this deposit, the quantity of ash was greater, the multicoloring more marked, and the texture tending softer and finer; in the west part of Trench 12 (in the vicinity of Inhumation Tombs 6, 7, and 8) the earth was more consistently colored and slightly coarser in texture, with a quantity of bedrock chips and pebbles. The pottery recovered from the deposit was of the Early Iron Age, except for a small amount of Classical intrusive material in its upper passes that was clearly the result of the digging of foundation trenches for the Classical walls. The cremation tombs within the area of the cutting differed in details to those elsewhere, especially in that loose blackened earth representing the remains of the pyre was placed around the tomb pots, from which was often recovered many burned sherds; it was here, too, that many inhumation tombs were uncovered (**figs. 13**, **18**), two of which were stratigraphically interrelated with cremations. The importance of the area in terms of the layout of the cemetery and its chronology is considered in chapter 4. In different parts of the excavated area deposit type 4 was encountered beneath either deposits type 1, 2, or 3 (see sections, **figs. 23c**, **24b**, **29d**, **31c**, **37b**).

Deposit type 5

Deposit type 5 represents a thin but distinct layer of bedrock chips confined to those parts of the excavated area where bedrock had been more substantially worked in antiquity. It was most commonly encountered beneath deposit type 4 in the area of the Early Iron Age cutting, best illustrated in the sections of Trenches 22 and 25 (see **figs. 29d**, **31c**). Revealed at one point in Trench 22 to a maximum depth of 0.20 m and often difficult to distinguish from the actual surface of bedrock, the deposit was normally sterile, although an occasional, usually nondescript sherd was sometimes found. A fill in consistency not unlike deposit type 5 was encountered in the upper excavated part of the possible well shaft in Trench 47 North Baulk and in the large pit along the west scarp of Trench 55 (see **figs. 47a–b**); it yielded in both cases a few sherds of Classical date.

Deposit type 6

Deposit type 6 refers to the remains of the Early Iron Age kiln located in the NW quarter of Trench 43 (see **figs. 13**, **38b**; **pls. 49–53**) and of similar units encountered in the NE corner of Trench 58 (see **figs. 50–51**), the latter possibly representing the remains of a second, as yet unexcavated kiln. Deposit type 6 includes the fill of the shaft of the firing chamber, the preserved remains of the collapsed superstructure, the burned debris in the fire-mouth, and the associated rake-out (fully published in Papadopoulos 1989a).

Catalogued Early Iron Age small finds from deposits on Terrace V

Deposit type 1	**1**, **2**, **3**, **4**, **5**, **6**, **23**, **32**, **33**, **34**, **35**, **36**, **60**, **61**, **62**, **63**, **64**, **68**, **79**, **80**, **81**
Deposit type 2	**24**, **25**, **26**, **41**, **42**, **43**
Deposit type 3	**9**, **10**, **11**, **27**, **28**, **65**, **66**, **67**, **69**, **70**, **71**, **72**, **73**, **74**, **75**, **76**, **77**, **78**
Deposit type 4	**7**, **8**, **12**, **13**, **14**, **15**, **16**, **17**, **18**, **19**, **20**, **21**, **22**, **29**, **30**, **31**, **37**, **38**, **39**, **40**, **44**, **45**, **46**, **47**, **48**, **49**, **50**, **51**, **52**, **53**, **54**, **55**, **56**, **57**, **58**, **59**
Deposit type 5	—
Deposit type 6	**82**, **KP-1–KP-14**
	83 (cf. **82**) was found built into Trench 43 wall *d*

THE TRENCH SUMMARIES

The system of excavation was conventional trenches and baulks, aligned according to the north–south grid laid out in 1981 by John Harwin (see **fig. 7**). During the excavations the datum point for each trench was normally the SW corner, but all

readings of depth given here refer to depth below surface. These can be converted to height above sea level by subtracting any given reading from 27.0 m. Baulks separating trenches (usually 1.0 m wide) are referred to as either the north or the east baulk in relation to the SW corner of the adjacent trench; hence the baulk separating Trenches 12 and 6 is referred to as Trench 12 East Baulk (not Trench 6 West Baulk), the baulk separating Trenches 12 and 22 as Trench 22 North Baulk, and so on. It was originally intended, at the completion of Test Trench 1, to lay out squares of 5.0 m; pressures of time, however, coupled with the nature and configuration of the cemetery, which required irregular extensions in order to recover individual tombs, plus the dictates of a privately owned pear tree between Trenches 46 and 60, meant that this ideal could not be rigidly adhered to.

The following summary of the excavations is according to trench. For the sake of simplicity the order follows that of the allocated trench numbers, beginning with the trenches opened in 1981. It thus provides something of an account of the development of the excavations as the trench numbers follow, more or less, the order in which they were excavated. The baulks subsequently cleared in the 1984 campaign but numbered according to a 1981 trench (as, for instance, Trench 13 East Baulk) are presented after that trench. Excavation was by cultural layer (deposit type) but with many subdivisions into arbitrary vertical passes and horizontal spits, following unit and zembili designations.[11] These allowed for greater overall control of the archaeological material, all of which was kept in the first instance, washed, quantitatively analyzed, and recorded.[12] In the course of excavation all units considered appropriate were dry-sieved; unsieved soil samples were kept for residual water sieving in later seasons. Only about 10 percent of topsoil was dry-sieved; the remainder of the topsoil, as well as certain disturbed units, were not sieved. All the earth associated with inhumation tombs, including those much disturbed or destroyed, was dry-sieved and a few samples from better preserved inhumations were water-sieved. In the case of the cremation tombs, the contents of all ash-urns were carefully water-sieved by the excavation conservator in the excavation laboratory. The contents of those cremation tomb pits yielding no pyre refuse (usually a fill of redeposited bedrock chips and small quantities of earth) were dry-sieved. The pyre refuse of those cremation tombs in the area of the Early Iron Age cutting was water-sieved, except in the case of disturbed or damaged tombs.

Trench 1, incorporating Test Trench 1 (1981) **Figs. 19a–b**; **pl. 20**

Test Trench 1, sited on the north side of the terrace, cut across the bank separating Terraces IV and V (**pls. 21–22**). It measured 8.0 m NS × 1.0 m EW, and was 5.0 m from Test Trench 2 on Terrace IV. For most of the test only a shallow depth of soil—at some points only 0.05 m—overlay bedrock and no stratigraphy was encountered, except toward the north. The test brought to light four tombs: Pithos Inhumation Tomb 1, Inhumation Tomb 3, and Cremation Tombs 18 and 19. Tombs 3 and 18 were stratigraphically interrelated and the upper parts of all four were disturbed, probably the result of modern plowing. The only architectural feature uncovered was the poorly preserved wall *a*; approximately 0.50–0.80 m to the south was a cutting in bedrock 0.40 m deep, roughly on the same alignment and evidently a foundation trench. It was here that the only stratigraphy was encountered (**fig. 19b**). The small quantity of associated pottery, although predominantly Classical, included a few Late Roman fragments; it appears likely the cutting originally may have been for an earlier wall that was later replaced by wall *a*. The orientation of both wall *a* and the cutting, and their proximity to the present-day terrace edge, indicates retaining walls. The construction of wall *a* during Late Roman times is possible given the Late Roman cemetery on Terrace IV below.

The extended Trench 1 (4.0 m EW × 5.0 m NS) revealed a total of eight more tombs, Cremations Tombs 17, 20–24, and Inhumation Tombs 2 and 4.[13] With the exception of Tomb 17 the cremations were well preserved. Tomb 24 was exceptional in that the tomb pit was filled with loose blackened earth representing the remains of the pyre—one of the few tombs outside the area of the Early Iron Age cutting where this was the case. Only the upper part of the skeleton of Inhumation Tomb 2 was preserved in situ (**fig. 20).** In Tomb 4 the only remains encountered were a few small

fragments of a tibia and fibula as well as parts of one radius and ulna of the deceased; although poorly preserved, these had the appearance of being in situ. As was the case with all inhumations where the body of the deceased was placed in a simple pit cut into rock, the bones had with time become firmly attached to the rock. Topsoil deposit type 1a overlay bedrock except in the NE quarter; almost all the diagnostic pottery recovered was of Classical date.

In the NE quarter of the trench a cutting in bedrock 0.40 m deep accounted for the damage caused to Tomb 17. Associated with the cutting were stones that appeared to define the poorly preserved remains of two possible walls, designated walls '*b*' and '*c*' **(figs. 19a–b**). In this area deposit type 3 was met below topsoil to a depth of 0.36 m; the associated diagnostic pottery was Classical except for a possible Early Iron Age sherd (not inventoried) and one small fragment of a Late Roman amphora, best seen as intrusive. Walls '*b*' and '*c*' were consistent with, and on a similar alignment to, the better preserved Classical walling uncovered in Trench 43 to the east, although their relationship with any of these walls could not be clearly determined. The two catalogued Early Iron Age fragments (**1**, **2**) were both gleaned from topsoil, deposit type 1a.

Trench 6 (1981) **Figs. 21a–b**; **pls. 23–25**

Trench 6, originally laid out as a 2.0 m × 1.0 m test, was quickly extended into a square measuring 5.0 m to the side, sited 3.0 m south of Trench 1. It produced immediate results and, with Trench 13 to the east, defined one of the most concentrated clusters of Early Iron Age tombs. Sixteen certain tombs (Tombs 28, 37–46, 48, 50, 52–54) were uncovered, all cremations. Many were found in a good state of preservation; some, such as Tombs 37, 43, 46, and 48, still had their stone covers preserved. Less well preserved were the four tombs (Tombs 38–40, 45) in the SW quarter of the trench, their upper parts much damaged by modern plowing. Approximately 0.35 m SE of Tomb 39, were fragments of the jug **3**, probably representing the displaced remains of a vessel originally serving as *kterisma* for one of the nearby tombs (cf. Tomb 39). The only tomb in any way clearly disturbed by Classical building activity was Tomb 53, although it is interesting to note that two of the best preserved tombs (Tombs 43, 46) were located only centimeters from the NW face of wall *a*. Apart from the certain tombs, four shallow empty pits observed in bedrock may represent tomb pits.[14]

The only evidence of burned debris representing possible remains of a pyre was noted on flat bedrock in the area between Tombs 43 and 46, both of which were sealed with cover stones. Recovered from this area of blackened earth were several burned sherds (listed under Tomb 43 in chapter 3). In the immediate vicinity of Tomb 28 a scatter of unburned sherds encountered to the north and west of the ash-urn (itself sealed by the schist disk **T28-2**) included fragments of an Early Iron Age amphora **T28-4**, as well as later intrusive material (noted under Tomb 28 in chapter 3). In most parts of the trench, deposit type 1a overlay bedrock to a depth of 0.10–0.40 m, from which was recovered a small quantity of Early Iron Age material, including some of the missing fragments of tomb pots; a good deal of Classical material; and a small quantity of Archaic, Late Roman, and post-Byzantine pottery. Apart from the jug **3**, selected Early Iron Age fragments include **4** and **5**, from topsoil in the general area of Tomb 28, and **6** encountered near the center of the trench.

The remains of two poorly preserved walls, designated walls *a* and b, defining a corner were met in the south part of the trench and a shallow foundation cutting for wall *a* continued to the NE for about 1.0 m. Wall *b* continued to the south scarp but was not picked up in the adjacent Trench 46. The only encountered stratigraphy was immediately east of walls *a* and b, where deposit type 3 was located beneath topsoil, but extended horizontally only for a distance of 1.5 m and was not picked up along the east scarp section. Once this unit was cleared, the preserved top of the damaged Tomb 53 was revealed.

Trench 6 East Baulk (1981) **Fig. 22**

The baulk measured 5.0 m NS × 1.0 m wide. Deposit type 1a, which yielded a small quantity of Classical pottery, overlay bedrock to a depth of 0.15–0.35 m. Two cremation tombs (Tombs 49, 51) were uncovered consistent with those in Trenches 6 and 13; the latter tomb was of particular interest for its many tomb covers (see **fig. 14**;

pls. 155–157). In excavating the baulk the eastern extent of the pit for Tomb 54 (excavated as part of Trench 6) was more clearly defined, and it was here the pierced terracotta (**T54-2**) was found 0.10 m below the lip of the tomb pit.

Trench 9, incorporating Test Trench 9 (1981) **Figs. 23a–c**

The initial Test Trench 9, 4.0 m EW × 1.0 m NS, was sited 21.30 m south of Test Trench 1 in order to investigate the nature of occupation at a point near the center of the terrace. A further test (Test Trench 8) was sited near the southern extremity of the terrace but was never excavated. Having been cleared to bedrock, Test Trench 9 revealed a greater depth of deposits than that encountered in the north part of the terrace. The deposits consisted of several distinct Classical strata, including the upper part of a large pit or possible well shaft as well as an Early Iron Age cremation, Tomb 134. As a result of these finds a number of extensions were planned around the original test and an area measuring 6.0 m × 4.0 m was opened, resulting in a final trench plan defining a rectangle 5.60 m NS × 6.0 m EW, with a small projection at the SE corner (**fig. 23b**).

The stratigraphy is shown on the sections (**fig. 23c**). Deposit type 1a was encountered to a greater depth than in other areas, ranging between 0.20 and 0.50 m, with its upper crust slightly lighter in color as a result of leeching. Below this a more compact, darker soil, deposit type 1c, was encountered to a depth of 0.07–0.25 m. The pottery recovered from deposits type 1a and 1c was identical—predominantly Classical wares with the occasional fragment of Late Roman and post-Byzantine pottery. Walls *a* and *b*, along with associated tumble, began to appear at 0.40 m below surface, as did the Classical layers, deposit type 3. The latter included part of a level paved walking surface and a roof-tile and pottery smash. Apart from a few sherds of Early Iron Age date (**9–11**), the sherd material recovered was Classical, with a high proportion of fragments of wine amphorai and black-gloss saltcellars, dating the deposit to the fourth century B.C.[15] Similarly, the excavation of the pit first noted in Test Trench 9 yielded fourth-century material, with decayed and recompacted bedrock chips, consistent with deposit type 5 encountered in the bottom 0.15 m (see **fig. 23c,** south scarp section). The only walls encountered (walls *a* and *b*) formed the NE corner of a structure subsequently excavated as part of Trenches 44, 47, and 48.

The clearance of deposit type 3 revealed the tops of the southernmost Early Iron Age tombs (Tombs 133–134). In the central and NE sectors of the trench deposit type 4 was encountered above bedrock to a maximum depth of 0.15 m, and it was through this layer that many of the tomb pits were dug. That this deposit represents a direct continuation of the same unit encountered in Trench 22 associated with the Early Iron Age cutting was clear, although its precise horizontal extent into Trench 9 was difficult to determine accurately because of the disturbance caused by the Classical building activity in both Trench 9 and the south part of Trench 22. This was further confounded by the fact that an area measuring 3.40 m × 1.60 m in the NW quarter of the trench was not excavated to bedrock **(fig. 23b**). Some of the pottery encountered in deposit type 4 in Trench 9 was Classical, best seen as intrusive, but many fragments of Early Iron Age vessels were recovered, including **7** and **8**. More notable, however, was the presence of a relatively large quantity of fire-affected sherds, a selection of which is catalogued (**12–22**), that were recovered from the general vicinity of Tombs 122 through 131. Some of these fragments may represent sherds displaced from one or other of the disturbed tombs.

A total of thirteen tombs was revealed, defining the southernmost cluster of those excavated (Tombs 122–134). All thirteen were cremation tombs with simple pits cut into the rock, although in the case of Tomb 123 the ash-urn was placed on unworked bedrock (cf. Tomb 99). Their state of preservation varied; some (e.g., Tombs 124, 127, 130, 133, 134) were well preserved; others (e.g., Tombs 122, 126, 131, 132) were much disturbed by the Classical building activity, especially Tomb 132. In some tombs (Tombs 125, 127, 128, and probably 132) the pit was filled with remains of the pyre; in the case of Tomb 124 only a small quantity of loose blackened earth was encountered in the tomb pit, which was otherwise filled with chocking stones and bedrock chips. A small quantity of darker earth was noted in the immediate vicinity of Tombs 122, 123, and 126, but no burned debris was recovered

from the actual tomb pits; in Tombs 129, 130, 131, 133, and 134 there was no burned material.

Trench 12 (1981) **Figs. 24a–b**; **pls. 26–28**

The original Trench 12 was a 5.0 m square sited 1.0 m west of Trench 6. The early discovery of Inhumation Tomb 6 in the SW corner and of fragments of human bone in the south scarp necessitated extensions, resulting in a final trench plan measuring 8.0 m × 5.0 m, with the small projection to the west. Deposit type 1a was encountered over the entire area of the trench to a maximum depth of 0.30 m. In the north and east sectors of the trench bedrock was soon reached with the removal of topsoil, and it was in this area of higher, unworked bedrock that five cremation tombs were uncovered; these tombs (Tombs 29–32, 82) represent a continuation of the same cluster first encountered in Trench 6. With the exception of Tomb 30, they were found in a very poor state of preservation, their upper parts only centimeters from the modern surface. In addition to the normal quantities of Classical pottery and a small amount of Late Roman and post-Byzantine sherds, topsoil yielded a few of the missing fragments of disturbed tomb pots as well as a small quantity of other Early Iron Age fragments, including **23**.

The stone packing deposit type 2 was encountered below topsoil in those parts of the trench where bedrock was not met. The packing, ranging in depth from 0.05–0.55 m, was laid in order to create a surface level with the higher bedrock (**fig. 24b**). In addition to the stones and roof-tile fragments, a good deal of fragmentary pottery was recovered, dating primarily from the sixth through fourth centuries B.C. but including fragments of at least twelve different vessels of post-Byzantine lead-glazed ware;[16] a few sherds of the Early Iron Age were also recorded (**24–26).** The removal of deposit type 2 revealed the preserved top of wall *a* at a depth of 0.35 m below surface in the SW corner of the trench. Only a single course, founded on bedrock, was preserved, and its continuation was picked up for a short distance to the west in Trench 25 East Baulk (see **fig. 32b**). The subsequent excavation of Trench 22 North Baulk (see **figs. 30a–c**) showed that it formed a corner with Trench 22 wall *e* (see **fig. 29a)**. In the area between wall *a* and the south scarp, deposit type 3a was noted below deposit type 2, representing fill below the floor level of this structure; the small quantity of pottery recovered from it was exclusively Classical. In other parts of the trench, mainly in isolated pockets in the natural rock, deposit type 3b was noted below deposit type 2 (**fig. 24b,** sections B-B and C-C).[17]

In the SE part of the trench, north of wall *a* and associated with the deep cutting in bedrock that averaged 0.30–0.40 m deep, deposit type 4 was revealed below deposit type 2. The cutting, clearly illustrated on **pls. 27–28**, and the associated deposit type 4 were subsequently encountered in trenches to the south, and it was clear that bedrock in the area was carefully prepared in order to create a level surface. Five tombs were located in this area of Trench 12, Inhumation Tombs 6, 7, and 8 and Cremation Tombs 96 and 97. Of the inhumations, Tombs 6 and 7 were found in a good state of preservation although the cranium of Tomb 7 was not preserved (see chapter 4). The deceased were laid out in line, some 0.50 m apart, in extended supine position, oriented SE–NW with crania to the SE. Only the lower legs and feet of the deceased of Tomb 8 were preserved, in situ and well articulated; the remainder of the body had been destroyed by the foundation for wall *a*. Cremation Tomb 96 was stratigraphically related with Inhumation Tomb 6, its ash-urn in a more-or-less upside-down position over the lower right arm of the skeleton below. The only other ash-urn encountered in an upside-down position was in Tomb 57. The ash-urn of Tomb 97 was located in the area between Inhumation Tombs 6 and 7 and its tomb pit, like that of Tomb 96, was cut into deposit type 4 but did not reach bedrock. The very bottom of the tomb pit was at the level of the skeletons of Tombs 6 and 7. Unfortunately, the small quantity of pottery recovered from deposit type 4 in this area could not be more precisely dated than Early Iron Age; only three fragments, all from handmade vessels, have been selected and catalogued (**29–31**).

Trench 12 East Baulk (1981) **Fig. 25**

The baulk measured 5.0 m NS × 1.0 m wide. Outcrops of bedrock were visible above surface, especially toward the south, prior to excavation. The removal of topsoil deposit type 1a (maximum depth 0.25 m), revealed bedrock in all parts of the

baulk, as well as the preserved tops of four cremation tombs (Tombs 33–36). The south extent of the pits of Tombs 34 and 35 were in the NW corner of Trench 60 (see **fig. 53a**), and the west extent of Tomb 34 was partly located in Trench 12; Tomb 36 was mostly located in the SW corner of Trench 6. Scraps of cremated bone were found scattered in an area just north of the pit for Tomb 33, along with a few fragments of the presumed ash-urn **T33-1**. All four tombs were encountered in the south half of the baulk in an extremely poor state of preservation, being so close to the modern surface.

Trench 13 (1981) **Fig. 26**; **pl. 29**

Trench 13 was laid out as a 5.0 m square east of Trench 6. A small extension (0.90 m × 0.90 m) near the SE corner was opened to define more clearly the extent of Tomb 68; it was here that the body fragments of the Early Iron Age amphora **32** were found on flat bedrock.[18] With the removal of topsoil deposit type 1a, bedrock was reached in all parts of the trench at a depth of 0.20–0.40 m. Deposit type 1a yielded many fragments of Classical pottery, a small quantity of later wares, and a few of the broken and displaced fragments of tomb pots. Fourteen cremation tombs (Tombs 56–69) were uncovered, the majority partially damaged with their upper parts mostly plowed away. The damage was greater in Tombs 59, 61, 64, 66, and 68. In some cases, notably Tomb 57, a layer of bedrock chips either was placed over the ash-urn or had subsequently accumulated and recompacted, resulting in particularly well-hidden tombs. In the area between Tombs 60, 61, and 62 a small lens of loose blackened earth, about 0.45 m across, contained a small quantity of cremated human bone as well as fire-affected sherds, a selection of which is catalogued (**33–35).** Although this material may have been displaced from Tombs 61 or 62 (both poorly preserved), it could not be clearly associated with either. A smaller quantity of blackened earth, but no burned sherds, was encountered in the pit of the better preserved Tomb 60.

About 0.75 m to the south a similar, but smaller, lens of loose blackened earth was noted on flat bedrock in the area between Tombs 62 and 63, from which was also recovered a small quantity of cremated human bone and joining body fragments of a wheelmade amphora **36** that displayed no clear signs of burning. The only other feature encountered was a rectangular-shaped cutting in bedrock in the SE quarter of the trench (1.40 m long × 0.60–0.70 m wide × 0.30 m deep). This represents what survived of a foundation trench for a Classical wall (robbed of its stone) directly in line with the small preserved portion of wall *a* in Trench 46. The fill of the cutting was the same as deposit type 1a, and it was clear that this cutting accounted for much of the damage to the nearby Tombs 64 and 66.

Trench 13 East Baulk (1984) **Fig. 27**

Trench 13 East Baulk measured 5.0 m NS × 1.0 m EW. Its north scarp was about 0.40 m north of that of Trench 13 but on the same alignment as the north scarp of Trench 58 (cf. **figs. 50–51**; **pls. 69a–b**). Bedrock was quickly reached at a depth of 0.05–0.35 m with the removal of topsoil deposit type 1a; the small quantity of pottery recovered was of Classical date. In the central part of the baulk, portion of wall *a*, more fully exposed in Trench 58, encountered only centimeters below surface, clearly defined a corner with the poorly preserved remains of another wall (see **fig. 50a–b**). In the north part of the baulk a concentration of stones and roof-tile fragments was intermingled with sherds of Classical date. Tomb 70, met at a depth of 0.16 m, was fairly well preserved; a very small quantity of blackened earth, but no cremated bone or fire-affected sherds, was encountered a few centimeters to the north.

Trench 15 (1981) **Fig. 28**; **pls. 30–31**

Trench 15, a 5.0 m square, was sited close to the north and west limits of Terrace V, near to the constructed feature, partially visible at surface level, known locally as pyrgos (see p. 23). Bedrock was quickly reached in most parts of the square at an average depth of 0.15–0.30 m with the removal of deposit type 1a. In the SE corner a concentration of small stones defining an area approximately 1.25 m × 1.15 m was uncovered below deposit type 1a, directly on bedrock, which at this point was at a slightly lower level. Consisting of small unworked pieces of limestone, it resembled deposit type 2 but lacked the copious quantities of roof-tile and pottery fragments recovered from this deposit elsewhere; the small quantity of associated pottery

gave no firm clue as to date. The same deposit was later picked up in the NE corner of Trench 57 for a distance of 1.50 m (see **fig. 49a**), but petered out to the east, appearing only as an ill-defined scatter of stone in Trench 57 East Baulk. Although probably best seen as an isolated pocket of deposit type 2, it was separated by some 4.50 m from the main area of the packing (see **fig. 16**).

Also uncovered were four pits in the bedrock. Pit 1 was roughly circular (maximum length 1.05 m × 0.35 m deep). The fill comprised earth that was slightly looser in texture and darker in color than topsoil, and from which was recovered a complete roof tile of Lakonian type (inv. 81.68) as well as pottery dating to the sixth and fifth centuries B.C. and some fragments of animal bone.

Pit 2 was also roughly circular (maximum length 0.94 m × 0.45 m deep). The contents of the pit were unusual. In the center two medium-sized pieces of limestone lay side by side; above them were a number of smaller stones and slightly to the NW the base fragment of a handmade vessel, perhaps Early Iron Age (inv. 81.81, not catalogued). The rest of the pit was filled with loose blackened earth identical to that encountered in tomb pits containing the remains of pyres. From this fill were recovered sixteen very small fragments of an Early Iron Age handmade burnished vessel, much affected by intense burning, and twenty-four small seashells. No cremated human bone was recovered, so the possibility of it being a tomb seemed unlikely. Its interpretation as a pyre also seemed doubtful, particularly as no trace of human bone was recovered. Moreover, it differed from known pyres in other parts of the Greek world, especially in size. The feature interpreted as the main pyre area of the Koukos cemetery (Carington Smith and Vokotopoulou 1989:431) was larger than Pit 2 by almost half a meter. A plausible explanation is that it was associated with an aspect of the funeral ritual, perhaps the preparation of food as part of the funeral feast or *perideipnon* (see chapter 4).

The oval-shaped Pit 3 measured 1.15 m long × 0.40 m wide × 0.41 m deep. No distinct fill was encountered that differed significantly from deposit type 1a. In addition to a small quantity of sherds, all evidently of Classical date, the fill yielded ten small fragments of a human skull, perhaps displaced from one of the nearby poorly preserved inhumation tombs excavated as part of Trench 1 (cf. Tombs 1–4). Pit 4 measured 1.25 m long × 0.50 m wide (max.) × 0.44 m deep. The dark-colored earth fill proved sterile.

These four pits were larger than most of the Early Iron Age cremation tomb pits; the long and narrow Pits 3 and 4 were probably only natural hollows in the rock. Pit 1 may have been intentionally cut in the Classical period, and only Pit 2 was clearly contemporary with the Early Iron Age cemetery, although its exact function is difficult to determine. The fact that no certain tombs were encountered in the trench provided useful information on the NW extent of the cemetery area.

Trench 22 (1981 and 1982) **Figs. 29a–d**; **pls. 32–33**

Trench 22, 4.0 m NS × 5.0 m EW, was opened late in the 1981 season and not completed until the following year. Sited in the area between Trenches 9 and 12, it proved one of the most productive on the terrace and subsequently dictated the siting, in 1982, of Trenches 25 and 26. As with Trench 9, the depth of deposits was more substantial than in trenches further north. The removal of deposit type 1a to a depth of 0.10–0.32 m revealed the preserved tops of a series of walls as well as a number of distinct soil units defined horizontally. In all, remains of five walls (designated walls *a* through *e*) were uncovered, generally in a poor state of preservation. In the west part of the trench wall *b* had been built flush against wall *d*, and this "double" wall, designated wall *b/d*, extended into Trench 25 East Baulk. In the SE quarter of the trench the remains of a further two walls were revealed; the better preserved wall *a* was built parallel to wall *c* and separated by a narrow channel 0.35 m wide, although at the east scarp of the trench walls *a* and *c* appear to have been connected by at least one block set lengthways and clearly in situ. Whether walls *a* and *c* once formed a double wall like *b/d* is uncertain, although their line if continued to the NW would bond at right angles with wall *b/d*. A small portion of another wall, wall *e*, was uncovered along the north scarp and was more fully exposed in Trench 22 North Baulk (see **figs. 30a–c**), where it was shown to have formed a corner with Trench 12 wall *a* (see above). On the

evidence of associated pottery, two distinct structures are represented by the walls uncovered in Trench 22. The first, comprising Trench 12 wall *a* and Trench 22 wall *e*, is probably of an earlier phase of Classical building activity; the second, comprising Trench 22 walls *b/d*, *a*, and *c* was perhaps slightly later. The latter may have been connected with the building more fully exposed in Trenches 9, 44, 47, and 48.

In the center of Trench 22 the stone packing deposit type 2 was encountered below topsoil; the channels left in the earth once the packing was removed clearly indicated that the walls in the vicinity had been robbed of their stone. As was the case in Trench 12, deposit type 2, although yielding many fragments of Classical wares, was clearly deposited during the post-Byzantine period as was made clear by fragments of late glazed wares encountered throughout the unit. A concentration of stones revealed in the NE quarter of the trench was either a continuation of deposit type 2 or tumble from wall *c*.

Deposit type 2 did not extend over the entire area of the trench. Once topsoil was cleared several distinct soil units were exposed in addition to the packing, although at certain points the stratigraphy was far from clear because of disturbance caused by the stone robbing. In the south part of the trench, and within the area more clearly defined by the triangle formed by walls *b/d*, *a*, and *c*, deposit type 3 ranged in depth from 0.25–0.36 m and yielded pottery that was almost exclusively Classical. It was into this deposit, near the center of the south scarp, that a pit was dug. Only about one-half of this pit could be excavated as it extended into the south scarp of the trench; it had a maximum preserved diameter of about 0.90 m × 0.35 m deep. In it were fragments of pottery and roof tiles, evidently of the fourth century B.C.

Below deposit type 3 a softer, multicolored soil, deposit type 4, was met to an average depth of 0.2 m; the coloring ranged from brown to gray with patches of black and pinkish-mauve, the result of ash and other burned debris. It was during the excavation of deposit type 4 that the tops of Early Iron Age tombs began to appear. The pottery recovered from the deposit in this part of the trench includes both Early Iron Age and Classical fragments, but the incidence of many joins among the Classical fragments in this deposit and the one immediately above (deposit type 3) suggests that the presence of Classical material was intrusive. Toward the center of the trench the depth of deposit type 4 was greater, up to 0.40 m deep, where it also lay directly below deposit type 2. Only fragment **37** was selected among the many fragments of Early Iron Age date from this area. Below deposit type 4, but confined to certain points, were the decayed bedrock chips of deposit type 5.

In the north half of the trench the stratigraphy was slightly different (cf. **fig. 29d**; the horizontal extent of deposit type 4 in the north half of the trench is indicated by hatching on **fig. 29a**). To the west of the preserved wall *e* deposit type 4 was revealed immediately below topsoil, directly over bedrock. The deposit here had a maximum depth of 0.23 m and was somewhat coarser in texture than that further south; it contained a greater amount of pebbles and small stones but similar quantities of burned debris. The pottery recovered was almost exclusively of Early Iron Age date, of which only two pieces (**38**, **39**) have been selected. In the area east of wall *e* topsoil (deposits type 1a and 1c) was removed in two passes. Deposit type 4 was encountered below, identical in color and texture to the same unit west of wall *e*; below deposit type 4 were met bedrock chips intermingled with light-colored earth of deposit type 5. The working of the natural rock in this area of the trench in order to provide a level surface was particularly highlighted along the north scarp section. Here it was shown that deposits type 4 and 5 were confined within the cutting in bedrock (at this point about 0.45 m deep), whereas to the east the higher level of unworked bedrock continued into Trench 26. In addition, the small area between walls *a* and *c* (excavated separately) revealed that both walls were founded not directly on bedrock but into the earth of deposits type 4 and 5. A similar situation was noticed for parts of wall *b/d*, which was especially clear in Trench 25 East Baulk where parts of Tombs 101 and 106 were located below wall *b/d*. At one point below wall *c* deposit type 4 was encountered to a depth of 0.40 m. Several Early Iron Age tombs (especially Tombs 119, 120, 121) had been clearly damaged by these walls, and the possibility of other tombs being completely hidden beneath them cannot be ruled out.

A total of sixteen tombs (Tombs 99, 107–121) was uncovered, all cremations. Tombs 112 and 118 were multiple cremations where more than one ash-urn was placed in the same tomb pit. Some of the tombs were well preserved, others much damaged; the disturbance of Tombs 107 and 110 was caused by the foundation for wall *e*, Tomb 119 was damaged by wall *c*, and wall *a* accounted for the poor state of preservation of Tombs 120 and 121. The damage caused to Tomb 116 was either the result of Classical building activity, at a point near to where walls *b/d*, *a*, and *c* may have converged, or by the later deposit type 2 (Papadopoulos 1990). With the excavation of Trench 22 to bedrock, it was clear that the cutting in the natural rock in order to create a level surface extended over most of the area of the trench. Higher unworked bedrock was encountered only at the NE corner, at a point near the NW corner and several smaller outcrops near the south scarp. The same cutting continued into the SW quarter of Trench 12, the east half of Trench 25, and for a short distance into Trench 9; its eastern extent clearly terminated in the area of Trench 22 East Baulk.

The bedrock thus leveled, many of the ash-urns of individual tombs in Trench 22 were placed upright on the flat surface or within slightly hollowed-out pits only a few centimeters deep; there were none of the deep tomb pits encountered in the area beyond the cutting. The other significant feature of the tombs in this area was that the ash-urns, even those poorly preserved, were surrounded by loose blackened earth representing the remains of the pyre and from which was normally recovered a quantity of burned sherds, a feature rarely noted in tombs outside the area of the cutting. The significance of this area, in terms of both burial custom and chronology, is considered in chapter 4.

Trench 22 North Baulk (1984) **Figs. 30a–c**; **pls. 34–37**

The baulk measured 5.0 m EW × 1.0 m wide. No tombs were encountered, but its excavation provided useful information on the relationship of Trench 12 wall *a* and Trench 22 wall *e*. To the west a small portion of the stone packing deposit type 2 was revealed below topsoil (deposit type 1a),[19] but terminated well short of the west face of wall *e*, although it clearly extended over Trench 12 wall *a* (see **fig. 24b,** A-A, B-B*)*. A slightly darker earth near the south scarp and below a small piece of schist appeared to be related to a small hollow or depression in the bedrock. Originally thought to have been the remains of a damaged tomb, this proved to be a scatter of Early Iron Age sherds, most likely displaced from the nearby Tombs 98 and 107.[20]

Trench 25 (1982) **Figs. 31a–c**; **pl. 38**

Trench 25 was a 5.0 m square sited to the west of Trench 22 and separated by Trench 25 East Baulk. The trench was originally laid out in order to investigate further and define more clearly the area of the Early Iron Age cutting first encountered in Trenches 12 and 22. Topsoil deposit type 1a was excavated to a depth of 0.15–0.32 m; only in the SW corner of the trench was the looser, darker earth of deposit type 1b encountered above 1a to a maximum depth of 0.14 m. With the removal of topsoil bedrock was reached only in the NW quarter of the trench; elsewhere the stone packing deposit type 2 was revealed, except in the SE quarter where deposit type 4 was quickly encountered (**fig. 31c**). Deposit type 2, here cleared to a maximum depth of 0.4 m, was more concentrated toward the center and east parts of the trench, tending to peter out toward the west and south. The bulk of the pottery encountered among the stones and roof-tile fragments of the deposit was Classical, but the presence of fragments of at least three post-Byzantine vessels verified its late date. In the lowest pass of the deposit, immediately above deposit type 4, a small quantity of sherds of the Early Iron Age was recovered, two of which are catalogued (**41, 42**), as was a bronze finger ring (**43**) believed to be contemporary.

Deposit type 4 represents a direct continuation of the same unit in Trench 22, characterized by a soft texture and multicoloring and with ash and burned debris encountered throughout. Below deposit type 4, but only in those areas where the level of the natural rock was deepest, were the decayed bedrock chips of deposit type 5; it was during the excavation of deposits type 4 and 5 that the tops of Early Iron Age tombs were uncovered. Deposit type 4, excavated to a maximum depth of 0.25 m, yielded pottery almost exclusively of Early Iron Age date; only in the uppermost pass were any

fragments of later intrusive material noted. Of the Early Iron Age material only a selection has been catalogued: **44** and **45** were found in the NE quarter of the trench in the vicinity of Tombs 13 and 14; **40** and **48–54** were gleaned from the more productive SE quarter in the area of Tombs 103–105 (**40** from the upper pass of the deposit, **48–54** from the lower passes; uncatalogued fragments are listed under individual tombs). The locations of the jug **46** *a*nd the handmade open vessel **47** are indicated on **fig. 31a**. The former, found in the area above the cranium of Tomb 14, may represent an offering for that tomb, or was perhaps displaced from the nearby Tomb 12; similarly **47** may also represent a *kterisma* from one of the nearby tombs, although its shape, fabric, and burnishing are unusual and the vessel may well date to the Bronze Age.

The only wall encountered in the trench was a small portion of the poorly preserved wall *a*, revealed below deposit type 2. It was founded on bedrock, cutting across and causing much damage to the lower portion of the skeleton of Inhumation Tomb 16 below (see **pl. 114**; cf. the case of Inhumation Tomb 8, much of which was destroyed by the foundation of Trench 12 wall *a*). Well-defined Classical deposits were not encountered in the trench, although at a few points (especially in the SE quarter) the excavator noticed patches of reddish-gray and pinkish-mauve color resembling daub or packed mud at the same level, immediately above deposit type 4, probably representing the remains of a walking surface of Classical date.

Six tombs were cleared, Inhumation Tombs 13, 14, and 16 and Cremation Tombs 103–105. The cremation tombs, all located close to one other in the SE quarter, were consistent with those located in the cutting in Trench 22, with the blackened remains of the pyre placed in the tomb pit around the ash-urn—although in the case of Tomb 105 the quantity of associated burned material was not great. Of the three, Tomb 104 was exceptional in that the ash-urn, *kterismata*, and remains of the pyre were enclosed within a cist constructed of worked schist slabs. This was one of two only examples in the entire cemetery of a cremation cist tomb, the other being the disturbed and partially dismantled Tomb 102 (cf. the inhumation cist, Tomb 9).

A few centimeters north of Tomb 105 and east of Tomb 104 a small portion of a pit cut into bedrock and filled with ash appeared as a lens along the east scarp section; this proved to be the western extent of the pit of Tomb 106. The possibility of more tombs in the unexcavated baulk separating Trenches 25 and 44 was suggested by a similar lens of ash near the center of the south scarp; two pithos sherds, evidently set on edge, about 0.70 m west of the SE corner, may also be connected with a tomb (**fig. 31c**). The two inhumations in the NE quarter of the trench were simple pit graves, each on a similar orientation but with the pit of Tomb 13 cutting across the NW portion of the earlier Tomb 14 and causing considerable damage to the lower parts of that inhumation, in much the same way that Tomb 10 cut across and damaged Tomb 11 (see **fig. 32c**). At least two large stones over the cranium and upper body of Tomb 13 and at least one similar stone over the cranium of Tomb 14 (**figs. 31a–b**) served as partial tomb coverings. Smaller stones encountered at a slightly higher level were probably part of deposit type 2, rather than of a more substantial stone covering for these tombs. A number of displaced human bones in the vicinity (**fig. 31a**) must originally have belonged to Tombs 9, 11, 14, or perhaps even Tomb 12. Approximately 1.2 m south of the NE corner were a number of pithos sherds, laid flat on bedrock; with the subsequent excavation of Trench 25 East Baulk, these proved to be part of the Pithos Inhumation Tomb 12. As already noted, Tomb 16 was encountered in the west half of the trench, damaged by the foundation of wall *a*. The tomb, another simple pit grave on an orientation similar to Tombs 13 and 14, was a double grave consisting of the remains of an earlier inhumation that had been piled up in the east end of the pit in order to make room for the later inhumation, which was laid out in what was originally a fully extended position (other multiple inhumations include Tombs 5 and 9).

With the excavation of Trench 25 to the level of bedrock, it became clear that the natural rock was worked over most of the area of the trench in order to create a level surface; it was here that deposits type 4 and 5 were encountered. In the west part of the trench, and especially toward the NW, the surface of the natural rock was considerably harder, clearly unworked, and at a slightly higher

level. Consequently, the western extent of the Early Iron Age cutting was defined, with the whole leveled area measuring approximately 8.0–10.0 m EW.

Trench 25 North Baulk (1984) **Fig. 32a–d**; **pls. 35–37**

The baulk originally measured 5.0 m EW × 1.0 m NS, but was later incorporated with Trench 25 East Baulk and extended slightly (0.25 m) to the SE in order to clear Tomb 9. The stratigraphy encountered was consistent with that of Trenches 25 and 40. With the removal of topsoil deposit type 1a to a depth of 0.20–0.25 m bedrock was reached in the west half. The latter represents a continuation of the unworked bedrock in the NW quarter of Trench 25 and the west half of Trench 40, which neatly defined the west extent of the cemetery area. In the east half of the baulk deposit type 2 was met, petering out toward the west where deposit type 4 was revealed; the latter continued toward the east, below deposit type 2. The two Early Iron Age tombs (Tombs 9–10) uncovered were both inhumations. In the center of the baulk the removal of topsoil quickly revealed the top of Tomb 9, and only the SE end of the grave was partially covered by deposit type 2. Although poorly preserved, the tomb was exceptional in that it represents the only inhumation cist in the cemetery and contained the remains of four individuals, the greatest number in any one tomb. To the east was exposed the NW portion of the inhumation pit grave Tomb 10, which extended into Trench 25 East Baulk and is described more fully below.

Trench 25 East Baulk (1984) **Figs. 32a–i**; **pls. 35–37, 39–41**

Trench 25 East Baulk, which separated Trenches 22 and 25, proved to be one of the most productive excavated areas on the terrace and was soon extended to the north, up to the area of the small extension excavated as part of Trench 12 (see **fig. 12**). With a number of small extensions its final dimensions were 7.40 m NS × 1.12–1.65 m EW. The stratigraphy encountered is best illustrated on the east scarp section of Trench 25 (see **fig. 31c**). With the removal of topsoil deposit type 1a to a depth of 0.20–0.30 m, the stone packing deposit type 2 was met over the entire area, except toward to the south. The deposit was more concentrated toward the central area, tending to peter out toward the north where it was less than 0.10 m deep. To the south the preserved top of the double wall originally designated Trench 22 wall *b/d* appeared at a depth of 0.15 m. Northwest of the wall, about 0.30 m below surface, the excavator encountered patches of a pinkish-mauve packed mud surface that was taken to represent a floor or walking surface associated with wall *b/d* (this surface is also seen along the south scarp of Trench 25: **fig. 31c**). The removal of deposit type 2 yielded copious quantities of roof-tile and pottery fragments, primarily Classical, but also fragments of post-Byzantine pottery and other small finds. Once cleared, the top of the continuation of Trench 12 wall *a* was encountered, against the south face of which deposit type 3a was cleared. Below this a shallow foundation trench was revealed along the south face of wall *a*, being a cutting into bedrock approximately 0.20–0.47 m deep; the fill comprised a light-colored, compacted earth with bedrock chips (not unlike deposit type 5), which proved to be sterile. In other parts of the baulk the removal of deposit type 2 and the walking surface associated with wall *b/d* revealed the same multicolored, ash-contaminated layer, deposit type 4, associated with the Early Iron Age cutting more fully exposed in Trench 22. It was during the excavation of deposit type 4 that five cremation tombs (Tombs 98, 100–102, 106) and three inhumations (Tombs 11, 12, 15), some stratigraphically interrelated, were brought to light, as was the SE part of Tomb 10.[21]

From north to south, the tombs uncovered include the SE portion of Inhumation Tomb 10, the pit of which cut across and destroyed part of the lower region of the earlier Inhumation Tomb 11; some of the displaced human bone encountered in the NE quarter of Trench 25 may have belonged to Tomb 11 (see above). As with Tombs 13 and 14, a partial stone covering consisting of at least three stones set in line was noted over the cranium and upper body of Tomb 10. At the same level, both within the tomb pit and slightly to its north, fragments of two handmade kantharoi (**T10-1**, **T10-1a**) were found (**fig. 32b**); these represent either *kterismata* for this tomb, were possibly displaced from Tomb 11, or else served some other function in funerary ritual. It is worth adding that the pots

serving as *kterismata* for Tomb 10 and clearly in situ were located close to the feet of the inhumation (discussed further in chapter 4). No stone covering was encountered above Tomb 11.

About 0.10–0.15 m SW of Tomb 11, the remains of the pithos inhumation Tomb 12 were more fully uncovered. The section across Tomb 12, picked up along the east scarp of Trench 25 (**fig. 31c**) where fragments of the skull and tooth of an infant were found, showed a line of stones placed neatly above the pithos fragments as a partial cover. It was therefore clear that this inhumation was not a pithos burial in the normal sense, where the deceased was inhumed in an intact or near complete vessel, but that only a large fragment (or fragments) of a pithos was laid down as a kind of bedding for the deceased (cf. Tomb 1 and especially the case of Tomb 7, where the large pithos rim fragment **T7-1** was used as a "cushion" for the cranial region of the deceased). Only fragments of the body of the pithos were encountered in situ, but in the immediate vicinity was found a pithos rim fragment (catalogued under **T12-1**), thought to be from the same vessel; this raised the possibility that the east part of Tomb 12 may have been damaged, at least in part, by Tomb 11. The bronze ring **43** and the two pots **46** and **47** found in Trench 25 may represent displaced *kterismata* either from this tomb or from Tombs 9, 11, or 14. The remains of the poorly preserved Tomb 98 were encountered to the east of Tomb 11, with fragments of the ash-urn **T98-1** scattered in the vicinity.[22]

The tombs uncovered to the south include Cremation Tombs 100 and 106. The east end of the pit of Tomb 100 very slightly overlapped with the pit of Tomb 101, but it could not be established which was earlier as neither tomb was damaged in any way. Tomb 106 was partially located under, and damaged by, wall *d* (the east portion of Tomb 101 was also partially located beneath wall *d*). In the area between Tombs 100 and 106 was a complex of three stratigraphically interrelated tombs, comprising Cremation Tombs 101 and 102 and Inhumation Tomb 15. The close relationship of these tombs, coupled with the fact that much of the pottery associated with them could be closely dated, warrants a more detailed description of their excavation here. Recovered from deposit type 4 in the immediate vicinity of Tombs 15, 100–102, and 106, but not clearly associated with any individual tomb, were two terracotta spindlewhorls, beads, or buttons (**55**, **56**), a bronze finger ring (**57**), a fragment of a bronze pin-shaft (**58**), perhaps from a fibula, and a small blue glass compound/faience bead (**59**). The terracotta **55** and the ring **57** were found in the uppermost pass of deposit type 4 immediately below the packed mud floor associated with wall *d*; **56**, **58**, and **59** were encountered at a slightly deeper level.

INHUMATION TOMB 15, CREMATION TOMBS 101 AND 102 (**Figs. 32c–d, g–i**; **pls. 41, 110–113**)

The tombs and their contents are individually described in chapter 3; here it is their relationship to one another as excavated that is important. The first feature encountered was the ash-urn of Tomb 102, which contained the cremated remains of an adult of undetermined sex. **T102-1** was a large wheelmade krater; only the base and lower body were preserved in situ, although fragments of the rim and one handle were strewn about the immediate area (**fig. 32g**; see **pl. 110**). As encountered, the pot did not appear to be in a distinct pit but was found upright on a flat piece of schist; this was an unusual feature as no other ash-urn was encountered in similar circumstances.

More schist slabs revealed below (**fig. 32h**; **pl. 111**), at a depth of 0.48–0.68 m, proved to be the carefully laid cover slabs of Inhumation Tomb 15. The subsequent removal of these cover stones revealed one of the best preserved inhumations in the cemetery, that of an adult male aged 25–30 years at death; the skeleton was oriented SW–NE with the cranium toward the SW (**fig. 32i**; **pl. 41**; see also **pl. 112**). Although the deceased had been laid out on his back in a fully extended position, his cranium was propped up against a large flat piece of schist set on edge to form a corner with another similar slab, against which was the right hip of the individual. The impression thus created was of a partial cist, as the sides of the cist did not extend around the entire body of the inhumation. Furthermore, the slabs defining the cist were not exactly aligned with the body inhumed. At the north end of the tomb the well-articulated feet of the inhumation were found resting on a pot that proved to be the ash-urn for an adult male (**T101-1**)

placed upright in a pit cut into bedrock and surrounded by intensely blackened earth representing the remains of the pyre, from which were recovered many fire-affected sherds (**T101-2–T101-15**) (**fig. 32i**; see **pl. 113**). The ash-urn and its associated pottery could be assigned as Submycenaean on the basis of style, and at least one of the fire-affected vessels is considered an Attic import. It was, therefore, clear that Inhumation Tomb 15 was later than Cremation Tomb 101.

These combined features initially suggested a straightforward course of events; however, the picture was complicated once Tomb 15 was recorded and taken up. Below the upper body of the inhumation, at the south end of the tomb, lay a large, roughly square-shaped pit (maximum length 0.72 m) that contained blackened earth, burned sherds, and some fragments of cremated human bone.[23] More significantly, the outline of this pit was clearly defined by the two schist slabs set on edge (to form the corner already noted) against which the cranium of Tomb 15 was rather uncomfortably propped up (**figs. 32c–d,** section B-B). Moreover, one of the larger sherds found in the pit below the skeleton proved to be an unburned joining fragment of the ash-urn **T102-1**, the remainder of which was encountered above the inhumation. **T102-1** must therefore have been the ash-urn that belonged in this pit, originally enclosed within a cist, the shape, nature, and dimensions of which would have been similar to the nearby cremation cist, Tomb 104 (see **pls. 210–215).** Tomb 15 was therefore later than Tombs 101 and 102.

The most unusual aspect of this complex of tombs was the degree to which one tomb disturbed two others, a situation rarely met in the cemetery. In order to inter Inhumation Tomb 15, the cist of Tomb 102 was partially dismantled and its ash-urn lifted and subsequently replaced above, a process that caused minor damage to Tomb 101. This might be explained by the fact that the inhumation was significantly later and that the cist was buried at a time when any possible markers for the cremations below were no longer visible—or perhaps that Tombs 101 and 102 were never marked, a less likely event on the evidence of the general layout of the cemetery. Be that as it may, the top of the cist of Tomb 102 would soon have been clear to anyone digging down to that level.

Unfortunately, there were no *kterismata* associated with Tomb 15 to help pinpoint its date, but it remains difficult to imagine it being significantly later than the cremations. Although the rites of cremation and inhumation were practiced side by side at Torone, the weight of the evidence would indicate that inhumations tended to be earlier than the majority of cremations (cf. especially the relationships of Tombs 6 and 96 and Tombs 3 and 18). Another explanation might be that the layout of these three tombs was intentional and that they represent a multiple—possibly family—group of graves laid out over a short period, not unlike the multiple Inhumation Tombs 5, 9, and 16, which were all opened at some time in order to inter another (or more than one) individual. The date of the pottery associated with Tombs 101 and 102 is interesting. It seems this complex of tombs was laid out at a time contemporary with the transition from Final Mycenaean/Submycenaean to Early Protogeometric in Athens, when cremation began to replace inhumation as the favored rite (see chapter 4; see also Kurtz and Boardman 1971:34; Desborough 1972:270–277).

Trench 26 (1982) **Figs. 33a–b**; **pls. 42–45**

Trench 26, 5.15 m EW × 4.0 m NS, was laid to the east of Trench 22 (Trench 22 East Baulk [0.85 m EW] remains unexcavated). The trench was originally sited in order to investigate and define more clearly the area of the Early Iron Age cutting centered in Trench 22. With the removal of topsoil deposit type 1a bedrock was reached in all parts of the trench at a depth of 0.05–0.35 m and it was soon evident that the natural rock here had not been worked as it had in the area of Trench 22. It was also clear that the eastern extent of the Early Iron Age cutting was to be found in the area of Trench 22 East Baulk. Deposit type 1a yielded sherd material that was predominantly Classical but with the occasional Early Iron Age, Late Roman, and post-Byzantine fragment also noted; much of the Early Iron Age material encountered would have been displaced from tombs. A total of eight tombs (Tombs 87–94) was uncovered, all cremations and consistent with those beyond the area of the Early Iron Age cutting. These tombs were in a poor state of preservation, a few centimeters below surface, and with their upper parts mostly

damaged by modern plowing. In addition, fragments of two Early Iron Age vessels (**60**, **61**) were found close to each other, along with a few Classical sherds, approximately 2.20 m NE of the SW corner of the trench. This was originally thought to represent the possible remains of another tomb, but as no distinct tomb pit was encountered, nor any cremated bone, such a possibility seemed highly unlikely. Of the eight tombs, seven were clustered close together in the NE quarter; no tombs were encountered in the west part of the trench toward the area of the Early Iron Age cutting, and only one, Tomb 94, was located slightly to the south. Worthy of note is Tomb 89, where the ash-urn (**T89-1**) was the body of a pithos unlikely to have been an intact vessel at the time of burial. This tomb provides the only instance where fragment(s) of a pithos served as an ash-urn. Tombs were not encountered to the south with the excavation of Trenches 28 and 29.

Trench 26 East Baulk (1982) **Pl. 45**

The baulk separating Trenches 26 and 27 measured 4.0 m NS × 1.0 m wide. With the removal of topsoil deposit type 1a bedrock was quickly reached at an average depth of 0.10 m (a section of the south scarp of the baulk is incorporated in the south scarp section of Trench 27: **fig. 34b**). No tombs, nor any other feature, were encountered, but the east edge of the pit of Tomb 91, excavated as part of Trench 26, which extended slightly into the baulk, was more clearly defined.

Trench 27 (1982) **Figs. 34a–b**; **pl. 45**

Trench 27, sited east of Trench 26, measured 4.0 m NS × 5.0 m EW; the east scarp of the trench was on the same north–south line as the east scarps of trenches 43, 13, 46, and 29, thus providing a north–south section across the entire east part of the excavated area (cf. **fig. 15**). Bedrock was reached in all parts of the trench at a depth of 0.08–0.34 m with the removal of topsoil deposit type 1a, which was deepest toward the east, especially near the NE corner where a slight, evidently natural, depression in the bedrock was met. The pottery recovered was mainly Classical, except for fragments of a handmade tripod cauldron of the Early Iron Age (not catalogued). Only one cremation, Tomb 80, was encountered near the center of the trench in a poor state of preservation, its upper parts probably damaged by plowing.

Trench 28 (1982) **Figs. 35a–b**; **pls. 44–46**

Trench 28, 5.0 m NS × 4.0 m EW, was sited 1.0 m south of Trench 26 and 1.0 m east of Trench 9. With the removal of topsoil deposit type 1a, bedrock was reached in most parts of the trench, except to the west; the depth of the deposit ranged between 0.04–0.15 m in the east to a maximum of 0.40 m near the SW corner. In the west part of the trench, in an area defined by the lower level of the natural rock, the stratigraphy encountered was consistent with that of Trench 9. Below deposit type 1a the darker, more compact earth of deposit type 1c was revealed, located for much of the area over bedrock to a maximum depth of 0.20 m. The pottery recovered from deposits type 1a and 1c was identical—mainly Classical sherds and the odd fragment of post-Byzantine date. Below deposit type 1c, but confined to isolated points near the NW and SW corners, a soil change was associated with a scatter of stones and roof-tile fragments consistent with deposit type 3 in Trench 9. The pottery recovered here was exclusively Classical. Toward the north scarp a number of small, shallow depressions were noted in bedrock (**fig. 35a**); the largest had a maximum length of 0.60 m and was 0.17 m deeper than the surrounding bedrock. Within it were found two stones, a roof-tile fragment, and the toe of a Classical amphora. A little to the west were two more shallow depressions, but in neither case was a distinct fill observed. These depressions, indicated by dotted lines on **fig. 35a**, had a maximum length of 0.35 and 0.39 m, respectively, and a depth of 0.10–0.15 m. The excavator raised the possibility that these were originally Early Iron Age tomb pits. This, however, remains improbable as even with very disturbed tombs (e.g., Tombs 32, 34, 36, 53, 132) some telling indication was nevertheless preserved. It is worth noting that although no Early Iron Age material was encountered in the trench, it is possible the area of lower bedrock in the NW corner may represent the SE extent of the Early Iron Age cutting, particularly as the continuation of the cutting into Trench 9 was difficult to define horizontally. At two isolated points further east the excavator noted slight patches of discoloration thought to be

ash but with nothing of Early Iron Age date associated.

Trench 29 (1982) **Figs. 36a–b**; **pl. 47**

Trench 29 was originally laid out as a 5.0 m square east of Trench 28 and south of Trench 27 and represents the SE extent of the excavations on the terrace. The trench was sited to test for the possible continuation of tombs, but as the prior excavation of Trenches 27 and 28 had already provided much evidence for establishing the SE extent of the cemetery area, it was decided to begin the excavation of the new trench by testing only the easternmost strip (1.0 m EW × 5.0 m NS).

For most of the test topsoil deposit type 1a overlay bedrock to a depth of 0.08–0.37 m, assuming a particularly reddish tinge as the natural rock was approached, especially where deepest. The only encountered feature was a cutting in bedrock 0.10–0.25 m deep, averaging 0.40 m wide, that ran diagonally (SW–NE) across the test. The fill was a more compact, darker-colored earth than that of deposit type 1a, consistent with deposit type 1c as encountered in Trenches 9 and 28; it yielded a good quantity of sherds and other small finds of Classical date, but also at least one Late Roman fragment. The orientation and width of the cutting were features consistent with the Classical walls on the terrace and it is likely it was the foundation trench for a Classical wall later robbed of its stone.[24] In the absence of either Early Iron Age tombs or any related sherd material, it was decided not to excavate the remainder of the trench but to concentrate on, and further test, potentially more productive areas.

Trench 40 (1982) **Figs. 37a–b**; **pl. 48**

Trench 40 was a 5.0 m square sited north of Trench 25 and west of Trench 12. The west scarp of the trench represents the western extent of the excavations on the terrace. Topsoil deposit type 1a was cleared to a depth varying from 0.04 m near the NW to 0.40 m in the NE to expose bedrock in the west half of the trench (see **fig. 37b**, north scarp).[25] In the SE quarter of the trench, below deposit type 1a, deposit type 3 was cleared to a maximum depth of 0.22 m. The horizontal extent of deposit type 3 in Trench 40 was defined by the level of higher bedrock to the west and by the projected line of Trench 12 wall *a* to the north (the wall itself was not preserved); the deposit was not encountered to the NE. The only trace of the later stone packing deposit type 2 was a cluster of stones at the SE corner of the trench; a small cluster of stones consistent with deposit type 2 was also encountered immediately to the west of Tomb 5 (**fig. 37a**). The small quantity of post-Byzantine pottery recovered from deposit type 3, the material from which was otherwise predominantly Classical, was probably the result of disturbance caused by deposit type 2. In the east half of the trench deposit type 4 was encountered below deposit type 3 toward the SE, whereas toward the NE it was encountered directly below deposit type 1a. Deposit type 4 was excavated to a depth of 0.27 m, but lacked the greater ash contamination evident in the same deposit in Trench 22. Significantly, the west extent of the deposit was clearly defined by the level of higher, unworked bedrock, whereas to the east the natural rock was worked in order to create a level surface (bedrock near the north scarp of the trench had been cut to a maximum depth of 0.50 m). Consequently, the NW extent of the Early Iron Age cutting was established. The small quantity of sherd material recovered from deposit type 4, although predominantly Early Iron Age (a few fragments of intrusive Classical and later material were noted in the upper pass), consisted mainly of fragments of handmade wares difficult to date more closely.[26]

Two Early Iron Age tombs were uncovered: Inhumation Tomb 5 and Cremation Tomb 95. Tomb 95 lay along the east scarp of the trench, necessitating a small extension in order to recover it, and consisted of an ash-urn (**T95-1**) placed upright on bedrock that was only very slightly worked in order to receive it; the tomb was located only centimeters east of Inhumation Tomb 5. Inhumation Tomb 5 was a multiple grave consisting of three skeletons, one on top of the other, in a simple pit. Immediately to the west, on the higher level of unworked bedrock, was a concentration of stones probably best seen as a continuation of deposit type 2 rather than representing the remains of a possible stone covering, cairn, or marker.

Trench 43 (1982) **Figs. 38a–c**; **pls. 49–53**

Trench 43 was laid out as a 5.0 m NS × 6.0 m EW rectangle to the north of Trench 13 (separated by a

baulk measuring 0.7 m) and to the east of Trenches 1 and 56 (separated by a baulk measuring 0.8 m). It represents the NE extent of the excavation area at a point near the terrace edge.

Trench 43 proved productive, yielding two Early Iron Age tombs, a series of walls of at least two distinct Classical building phases, and an Early Iron Age potter's kiln (Cambitoglou 1982:77, pl. 56a; Papadopoulos 1989a). With the removal of topsoil deposit type 1a the preserved tops of walls began to appear at a depth of 0.10–0.40 m, while in various parts of the trench (especially in the south half) bedrock was exposed at a similar depth (**fig. 38c**). The pottery recovered from topsoil was again primarily of Classical date with a small quantity of later material (Late Roman and post-Byzantine) encountered in the upper passes; the material from the lower passes tended to be more exclusively Classical. A small quantity of Early Iron Age sherds was scattered throughout topsoil, a selection of which is catalogued (**63, 64**). The various walls uncovered in the trench, labeled alphabetically, are presented in plan on **figs. 38a–b**.[27] A more detailed descriptive account of the Classical architecture will be presented elsewhere.

Walls a, *d*, and *e* were clearly part of one structure, with a small preserved area of water-worn pebbles set in a matrix of mud (deposit type 3a) representing the remains of a floor (**fig. 38a**).[28] A large pyramidal loomweight (**83**) found built into wall *d* (**fig. 38a**) was identical to **82** found in the west part of the trench in deposit type 6 and thought to be Early Iron Age (for contemporary loomweights elsewhere see Carington Smith 1975; E. Barber 1991). Representing an earlier phase of construction was wall *j*, uncovered in the NE quarter of the trench and cut through by the later wall *d*. To the NE an associated floor, deposit type 3a, was made of small sea-worn pebbles set in a matrix of gray-colored mud, similar to the floor deposit already noted along the SE face of wall *a*. Associated pottery and other small finds recovered from above the floor and in its makeup appeared to date from the fifth century B.C. Below the deposit type 3a floor two distinct Classical units encountered, here designated deposit types 3b and 3c, were confined to this area of the trench (**fig. 38c**, north scarp).

The various walls encountered in the trench were of a series of structures representing different chronological phases of construction of Classical date. The earliest structure appears to be that represented by wall *j*, later built across by wall *d*, which was in turn part of a structure also comprising walls *a* and *e* (perhaps also wall *g*?). In the NW quarter of the trench, walls *b*, *c*, and *h* defined the preserved remains of another architectural unit that appeared to be earlier than that represented by walls *a*, *d*, and *e* as the SE end of wall *b* was apparently cut by the foundation trench for wall *a*. The poor state of preservation of wall *b* and the fact that no trace of it was encountered to the east of wall *a* raised some doubts, however. The exact relationship of Feature f and wall *g* to any of these structures was impossible to establish with certainty. Moreover, the relationship of the walls encountered in Trench 43 with those of Trench 1 to the NW was not clear.

The Early Iron Age kiln was located in the NW quarter of the trench in the area surrounded by the later walls *a*, *b*, and *c*, and partially beneath the base of wall *b* (**fig. 38b**; **pls. 49–53**). A detailed description of the kiln along with a discussion and catalogue of its contents has already been published (Papadopoulos 1989a); here only the circumstances of its excavation are noted.

With the removal of topsoil deposit type 1a, a bright red-colored clayey deposit with traces of black—deposit type 6—proved to be the remains of the collapsed superstructure of the kiln, subsequently leveled and cut across by the foundations of the later walls. This deposit, which yielded fragments of Early Iron Age pottery (most of which joined with fragments found within the pit of the firing chamber below), was confined horizontally to the immediate vicinity and was not encountered along the north or west scarps of the trench. It was here that the loomweight **82** was found. Deposit type 6 was encountered to a depth of a few centimeters only, and in the course of its excavation the pit for the firing chamber of the kiln and its entrance (the stoke hole/fire-mouth) were uncovered. Deposit type 6 had a maximum depth of 0.10 m where it overlay the bedrock surrounding the pit for the fire chamber. The circular-shaped shaft for the firing chamber, about 0.80 m in diameter, was cut into bedrock to a depth of 0.40 m and lined with hard-fired clay. The narrow stoke hole/fire-mouth cut to a similar depth at the SE quarter of

the main shaft measured approximately 0.50–0.60 m long and 0.40 m wide. Within the shaft of the firing chamber the complete base and lower body of a large pithos (**KP-l**) was found upright in situ, while all around it were strewn fragments representing at least thirteen more vessels (**KP-2–KP-14**), some semicomplete, more fragments of the pithos **KP-l**, and a few large pieces of red-colored fired lumps of clay, probably the remains of the floor of the chamber of the kiln and its superstructure. There was also a large piece of fired clay resembling a brick. It was clear that the kiln had collapsed at a time when the baking of the pots was nearly complete. The most conspicuous area of blackened and burned debris was encountered in the stoke hole/fire-mouth of the kiln; the fire itself would have been built in the entrance of the kiln (Rhodes 1968:11–17; Papadopoulos 1989a). Approximately 1.0 m SE of the kiln and beyond the area of its collapsed superstructure, a few patches of multicolored earth displaying clear signs of burning were encountered immediately above bedrock and below deposit type 1a (**fig. 38b**), the largest of which measured 1.20 m across; a smaller patch was noted in the area east of wall *d*. These patches were taken to represent a raking-out of the burned material from the pit of the firing chamber of the kiln.[29]

Two Early Iron Age cremation tombs were encountered in the trench; the tomb pit of Tomb 25, located along the west scarp, was partially filled with the blackened remains of the pyre and represents one of the few tombs beyond the area of the Early Iron Age cutting where such was the case. Tomb 55, located near the south scarp, represents a continuation of, and was consistent with, the cluster of tombs first encountered in Trenches 6 and 13. Approximately 1.0 m west of Tomb 55 the base fragment of a small Early Iron Age wheelmade amphora (**62**) was encountered on flat bedrock; **62** may represent a displaced *kterisma* from Tomb 55, but this seems unlikely given the size of the tomb pit and the actual shapes of the pottery involved (**T55-1**, **62**). The excavation of Trench 43 provided useful information on the extent of the cemetery area. The fact that only two tombs were encountered, coupled with the location of the kiln, helped establish the NE boundary of the Early Iron Age cemetery. The kiln was located 1.25 m from the nearest tomb (Tomb 25); for the possible location of another, as yet uncertain, kiln in the NE corner of Trench 58, see p. 47.

Trench 44 (1982) **Figs. 39a–c**; **pl. 54**

Trench 44, a 5.0 m square, was sited south of Trench 25 and west of Trench 9. As was the case in Trench 9 (and subsequently with Trenches 47 and 48 to the south), the depth of deposits encountered was somewhat more substantial than in trenches to the north. Topsoil deposit type 1a was cleared to a depth of 0.10–0.50 m; below it, in most parts of the trench, deposit type 1c was revealed to a further depth of 0.08–0.35 m. Deposit type 1c was characterized by a more compact earth containing small stones but assumed a color more yellow-brown than was the case in Trench 9; it represents accumulated soil unaffected by plowing. At some points the demarcation between 1a and 1c was not very clear; the pottery recovered from both units was identical, comprising a large quantity of Classical sherd material with a small admixture of Late Roman fragments and a significant number of Classical loomweights. With the removal of deposits type 1a and 1c the preserved tops of a series of walls, designated walls *a* through *e* and *g*, began to appear at depths of 0.10–0.35 m below surface; wall *f* was subsequently exposed with the removal of deposit type 3.

In the area NW of wall *a*, a hard-packed yellow surface revealed with the removal of deposit type 1a was taken to represent a floor of packed earth. The pottery recovered immediately above this surface could be dated to the fourth century B.C.; this presumed floor level was not cleared. Wall *b* represents a continuation of Trench 9 wall *b* (**figs. 13**, **23a**) and 'wall' *d* may be related to Trench 22 wall *b/d*. At a distance of about 3.0 m SW of wall *b*, walls *a* and *c* were connected by wall *e*. The preserved top of wall *e* was encountered at a slightly lower level than the preserved tops of walls *a*, *b*, and *c*. In plan the result was a small and narrow enclosure formed by walls *a*, *c*, and *e* that butted against wall *b*. The internal space thus defined was excavated separately in two passes. The upper pass, consisting of a soil similar to deposit type 1c but with fewer small stones, yielded a number of Classical sherds in addition to a small quantity of animal bone. The lower pass, comprising a still lighter-

colored earth with many bedrock chips, yielded only two sherds. Although difficult to interpret, the area may have been used for storage and may have represented the substructure of a stair or related support providing access to the roof or possible upper story.

In the area to the east of wall *c*, and at the same level as the preserved top of wall *b*, the removal of topsoil brought to light a small concentration of Classical amphora fragments intermingled with stone (**fig. 39a**), and exposed to the south a constructed feature thought to be a drainage or guttering system. The subsequent removal of the feature yielded a small quantity of sherd material and other small finds that could be dated to the Classical period. To the SE were a number of limestone pieces set in line within a shallow cutting in bedrock, which extended to the south scarp; although poorly preserved, they clearly defined another wall, designated wall *g*. The SW continuation of this wall was subsequently picked up in Trenches 47 and 47 North Baulk (there designated wall 1: see **fig. 43**). The latest diagnostic pottery recovered from the cutting for wall *g* belonged to the fourth century B.C.

Deposit type 3 was encountered in the area north and west of the wall, below the drainage feature. A good deal of sherd material was recovered from this deposit, together with a number of other small finds, the latest of which belonged to the late fifth century B.C. but with many sherds of Archaic and early Classical date noted. It was during the excavation of deposit type 3 that the preserved top of wall *f* first appeared at a depth of 0.45 m. Wall *f* appeared to form a corner with wall *g*, but the relationship of the two was not clear.

The removal of deposit type 3 to a depth of 0.27 m revealed a floor level comprising a purple-brown-colored packed earth, especially in the area between walls *b* and *f* but also at certain points south of wall *f* and east of wall *c*; in the south part of the trench bedrock was exposed (**fig. 39c**, east and south scarps). The subsequent clearance of the floor makeup in the area between walls *b* and *f* yielded a few Classical sherds as well as fragments of four Early Iron Age vessels (not catalogued).[30] The clearance of the same floor makeup in the area south of wall *f* saw the purple-brown giving way to a pale yellow-colored makeup, which yielded a good quantity of sherds, primarily Classical and Archaic but with fragments of the Early Iron Age also recovered. Of the latter, a selection is catalogued (**65–67***)*; a few of these fragments displayed signs of secondary burning.[31]

With the floor makeup cleared, bedrock was reached over most of the area and a series of three pits exposed (**fig. 39b**). The largest of the three, Pit 1, 1.0 m long × 0.50–0.60 m wide, was cut into bedrock to a depth of 0.41–0.46 m. There were two distinct types of fill: an upper level consisting of a loose-textured, light gray soil; and a lower level of a more compact, darker, yellow-brown earth with several fist-size stones. The pottery in both levels was exclusively of Classical date, thus the pit resembled some of those uncovered in Trench 15 (especially Pit 1). Approximately 0.60 m to the NW was the smaller, oval-shaped Pit 2, with a maximum length of 0.52 m and ca. 0.40 m deep; no fill distinct from that of the floor makeup was noted. Pit 3, located near the SW corner beside the east face of wall *c*, was circular with a maximum diameter of 0.70 m and 0.30 m deep; the fill was a dark red-brown earth in which were noted small flecks of carbon. Of the five sherds recovered, four were clearly Early Iron Age and fire affected (cf. **67**).[32] It is possible this pit and its contents represent the poorly preserved remains of an Early Iron Age tomb; a few more Early Iron Age sherds were encountered in Trench 47 to the south, as well as a small quantity of cremated human bone.

In the NE corner of the trench, in the small area north of wall *b*, the removal of topsoil deposits type 1a and 1c revealed deposit type 3, which here assumed a slightly darker color with a purplish tinge and with traces of black throughout; the pottery recovered was exclusively Classical. Below this a thin deposit of lighter color, mostly bedrock chips, was revealed to a maximum depth of 0.10 m, consistent with deposit type 5. Deposit type 4, encountered in the SE part of Trench 25 only 1.0 m to the north, was not picked up in Trench 44 and it would appear that the area of the Early Iron Age cutting did not extend this far to the SW. The subsequent excavation (in 1984) of Trenches 47 and 48 to the south brought to light more Classical walls, which helped better define the structures in Trench 44. It is worth noting that the high incidence of Classical loomweights in deposit type 3

and topsoil may indicate that a loom once stood in the area in antiquity.

Trench 46 (1982) **Figs. 40a–b**; **pl. 55**

Trench 46, the last of the trenches opened on the terrace in the 1982 campaign, measured 5.0 m EW × 3.56 m NS; its north scarp was flush against the south scarp of Trench 13. A skin baulk a few centimeters wide was left in order to provide a north scarp section; Trench 46 was separated by a baulk of 0.44 m from Trench 27 to the south. Topsoil deposit type 1a overlay bedrock in all parts of the trench to a depth of 0.05–0.30 m. It yielded the normal quantity of sherd material, primarily Classical but with a few sherds of Early Iron Age date, mostly fragments displaced from one of the tomb pots encountered in the trench. Toward the SW corner a thin layer of humus, deposit type 1b, had formed over deposit type 1a, the result of a pear tree just to the west. The only walling revealed was a small portion of the poorly preserved wall a. The probable continuation of this wall to the NE was picked up in the SE quarter of Trench 13 in the form of a foundation trench cut into bedrock. Against the SE face of wall *a* was a roughly oval-shaped pit or depression in the natural rock that measured 0.90 m × 0.75 m × 0.25 m deep. Large fragments of pottery, mainly Classical wine amphorai, as well as a few other small finds and small stones were encountered within (cf. Trench 15 Pit 1 and Trench 44 Pit 1).

Five Early Iron Age tombs (Tombs 73–76, 79) were uncovered, all cremations and poorly preserved, and with only the lower parts of the tomb pots in situ. Tombs 73–76, which lay along the east scarp, represented a continuation of the cluster of tombs first met in the SW corner of Trench 13, whereas Tomb 79 was located some 2.30 m to the SW. Only one other tomb, Tomb 80, was encountered in Trench 27 to the south.

Trench 46 East Baulk (1984) **Figs. 41a–b**

Trench 46 East Baulk, 4 m NS × 1 m wide, was sited in order to allow further investigation of the concentration of tombs encountered in the east parts of Trenches 13 and 46, and to establish how much further east the cemetery extended. It was excavated prior to Trench 59. The south scarp of the baulk continued the line of the south scarps of Trenches 46 and 59; the north scarp was flush against the south scarp of Trench 13 East Baulk. Bedrock was quickly reached at a depth of 0.07–0.20 m with the removal of topsoil deposit type 1a, and the rather poorly preserved Cremation Tombs 71 and 72 were revealed to the north. Encountered at a depth of 0.10 m below surface, with only the lower parts of the tomb pots in situ, the two tombs represent a continuation of the cluster of tombs first encountered in Trench 13. This cluster continued into the NE corner of Trench 46 and the south part of Trench 13 East Baulk; as was the case there, the damage caused to the upper parts of the tombs would have been the result of modern plowing. In the south part of Trench 46 East Baulk a small pot base (inv. 84.249) was found upright on flat bedrock; although not precisely datable, the fragmentary base did not appear to be of Early Iron Age date.

Trench 47 (1984) **Figs. 42–45**; **pls. 56–60**

Trench 47, laid out as a 5.0 m square to the south of Trench 44 and separated by a 1.0 m baulk (subsequently excavated as Trench 47 North Baulk), represents the SW extent of the excavations on the terrace. The trench was originally sited in order to investigate further the Classical buildings uncovered in Trenches 9 and 44 and to test for the possible continuation of Early Iron Age tombs in the vicinity. The earlier excavation of Trenches 9, 28, 29, and 44 indicated that tombs tended to peter out toward the south (tombs were encountered only in Trench 9). It was therefore hoped that the excavation of Trenches 47 and 48 would help define more accurately the southern extent of the cemetery area.

Topsoil deposit type 1a was encountered to a depth of 0.12–0.35 m; below it deposit type 1c was excavated to a depth of 0.40 m. A large quantity of pottery, primarily Classical, was recovered from 1a and 1c, with numerous joining fragments noted between the two. Also recorded were a small quantity of Archaic material, two sherds of Late Roman date, and a small quantity of Early Iron Age material, including **68** (from deposit type 1c) and a fragment of the krater rim **79** (deposit type 1a); more joining fragments of the same vessel were encountered in Trench 48.

During the excavation of deposits type 1a and 1c the preserved tops of a series of walls that began

to appear at depths ranging from 0.07–0.60 m were labeled numerically (**fig. 43**). Wall *1*, continuing for a short distance to the NE into Trench 47 North Baulk, clearly formed the continuation of Trench 44 wall *g*. Wall *2* was bonded to, and formed a corner with, wall *4*. The line of the latter, although it did not continue to the north scarp of the trench, formed a continuation of Trench 9 wall *a*. Near the corner of walls *2* and *4*, but at a slightly lower level, a number of small stones were set on bedrock, butting against the east face of wall *4* and extending to the NW corner of a paved structure located in the SE corner of the trench. The internal space defined by walls *1*, *2*, and *4* was excavated separately and although no fill distinct from deposit type 1c was noted, it was clear the bedrock here had been worked in order to create a level surface. In some parts of the area were the poorly preserved remains of a floor comprising a thin layer of fine gray-colored clay immediately above bedrock. The small quantity of pottery and other small finds found immediately above this floor was of Classical date.

To the south of and parallel to wall *2* was wall *3*, founded on a ledge of bedrock at a slightly lower level; the natural rock at this point fell away sharply to the SW (**pls. 56a**, **57**; cf. **fig. 44**). Wall *3* abutted the paved structure in the SE quarter of the trench (**fig. 43**). A fill similar to deposit type 1c but rather lighter in color and with many more stones characterized the small gap between walls *2* and *3*. The gap, which averaged 0.22 m across, was excavated separately. The latest diagnostic pottery recovered from this area was dated to the late fifth or early fourth century B.C. The bedrock had been cut to form a narrow channel, the surface of which appeared to be water worn, that evidently served as a gutter channeling water to the SE and emptying into a hypothetical drain for which the paved structure served as a covering. The paved structure itself, the best-preserved architectural feature encountered on the terrace (**pls. 56–57**, **60**), comprised a four-sided unit constructed of large worked granodiorite and limestone blocks founded on bedrock. At its SW corner, where the level of bedrock was lower, five and six courses of masonry were preserved; its SE corner ran into the south scarp of the trench and was not exposed. Its NW corner, where bedrock was higher, was preserved to two courses and consisted of two lines of stone, designated walls 7 and *8* (**fig. 43**).

The subsequent excavation of Trenches 47 East Baulk and 48 revealed that the west face of a further wall (Trench 48 wall *1*) butted against the east face of the paved structure. The top of the structure, encountered only a few centimeters below surface, consisted of a covering of thin slabs of worked schist laid flat and resembling a carefully paved surface. At least two courses of schist slabs were preserved that were distinct from walls 7 and *8* and that evidently served as a cover as the narrow channel between walls *2* and *3* appeared to connect with a small opening in the west face of the structure. The lower level of schist slabs, as preserved, roughly continued the line of the north face of wall *3*. Between them and the south face of wall 7 the small area of earth revealed was only partially dug; the few sherds recovered from this area, although Classical, could not be dated more closely. In the north part of the trench was a small portion of another wall, designated wall *6* (**fig. 43**), which continued into Trench 47 North Baulk (see below). At its SE preserved termination a medium-size piece of limestone was found jutting from the north face of the wall, but resting on earth at a slightly higher level. Originally thought to represent another possible wall line and accordingly designated "wall" 5, it proved to be little more than tumble. A further block was encountered directly above the pit or possible well shaft in Trench 47 North Baulk.

In the area west of the paved structure and south of wall *3* the depth of deposits encountered was more substantial; the removal of deposit type 1c revealed a layer of roof-tile fragments and pottery that partially covered the area. The diagnostic pottery encountered in the removal of this layer belonged mainly to the fifth century B.C. Below this deposit type 3a, excavated to a maximum depth of 0.45 m, yielded a good quantity of pottery, many roof-tile fragments, and a number of other small finds, notably loomweights, dating mostly to the years of the fifth century B.C. but with some Archaic material. A few Early Iron Age sherds included at least two of the eight fragments of the krater **78** (the remaining fragments were found in deposit type 3b). Toward the bottom of deposit type 3a, at a depth of 0.80–0.90 m, a concentration of small stones intermingled with larger

fragments of roof tile were uncovered, especially near the junction of wall *3* and the paved structure and a little to the NW along the south face of wall *3* (**fig. 42**). Once this was cleared, deposit type 3b, which contained far less pottery, fewer roof-tile fragments, and almost no small stones, was revealed. At one point, approximately 0.50 m west of the paved structure, an orange-colored patch, not unlike decayed mud brick in consistency, appeared as a lens along the south scarp section (**fig. 45**).

Deposit type 3b was cleared to a depth of 0.40 m and represents the limit of the excavations in the area; bedrock was reached only along the south face of wall *3* and around the paved structure. The latest diagnostic pottery encountered in the deposit belonged to the fifth century B.C., although a proportionately greater amount of Archaic material was noted than in deposit type 3a. In addition the deposit yielded a good many Early Iron Age fragments, most of which are catalogued (**69–78**). A small quantity of cremated human bone scattered throughout the deposit, especially in the area of the angle formed by wall *3* and the west scarp of the trench, coupled with the fact that bedrock fell away sharply to the SW, indicated that deposits type 3a and 3b were leveling fill deposited at the time of construction of the walls encountered in the trench. (The cremated bone in 3b may indicate that some of this fill was acquired near at hand.) A further indication is the fact that the various floor levels were found at a higher level. It is likely that the dip in bedrock may represent the natural line of the terrace edge as it was in antiquity (the present-day edge of the terrace being on a similar alignment a few meters to the SW) and that wall *3* may have served as a retaining wall. If so, the cemetery could not have extended to the SW.

Trench 47 North Baulk (1984) **Figs. 42–44**; **pl. 61**

The baulk separating Trenches 44 and 47 measured 5.0 m EW × 1.0 m NS. The stratigraphy encountered was consistent with that of the north part of Trench 47. With the removal of topsoil deposit type 1a to a maximum depth of 0.28 m, deposit type 1c was excavated to a further depth of 0.45 m. It was during the excavation of deposit type 1c that the preserved tops of walls (Trench 47 walls *1*, *6*, and "wall" *5*) were met. The pottery and other small finds recovered from 1a and 1c, including five coins and at least five more loomweights, belonged to the fifth and fourth centuries B.C. Wall *6* formed a corner with Trench 44 wall *c*. The preserved NE extent of Trench 47 wall *1* (described more fully above) was picked up for a short distance in the baulk and, although broken off toward the NE, it clearly continued the line of Trench 44 wall *g*. Along the west face of wall *1*, and partially underneath one of the blocks which at this point protruded slightly from its bedrock foundation, a deposit of pottery (**pl. 61**) dating to the late fifth or early fourth century helped fix the date of the wall more accurately. About 0.40 m to the west, a limestone block was encountered in line with that designated "wall" *5*. The subsequent removal of the block showed that it rested on the soil of deposit type 1c, which continued for another 0.30 m below it. At a depth of 0.80 m the top of a large circular pit about 1.0 m in diameter was exposed, perhaps the shaft of a well or cistern. It was excavated to a depth of only 2.50 m by the end of the 1984 season, to which point the fill comprised a bright yellow-colored earth with many bedrock chips (not unlike deposit type 5); it yielded only three sherds, all dating to the fifth century B.C.[33] In the area to the east, the floor level comprising a thin layer of fine gray-colored clay, first encountered in Trench 47 in the area defined by walls *1*, *2*, and *4* (see above), was found to continue, although it petered out toward the north where a slight depression in bedrock was noted.

Trench 47 East Baulk (1984) **Figs. 42–43**, **45**; **pl. 62**

The baulk separating Trenches 47 and 48 measured 4.50 m NS × 1.0 m EW. With the removal of deposit type 1a to a depth averaging 0.15 m, deposit type 1c was revealed to the north; toward the south the preserved top of the wall designated Trench 48 wall *1* was met, as was the continuation of the paved structure. A concentration of small stones, roof-tile fragments, and potsherds was found over the paved structure, whereas to the north and east stone tumble was encountered along the west face of Trench 48 wall *1*, the lower courses of which were a little further to the west than the preserved upper courses, which were aligned about 10° further east (**figs. 42–43**). All the associated pottery was Classical. In the central

part of the baulk the continuation of Trench 48 wall *5* was bonded to Trench 48 wall *1*. At a point near the middle of wall *5*, a large, flat schist slab laid as a threshold defined a narrow (0.60 m) entrance (**fig. 43**). This represents the only clearly preserved doorway of the Classical period encountered to date on Terrace V. To the south, the small area between wall *5* and the paved structure was excavated separately and bedrock was quickly reached a few centimeters below the level of the threshold block. The top of the threshold block was about 0.10 m below the level of the pebble floor more fully exposed in Trench 48.

Trench 48 (1984) **Figs. 43**, **45–46**; **pls. 56–60**, **62–63**

Trench 48 was originally sited as a 4.50 m × 5.0 m trench east of Trench 47 and south of Trench 9, but only the eastern part measuring 4.50 m NS × 3.0 m EW was dug. During the clearance of topsoil deposit type 1a, the tops of a series of walls, designated *1* through *5*, began to appear at a depth of about 0.40 m. Toward the SW wall *1* abutted the east face of the paved structure; wall *5* abutted the west face of wall *1*, wall *4* abutted the east face of wall *1*. In the area north of wall *5* and west of wall *1*, a floor encountered at a depth of about 0.15–0.20 m below surface comprised small pebbles set in a matrix of packed earth (**pl. 63**). Poorly preserved, this floor makeup petered out toward the north and west and extended only a short distance into Trench 47 East Baulk. The part of the floor encountered in this trench was not cleared, and the small quantity of diagnostic pottery found immediately above it was mainly fourth century B.C. The level of the floor was about 0.10 m above that of the schist threshold block in wall *5*; associated with it was a rectangular piece of worked limestone (0.27 m × 0.20 m), found in situ at the corner formed by the north face of wall *5* and the west face of wall *1* and which may have served as a door pivot. In the SE quarter of the trench two further possible wall lines, "walls" *2* and *3*, each slightly curved in plan, appeared to define a corner. Although clearly constructed, the function of this structure remains unclear.

No real stratigraphy was encountered in the trench, with topsoil deposit type 1a cleared to a maximum depth of 0.65 m and with bedrock having been exposed at only one point along the east scarp in the area north of wall *4*. Topsoil yielded a good quantity of sherd material and other small finds including numerous loomweights, the latest of which could be dated to the fourth century B.C. The only Early Iron Age material recovered from the trench were fragments of the krater **79**, of which a joining fragment was encountered in topsoil in Trench 47.

STRUCTURES OF THE CLASSICAL PERIOD IN TRENCHES 9, 44, 47, 47 NORTH AND EAST BAULKS, AND 48

The structures encountered in these trenches represent the best-preserved examples of Classical domestic architecture on the terrace. The main architectural unit appears to have been the large room, measuring about 6.75 m SW–NE × at least 6.5 m SE–NW, defined by Trench 9 walls *a* and *b*, Trench 44 wall *b*, and Trench 47 walls *2* and *4*. Probably contemporary with it, or perhaps even slightly earlier, were Trench 47 wall *3* and the paved structure in the SE quarter of Trenches 47 and 47 East Baulk. On the basis of the pottery recovered from both the associated floor in Trench 44 and the fill in the area SW of Trench 47 wall *3*, it appears that these walls were built during the later fifth century B.C. but were probably also in use during the fourth century. Representing a slightly later phase of construction were Trench 44 walls *a*, *c*, and *e* and Trench 47 wall *6*. Trench 44 walls *a* and *c* butted against the south face of Trench 44 wall *b* and were therefore later, although how much later was difficult to determine. Trench 48 wall *1* butted against the east face of the paved structure and was therefore later; at right angles to wall *1* were Trench 48 walls *4* and *5*. Although the excavation of the trench was not completed, the associated pottery suggested the architectural unit comprising Trench 48 walls *1*, *4*, and *5* was probably built during the early fourth century B.C. The exact function and date of the feature designated Trench 48 "walls" *2* and *3* remain uncertain. The only other walls encountered were Trench 44 walls *f* and *g*, with the continuation of the latter picked up in Trench 47 and Trench 47 North Baulk where it was designated Trench 47 wall *1*. Although poorly preserved, these two walls appeared to form a corner of another structure in the central east part of Trench 44.

The discovery of a possible well or cistern shaft in Trench 47 North Baulk, of the drainage system comprising the paved structure and the gutter between Trench 47 walls *2* and *3*, and of the gutter/drainage feature in Trench 44 (see **fig. 39a**) reflects the importance placed on the procurement and channeling of water on the terrace (cf. Trench 43 Feature f). The large quantity of loomweights may indicate that a loom once stood in the area.

Trench 55 (1984) **Figs. 47a–b**; **pls. 64–65**

Trench 55 was laid out as a 5.0 m square north of Trench 40 and west of Trenches 12, 15, and 57, separated by baulks of 1.0 m, and a short distance south of "pyrgos." With the removal of topsoil deposit type 1a, bedrock was quickly reached in most parts of the trench at a depth of 0.10–0.35 m. The absence of Early Iron Age tombs and any evidence of Classical walling provided useful information for establishing the NW extent of the cemetery area. The only features encountered were three pits or natural depressions in the bedrock similar to those encountered in the nearby Trench 15. The smallest of the three, Pit 1, was oval to circular in plan, with a maximum length of 0.50 m × 0.20 m deep. Toward the top of the pit was a concentration of roof-tile fragments and small stones (mainly schist), whereas from the fill below, which was no different from the earth of deposit type 1a, a single sherd of Classical date, along with a small quantity of roof-tile fragments, was all that was recovered. Pit 2, a much larger depression in the SE quarter of the trench was almost certainly natural. It had a maximum depth of 0.30 m and a preserved length of 2.60 m NS. The southern part extended to the south scarp of the trench, but was not encountered in Trench 40; no fill distinct from topsoil was noted. Among the sherds recovered from Pit 2 were a few Early Iron Age fragments (not catalogued), in addition to Classical material.[34] To the west Pit 3 was partially exposed; it had a maximum preserved length of 1.40 m × 0.40 m deep. The fill comprised a dark-red, fairly compact earth with many bedrock chips (in consistency not unlike deposit type 5), which yielded a very small quantity of sherds, most of which appeared to be Classical.

Trench 56 (1984) **Figs. 48a–b**; **pls. 66–67**

Trench 56, 3.0 m NS × 4.0 m EW, was laid out in the area between Trenches 1 and 6, both of which yielded many Early Iron Age tombs. A baulk of 0.50 m NS was left between Trenches 56 and 6, a small portion of which (0.5 m NS × 1 m EW) near the SE corner was subsequently excavated in order to recover Tomb 47. A skin baulk was left between Trenches 56 and 1 to provide a north scarp section.

With the removal of topsoil deposit type 1a, bedrock was quickly reached in most parts of the trench at a depth of 0.05–0.40 m, revealing the tops of three tombs. Along the south and east scarps of the trench were two pits, similar to those in Trenches 15 and 55. Apart from a single fragment of a Late Roman amphora, the sherd material from deposit type 1a was primarily Classical, with only the odd Early Iron Age piece (none catalogued). The three tombs (Tombs 26, 27, 47) were cremations consistent with those of Trenches 1 and 6; all three were found in a fairly good state of preservation even though none preserved any cover slabs. Tombs 26 and 47 had their pits filled with a greater than normal quantity of chocking stones hewn from the natural rock, setting the ash-urns and *kterismata* firmly in their respective positions. Near the SW corner of the trench the fragmentary base of a small wheelmade closed vessel (**80**), probably of Early Iron Age date, was found upright on unworked bedrock; the shape of the vessel together with the circumstances of its finding were similar to those of **62** from Trench 43. Pit 1, the larger of the two pits, was irregular in shape and probably a natural depression in the rock; it had a maximum preserved length of 0.80 m × 0.20–0.35 m deep. No fill significantly distinct from topsoil was encountered, although there was a slight increase in the quantity of sherd material, which was predominantly Classical. Near its center was a scatter of small stones and roof-tile fragments (**fig. 48a**). Pit 2, which extended for a short distance into Trench 56 East Baulk, was roughly circular (0.60–0.70 m in diameter × ca. 0.15 m deep). The fill comprised a loose-textured, dark-colored earth that yielded a few fragments of animal bone and only six small sherds (not catalogued), evidently Classical and Early Iron Age.

Trench 56 East Baulk (1984) **Pls. 66–67**

The baulk separating Trenches 56 and 43 measured 3.0 m NS × 0.80 m EW. With the removal of topsoil deposit type 1a, bedrock was reached at a depth of 0.04–0.25 m and the east part of Trench 56 Pit 2 was better defined.

Trench 57 (1984) **Fig. 49a–b**; **pls. 67–68**

Trench 57, 3.0 m NS × 5.0 m EW, was sited in the area between Trenches 12 and 15 and west of Trench 56. With the removal of topsoil deposit type 1a to a depth of 0.05–0.27 m, bedrock was quickly reached, except in the NE quarter. The small quantity of pottery recovered from topsoil was almost exclusively Classical, except for a few possible Early Iron Age sherds (not catalogued). In the NE quarter of the trench the continuation of the stone packing deposit type 2, first encountered in the SE corner of Trench 15 (see **figs. 16**, **28**, **49**), was revealed to a depth of about 0.10 m in a slight depression in the bedrock. Representing an isolated portion of the same deposit much more concentrated in trenches to the south (see **fig. 16**), it was confined horizontally to the immediate vicinity and was not encountered in Trench 57 East Baulk. The small quantity of pottery intermingled among the stone was insufficient to determine date.

Trench 57 East Baulk (1984) **Pl. 67**

The baulk separating Trenches 56 and 57 measured 3.0 m NS × 1.0 m EW. With the removal of topsoil deposit type 1a, bedrock was reached in all parts of the baulk at a depth of 0.10–0.28 m. Toward the center a roughly circular natural depression in bedrock was uncovered, about 0.75 m in diameter but only a few centimeters deep and with no distinct fill.

Trench 58 (1984) **Figs. 50–51**; **pls. 69a–b**

Together with Trench 59 to the south, Trench 58 represents the eastern extent of the excavations conducted on Terrace V. The trench was originally laid out as a 5.0 m square to the east of Trench 13, but only the western 2.0 m were dug, resulting in a trench plan 5.0 m NS × 2.0 m EW. The removal of topsoil deposit type 1a to a depth of 0.15–0.45 m (average 0.35 m) revealed the preserved top of wall *a*, first encountered in Trench 13 East Baulk (**fig. 27**); bedrock was quickly revealed only in the west part of the trench in the area north and south of the wall. The latest diagnostic pottery recovered from topsoil was Classical. As preserved, the north termination of wall *a* was marked by a large worked granodiorite slab (0.48 m × 0.32 m × 0.14 m) set through the width of the wall; its appearance suggested it may have been a cornerstone or perhaps a support for a door jamb not preserved. No trace of the wall was encountered between this block and the north scarp of the trench.

To the SW, in the area first excavated as Trench 13 East Baulk, wall *a* was bonded to and formed a corner with another wall oriented SE–NW. Although no constructed part of this return wall was preserved, its existence was clear from a relatively deep cutting in bedrock representing its foundation trench. The corner of the structure thus defined shared a similar alignment with other Classical buildings on the terrace but was not clearly connected with any of the walls encountered in nearby trenches. In the area within the corner defined by wall *a* and the cutting perpendicular to it, a layer of large roof-tile fragments, resembling a tile smash, was encountered below topsoil (**fig. 50a**). Extending to the east into the unexcavated part of the trench, this layer (deposit type 3) was cleared to a depth of 0.15–0.40 m; it yielded 347.33 kg of roof-tile fragments in an interleaving of light, yellow-brown soil, as well as a small quantity of pottery and other small finds, including a bronze coin, dating to the fourth century B.C.[35] Clearance of the tile revealed a scatter of small to medium-size stones (mainly schist), evidently fallen blocks, lying on what appeared to be a level surface and confined to the same area east of wall *a* (**fig. 50b**). It was at this level that the excavation of the trench was terminated.

In the NE corner of the trench, at a depth of only 0.07 m, was a bright pink to red-colored clayey unit that immediately recalled deposit type 6. Beside it, at a slightly lower level and appearing along the north scarp section (**fig. 51**), a small patch of dark-colored, ashy earth was revealed, similar to that encountered in the fire-mouth of the kiln and the rake-out area east and west of Trench 43 wall *d*. These features strongly indicated the location of a second kiln, still unexcavated, approximately 8.0 m SE of the first.

As bedrock was reached only in limited parts of the trench, it was not possible to determine with certainty how much further east the cemetery continued, although on the evidence recovered it appeared likely that the east edge of the cemetery was close at hand. There were no tombs in those parts of the trench where bedrock was exposed, and the three tombs (Tombs 70–72) located in the south part of Trench 13 East Baulk and the north part of Trench 46 East Baulk seemed to define the eastern extent of the cluster of tombs first encountered in the SE corner of Trench 13; the two tombs encountered in Trench 59 were both located along the west scarp of that trench.

Trench 59 (1984) **Figs. 51–52**; **pl. 70**

Trench 59 was originally laid out 5.0 m EW × 3.50 m NS to the east of Trench 46; however, only the west 2.0 m were dug, resulting in a trench plan 3.50 m NS × 2.0 m EW that lay 0.50 m south of Trench 58. With the removal of topsoil deposit type 1a, bedrock was quickly revealed at a depth of 0.08–0.30 m, except in the NE corner, and the tops of two tombs were uncovered. The latest diagnostic pottery encountered in topsoil was again Classical, but a few Early Iron Age sherds were also noted, including **81**. The tombs (Tombs 77, 78) were both located near the west scarp of the trench, and both were cremations consistent with those of Trenches 13 and 46. The ash-urn of the better preserved Tomb 78 was recovered almost complete even though no tomb covering was preserved; only the lower part of Tomb 77 was preserved in situ. The pottery from Tomb 77 was stylistically among the latest in the cemetery, an aspect further suggesting that the eastern edge of the cemetery was close at hand. In the NE corner a 0.15 m deep cutting in bedrock was partially uncovered, in the south part of which four small to medium-size pieces of limestone found in line perhaps represented the poorly preserved remains of another wall. The associated fill was not significantly different from topsoil, although it appeared slightly darker in color. The small quantity of pottery recovered from the area, although mostly Classical, could not be precisely dated, and the exact relationship of this feature, as preserved, with the building partially exposed in Trench 58 could not be determined.

Trench 60 (1984) **Figs. 53a–b**

Trench 60 was laid out as a 4.50 m NS × 4.0 m EW rectangle near the center of the cemetery area, between Trenches 6 and 26. Its west scarp was on the same line as the east scarps of Trenches 12, 22, and 22 North Baulk, whereas its north and south scarps were intentionally sited in order to partly cut into the backfill of Trenches 6 and 12 East Baulk to the north and Trench 26 to the south. An area measuring 4.0 m NS × 2.80 m EW between Trenches 60 and 46 remains unexcavated due to the presence of a privately owned pear tree.

The excavation of the trench was straightforward and productive. Once topsoil deposit type 1a had been cleared, bedrock was revealed in all parts of the trench at a depth of 0.05–0.25 m and the preserved tops of five cremation tombs (Tombs 81, 83–86) uncovered, consistent with tombs encountered in Trenches 6, 26, and the east part of 12. Most were found rather poorly preserved with only the lower parts of the tomb pots encountered in situ, although in the case of Tomb 86 the damage caused to the upper part of the tomb was minor. In the NW corner of the trench the southern part of the pit of Tomb 35, excavated as part of Trench 12 East Baulk, was more clearly defined but yielded no further finds.

CONSERVATION OF THE SITE

The shallow depths of the deposits encountered on Terrace V, coupled with the poorly preserved state of the Classical architecture (much of which had been robbed of its stone in the post-Byzantine period), alleviated to a great extent the problem of having to stabilize, consolidate, and maintain the exposed archaeological remains. At the same time it was clear that however poorly preserved these remains, their exposure would lead to inevitable decay and destruction, not only through the processes of natural weathering but also by visitors to the site, numerous in the summer months, and the large herds of goats that traverse the terrace in search of pasture. Moreover, the presence of numerous pits, including a number of the deeper tomb pits, a possible well shaft or cistern, as well as the somewhat better preserved architecture toward the southern part of terrace, posed a hazard for anyone walking over this part of site, and demanded fencing. For

practical reasons the construction of a fence seemed ineffective and would itself require maintenance and policing. Furthermore, the construction of a fence at this part of the site would create an aesthetic blight on the landscape.

On the basis of the experience of the first three seasons of excavation at Torone, it was clear that backfilling was not only the most viable option but also the most effective in terms of both conservation and maintenance. The architectural remains in the 1975, 1976, and 1978 trenches backfilled and subsequently reopened were found to be well preserved, whereas those in the Isthmus and Lekythos trenches that had been fenced and exposed had suffered to varying degrees. The decision was therefore taken to backfill all the trenches opened on Terraces IV and V, Promontory 2, and the Lower City area in 1981, 1982, and 1984.

All ancient walls and other architectural features were reinforced on either side by dry-rubble walls made from stone easily distinguishable from the original fabric of the wall or feature. The trenches were then covered with a variety of synthetic materials (gauzes and plastic) and backfilled with the excavated soil, thereby clearing the large excavation dumps. As part of the archaeological site of Torone is state owned and part privately owned, and as there are no immediate plans to have the site and the excavations formally opened to the public, the decision to backfill was readily accepted by the Archaeological Service and the land owners. It was also the preferred solution among archaeologists and conservators.

EARLY IRON AGE SMALL FINDS NOT FOUND IN TOMBS

The fragmentary pottery and other small finds catalogued in this section (**1–83**; **figs. 54–63**) represent material encountered in the various deposits on Terrace V not clearly associated with any particular tombs. The majority of this material is contemporary with the tomb pottery, although a few fragments are slightly later and contemporary with the kiln. The various locations of the pieces catalogued here are outlined in the trench summaries with their presentation according to trench and deposit type; a list of catalogued pieces according to deposit is given on p. 24. The significance of some of this material in terms of burial custom is outlined in chapter 4 and individual pieces are discussed in the shape studies in chapter 5; objects other than pots are more fully dealt with in chapter 7.

In addition to the material from Terrace V, a small quantity of sherds and objects other than pottery (**84–94; fig. 64**) have been selected from other parts of the site; some of this material is published and fully discussed in *Torone I* (Cambitoglou, Papadopoulos, and Tudor Jones 2001). The selected pieces represent all that can be assigned as contemporary with the tomb material with some degree of certainty, except for the settlement material recently excavated on Promontory 1, which will be published elsewhere. Fragments of pottery that are contemporary, or near contemporary, with the kiln and which were found in other parts of the site are not catalogued as the many of these appear in *Torone I*.

In order to facilitate reference, the following lists pieces according to shape or type of object:

Local wheelmade pottery

Amphorai (all types)	**1**, **4**, **8**, **9**, **10**, **24**, **26**, **32**, **33**, **36**, **39**, **61**, **62**, **65**, **66**, **80**, **86**, **93**, **94**
Amphoriskoi	**41**, **73(?)**
Skyphoi	**28**, **35**, **38**, **44**, **45**, **87(?)**
Lekanides	**5**, **6**, **25**, **37**, **69**, **72**, **89**
Kraters	**11**, **34(?)**, **40**, **87(?)**
Jug	**46**

Local handmade pottery

Two-handled jars	**60**, **75**
Jugs	**2**, **3**, **42**, **90**
Kantharoi	**7**, **31**, **67**, **74**
Bowls	**29**, **51**, **81**
Pithos	**30**
Tripod cauldrons	**23**, **76**, **77**, **88**
Other	**47**, **52**

Imported pottery

Probably Euboian	**48**, **49**, **63**, **78**, **84**
Uncertain	**27**, **64**, **85**
Handmade	**53**, **54**

Local Geometric pottery

50, **68**, **70**, **71**, **79**

Objects other than pottery

Terracotta spindle-whorls, bead, or buttons	**55**, **56**, **91**, **92**
Terracotta loomweights	**82**, **83**
Bronze finger rings	**43**, **57**
Bronze, other	**58**
Glass compound/faience	**59**

Note: **12–22**, fire-affected sherds encountered in Trench 9, deposit type 4, were perhaps displaced from one of the nearby cremation tombs; they are tabulated according to shape in chapter 4.

Unless otherwise specified, all measurements are in meters.

TRENCH 1

1. (81.1200) **Fig. 54**
Deposit type 1
TR 1 2#23
SHOULDER FR.; WM AMPHORA
PH 0.051; PL 0.075
Single fr., broken on all sides, chipped and worn.
Local clay with small to medium white and light-colored inclusions and much silver and golden mica, tending fine; occasional blow-outs. Clay and slip fired evenly pink 7.5YR 7/4.
Shoulder slightly curved, neck becoming vertical.
Slipped and painted: paint dull, thinly applied, fired dark brown. Row of mechanically drawn concentric circles on shoulder, with portions of two sets preserved.
Handle type undetermined. Cf., among others, **T51-1**, **T104-1** (belly-handled), **T124-1** (neck-handled); **T67-1** (belly-and-shoulder-handled).

2. (81.1201) **Fig. 54**
Deposit type 1
TR 1 2#23
FRR.; HM JUG WITH CUTAWAY NECK
Dimensions of illustrated fr.: PH 0.042; D (neck) est. 0.050
Eleven joining and nonjoining frr., much affected by intense burning, preserving small portions of base, body, neck, and rim.
Local clay with many small to medium white and light-colored inclusions and much silver and golden mica. Clay and surfaces discolored light gray due to burning.
Flattened base; body rounded. Vessel misshaped at junction of shoulder and neck. Vertical neck, cut away; rim chamfered.
Exterior burnished but with surface poorly preserved.

TRENCH 6

3. (81.381) **Fig. 54**
Deposit type 1
TR 6 S.F.9
BASE FRR.; HM JUG
PH 0.046
Three main frr. and many smaller chips preserving small portion of lower wall and junction with base; worn.
Local clay with many small white and light-colored inclusions and much mica, predominantly golden. Clay and surfaces fired evenly close to red 2.5YR 5/6.
Flattened base; body rounded but of undetermined H; thin walled.
Exterior burnished, with tooling marks running horizontally, producing good surface with a slight sheen though much worn.

4. (81.1202) **Fig. 54**
Deposit type 1
TR 6 2#7
RIM FR.; WM AMPHORA
PH 0.028; D (rim) est. 0.160
Single fr. preserving portion of rim; slightly worn.
Local clay with a great many small to medium white and light-colored inclusions and much mica, silver tending to predominate. Clay core fired light gray, elsewhere close to reddish yellow 7.5YR 6/6; slip slightly lighter.
Vertical neck; everted, almost horizontal rim with rounded edge.
Slipped and painted: paint dull, evenly and rather thickly applied with a tendency to flake; mostly fired red but becoming darker, approaching black, on one side. Exterior

painted solid, as is preserved interior; zigzag on rim top. Shape and decoration consistent with belly-handled amphorai (cf. **T75-1, T104-1**) and belly-and-shoulder-handled amphorai (cf. **T82-1, T67-1**). Decoration on rim top more common on latter type.

5. (81.1198) **Fig. 54**
Deposit type 1
TR 6 2#9
RIM AND HANDLE FR.; WM LEKANIS Type 1
PH 0.045; D (rim) est. 0.230
Single fr. preserving portion of rim, upper wall, and handle scar; much worn.
Local clay with many small to medium white and light-colored inclusions and much silver and golden mica. Clay fired close to reddish yellow 7.5YR 6/6; slip, where preserved, slightly lighter.
Preserved lower wall curved; upper wall vertical; horizontal rim, flat on top, with rounded outside edge. Portion of scar of horizontal ribbon handle, attached to upper wall directly below rim.
Slipped and painted, but worn: paint dull, with tendency to flake. Fired dark brown on interior and top of rim, light reddish brown on exterior. Traces of paint indicating horizontal band below rim on exterior and extending around handle; interior painted. Rim top decorated with groups of opposed diagonals as shown.
Cf. **T47-3**, **T51-3**, **T124-3**.

6. (81.1199) **Fig. 54**
Deposit type 1
TR 6 2#15
RIM FR.; WM LEKANIS Type 2
PH 0.037; D (rim) est. 0.190
Single fr. preserving small portion of rim and upper wall; slightly chipped.
Local clay with fewer inclusions than normal but some silver and golden mica, tending fine. Clay fired close to reddish yellow 7.5YR 7/6 and pink 7.5YR 7/4; slip closer to very pale brown 10YR 8/4.
Upper body marked by carination, upper wall curving out to short horizontal rim, flat on top, and tapering slightly to rounded outside edge.
Slipped and painted: paint dull, thickly applied, fired black. Broad band on upper wall below rim; lower preserved wall at break and outside edge of rim reserved; interior painted; rim top barred.
Cf. **T81-2**, **T83-2**.

TRENCH 9

7. (81.581) **Fig. 54**; **pls. 373a–b**
Deposit type 4
TR 9 S.F.59
HM KANTHAROS; SMALL VARIETY
H (to rim) 0.080; H (to handle) 0.095; D (rim) 0.047
Complete except for one missing handle and minor chipping at rim; body cracked but not broken.
Coarse local clay with many small to large white and light-colored inclusions and much mica, almost exclusively golden. Clay at handle scar brown 7.5YR 5/4. Exterior surface variously fired, in parts close to red 2.5YR 5/6–4/6, in others reddish yellow 5YR 6/6; at points discolored black.
Base only very slightly flattened, essentially rounded; thick-walled, rounded body; vertical rim terminating in plain rounded lip. Two vertical high-swung handles, only one of which is preserved, round in section, attached from point of max. D directly to rim. Small knob or mastos on either side of body at point of max. D, set between handles. Exterior and interior at neck burnished smooth producing a good but dull surface.
Cf. **T1-2** but with mastoi, and with taller more distinct neck/rim. Cf. Hochstetter 1984: pl. 39, no. 10. Shape common elsewhere in Macedonia from the Early Bronze Age (Heurtley 1939:179, no. 229; 186, nos. 268–270; 188, nos. 285–290; 192–194, nos. 320–349), through the Late Bronze Age (Heurtley 1939:214, no. 407; 222, pl. XVII, no. 437) into the Early Iron Age (Heurtley 1939: pl. XXIIIi, k, n; Andronikos 1969:211–213, figs. 51–52). The vessel may well be Early Bronze Age.

8. (81.611) **Fig. 54; pl. 262**
Deposit type 4
TR 9 9#53
SHOULDER AND HANDLE FRR.; WM NECK-HANDLED AMPHORA
PH 0.155; PL 0.190
Three joining frr. preserving portion of shoulder, neck, and one handle; slightly worn.
Local clay with many small to medium mainly white and light-colored inclusions and much silver and golden mica; occasional pinprick blowouts. Clay core fired light gray where thickest, elsewhere evenly fired close to reddish yellow 5YR 6/8.
Shoulder curved; vertical neck offset from body by slight ridge much worn. Thick vertical handle with double concavity on upper face, attached from shoulder to neck below rim (rim not preserved).
Slipped and painted: paint worn in parts; dull, rather thickly applied with tendency to flake; fired red. Broad horizontal band at lower preserved shoulder, from which springs a row of upright mechanically drawn concentric semicircles (one complete set and portion of a second preserved); preserved set comprising ten arcs with small dot at center. Thin horizontal band on lower neck above small ridge. Two parallel vertical stripes on upper face of handle following double concavity, extending onto horizontal band below, and onto neck at upper attachment as shown.
Cf. **T52-1**, **T73-1**, **T74-1**.

9. (81.1140) **Fig. 55**
Deposit type 3
TR 9 11# 61
SHOULDER AND NECK FRR.; WM AMPHORA
PH 0.087; PL 0.073
Two joining frr., broken on all sides, preserving small portion of shoulder and neck; slightly worn.
Local clay with many small to medium white and light-colored inclusions and much mica, almost exclusively golden; occasional blowouts. Clay evenly fired between pink 5YR 7/4 and reddish yellow 7.5YR 7/6; slip slightly lighter.
Shoulder curved; vertical neck marked by slight thickening on interior at junction with body.
Slipped and painted: paint dull with tendency to flake where thickest; more dilute on circles; fired red on circles, elsewhere black. Portion of one set of mechanically drawn concentric circles comprising three circles preserved on shoulder. Thin horizontal band at junction of shoulder and neck. Parts of two thin vertical lines preserved on neck and shoulder, but decoration at these points unclear.
Shape and decoration more consistent with neck-handled amphorai.
Cf. **T41-1**, **T77-1**, **T124-1**; Heurtley 1939: 236, no. 485.

10. (81.1141) **Fig. 55**
Deposit type 3
TR 9 11# 61
SHOULDER FR.; WM AMPHORA
PH 0.032; PL 0.052
Single fr., broken on all sides, preserving small portion of shoulder; much worn.
Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden; occasional pinprick blowouts. Clay evenly fired close to reddish-yellow 7.5YR 6/6. Slip worn but thick, approaching off-white, close to very pale brown 10YR 7/4.
Thin-walled, slightly curved shoulder.
Slipped and painted: paint completely worn, decoration attested only by impression left on slip. Portion of one set of mechanically drawn concentric circles; set comprising three circles with dot at center, but from vessel other than **9**.
Cf. **T51-1**, **T67-1**, **T104-1**, **T124-1**. Handle type undetermined.

11. (81.1142) **Fig. 55**
Deposit type 3
TR 9 12#68
RIM FR.; WM KRATER
PH 0.067; PL 0.090; D (rim) est. 0.400
Single fr., preserving small portion of rim and upper wall; chipped and worn.
Local clay with many small to medium white, light, and occasional darker inclusions;

much mica, golden tending to predominate. Clay evenly fired close to pink 7.5YR 7/4 and reddish yellow 7.5YR 7/6; thick slip, approaching off-white, close to very pale brown 10YR 8/4.

Vertical upper wall terminating in outward thickened rim, flat on top.

Slipped and painted: paint dull and rather thickly applied with pronounced tendency to flake; fired red. Row of mechanically drawn concentric circles on upper wall, one set preserved comprising three circles with dot at center; horizontal band immediately below rim. Rim top barred, with strokes set in groups of three; interior painted.

For shape cf. **40**.

TRENCH 9 BURNED SHERDS, UNIT 9

12. (81.1203) **Fig. 55**

Deposit type 4

TR 9 9#53

BASE FR.; WM AMPHORA

PH 0.027; D (base) est. 0.086

Single fr., much affected by burning, preserving small portion of base and lower wall.

Local clay with small to medium white and light-colored inclusions, silver and golden mica, tending fine. Clay discolored light gray due to burning.

Flat disk base.

No clearly preserved decoration.

Cf. the bases of **T51-1** and **T104-1**.

13. (81.1204) **Fig. 55**

Deposit type 4

TR 9 9#53

RIM FR.; HM OPEN VESSEL, PROBABLY BOWL WITH SQUARE-CUT HANDLES

PH 0.055; PW 0.060

Single fr., partially affected by burning, preserving portion of rim and upper wall.

Local clay with many small, medium, and some larger white and light-colored inclusions, much silver and golden mica. Clay and surfaces blackened in parts; where less affected by burning close to brown 7.5YR 5/4.

Upper wall tending vertical; rim thickened on interior, chamfered on top.

Surfaces burnished but poorly preserved, interior evidently better finished than exterior.

For general form cf. **T67-2**, closer to examples like **T113-16**, **T117-16**, **T117-17**. Cf. also the kantharoi **T7-2** and **T10-4**, although these have more incurved rims.

14. (81.1206) **Fig. 55**

Deposit type 4

TR 9 9#53, 55

BASE FRR.; WM LEKANIS Type 1

PH 0.037; D (base) 0.092

Five joining frr., much affected by burning, preserving almost complete base (2 frr. encountered in Unit 9#53, the rest in 9#55).

Local clay with some small white inclusions and silver and golden mica; discolored gray due to burning.

Tall flaring foot, almost conical, with narrow resting surface and rounded lower outside edge.

Slipped and painted: although poorly preserved, paint evidently dull, fairly thickly applied, black as preserved. Lower face of foot painted; upper foot and lower wall reserved; interior painted except for reserved disk at center.

Perhaps from the same vessel as **15**; cf. **T51-3**, **T124-3**.

15. (81.1205) **Fig. 55**

Deposit type 4

TR 9 9#55

RIM AND HANDLE FRR.; WM LEKANIS

PH 0.028; D (rim) est. 0.190

Two joining frr., much affected by burning, preserving small portion of rim and about one-half of handle.

Clay as **14**; discolored gray and in parts blackened due to burning.

Thin-walled, vertical upper body; horizontal rim, flat on top and with rounded outside edge. Horizontal ribbon handle, with concave outer face, attached directly below rim.

Slipped and painted: details of paint as **14**. Horizontal band on upper wall immediately below rim and extending onto outer, and partially onto upper, faces of handle; interior painted; top of rim barred as shown, with strokes evidently arranged in groups around rim.

From the same vessel as **14**? Cf. **T47-3**, **T51-3**, **T124-3**.

16. (81.1207) **Fig. 55**
Deposit type 4
TR 9 9#55
RIM FR.; WM SKYPHOS
PH 0.028; PL 0.033
Single fr., much affected by burning, preserving small portion of rim.
Local clay with small white and light-colored inclusions and much mica, mainly fine, golden tending to predominate; clay discolored light gray due to burning.
Upper wall vertical; gently outcurved/flaring rim, tapering slightly to rounded lip. No painted decoration preserved.
Skyphos type undetermined.

17. (81.1208) **Fig. 55**
Deposit type 4
TR 9 9#55
SHOULDER AND NECK FR.; HM JUG
PH 0.034; PL 0.065
Single fr. (more possible frr. of same vessel uninventoried), broken on all sides and partially affected by burning, preserving portion of shoulder and neck.
Local clay with many small to medium, and occasional larger, white and light-colored inclusions, much silver and golden mica. Interior surface of clay and parts of exterior discolored gray due to burning, exterior mostly close to reddish yellow 5YR 6/6.
Curved shoulder; vertical neck, offset from body by groove on exterior corresponding to angle formed on interior.
Exterior burnished, but much worn, with faintly preserved tooling marks running vertically on neck, horizontally on shoulder.
Wall thickness, fabric, and feel different from **21**.

18. (81.1209) **Fig. 55**
Deposit type 4
TR 9 9#55
HANDLE FR.; HM VESSEL
Max. L 0.025 × W 0.031
Single fr., affected by burning, preserving small portion of handle.
Local clay with small to medium white and light-colored inclusions, much silver and golden mica; clay and surfaces discolored dark gray.
Vertical strap handle with outer edges chamfered.
Upper face burnished smooth and decorated with nine, mostly parallel, grooves as shown.
Vessel type undetermined. Cf. **T101-13**.

19. (81.1210) **Fig. 55**
Deposit type 4
TR 9 9#56
BASE FR; WM VESSEL
PH 0.027; D (base) est. 0.075
Single fr., partially affected by burning, preserving small portion of base and lower wall.
Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden; clay and surfaces partially discolored light gray; where less affected by burning close to pink 5YR 7/4.
Low ring base with narrow resting surface; underside flat and thin walled; lower wall rather shallow and comparatively thick.
No painted decoration preserved.
Vessel form undetermined; although lower wall appears to be of an open form, the fr. may be of a closed vessel, perhaps even amphora; cf. the bases of **T74-1**, **T75-1**, **T77-1**.

20. (81.1211) **Fig. 56**
Deposit type 4
TR 9 9#56
LEG FR; HM TRIPOD CAULDRON
PH 0.069; W 0.043
Single fr. preserving portion of one leg; partially affected by burning (the result of normal household use?).
Coarse local clay with a great many small to large white and light-colored inclusions and much mica, exclusively golden. Clay and surfaces mainly fired close to reddish brown 5YR 5/4, where not blackened.
Leg of fairly large cauldron, almost rectangular in section and tapering toward rounded resting surface.
Surfaces burnished smooth.
Cf. especially the fragmentary cauldrons of the nearby Tomb 123.

21. (81.1212) **Fig. 56**
Deposit type 4
TR 9 9#56
FRAGMENTARY HM JUG WITH CUT-AWAY NECK
Reconstructed H 0.210; D (base) approx. 0.076
Twenty-two joining and nonjoining frr., all much affected by burning, preserving about one-half of base, parts of body including lower handle attachment, and small portion of neck and rim.
Local clay with many small to medium white and light-colored inclusions and much mica, golden tending to predominate. Clay and surfaces mostly discolored light gray, in parts brown, in others blackened.
Proportions of shape not absolutely certain. Base flattened; body rounded but tending squat. Preserved lower handle attachment shows that handle was attached by piercing, with clear but broken projection of clay on interior. Tall vertical neck evidently offset from body by scraped groove on exterior (partially preserved). Neck cut away; rim chamfered. Wall thickness varies considerably.
Exterior surface burnished with tooling marks running vertically on neck, horizontally on upper body and on underside, diagonally opposed on lower body, producing a dull finish, which is worn.
Proportions of the vessel perhaps not unlike those of **T52-2**.

22. (81.1213) **Fig. 56**
Deposit type 4
TR 9 9#57
LEG FR.; HM TRIPOD CAULDRON
PH 0.040; PW 0.027
Single fr., partially affected by burning (cf. **20**), preserving small portion of leg.
Coarse local clay with a great many small to large white and light-colored inclusions and much mica, predominantly golden. Surface and one-half of clay body blackened, other half close to yellowish red 5YR 5/6.
Small leg, rectangular in section, tapering very slightly toward resting surface, which is not preserved.
Surfaces burnished smooth.
Cf. **20**, but from smaller vessel.

TRENCH 12

23. (81.173) **Fig. 56**; **pl. 408**
Deposit type 1
TR 12 Ext. 2 Unit 2
BODY AND LEG FR.; HM TRIPOD CAULDRON
PH 0.075; PW 0.100
Single fr., broken on all sides, preserving small portion of body and leg.
Coarse local clay with a great many small to large white and light-colored inclusions and much mica, predominantly golden. Clay and surfaces variously fired from dark brown to red; part of surface on interior blackened.
Body curved; upper part of one leg preserved, thick and rectangular in section. Exterior surface burnished with faint, shallow and broad tooling marks preserved near leg, producing a good surface with a slight sheen; interior less well finished.
Cf., among others, **T47-4**, **T123-2**, **T123-3**.

24. (81.561) **Fig. 56**; **pl. 288**
Deposit type 2
TR 12 Unit 3
BODY FR.; WM AMPHORA
PH 0.067; PL 0.105
Single fr., broken on all sides, preserving small portion of body.
Local clay with many small to medium white and light-colored inclusions, much silver and golden mica, the former tending to predominate. Clay fired close to light reddish brown 5YR 6/4; thick slip, closer to pink 7.5YR 6/4.
Sherd curved; from large closed vessel near point of max. D.
Slipped and painted: paint dull, thickly applied, fired red. Partially preserved horizontal band at lower break, broad band above from which springs a row of crosshatched triangles (portions of three triangles preserved).
Decoration consistent with belly-and-shoulder-handled amphorai: cf. **T56-1**, **T81-1**, **T82-1**, **T83-1**.

25. (81.1148) **Fig. 56**
Deposit type 2
TR 12 3#32
RIM FR.; WM LEKANIS Type 1
PH 0.046; D (rim) est. 0.250
Single fr. preserving portion of rim, upper wall, and handle scar; slightly worn.
Local clay with small to medium white and light-colored inclusions and much mica, golden tending to predominate; occasional blowouts. Clay core fired light gray, elsewhere close to reddish yellow 5YR 6/6; slip closer to 7.5YR 6/6–7/6.
Lower part of preserved fr. curved; upper wall vertical, everted to horizontal rim, flat on top and tapering very slightly to rounded outside edge. Small portion of horizontal handle scar preserved, attached to upper wall directly below rim.
Slipped and painted; paint dull, rather unevenly applied, with a tendency to flake only where thickest; variously fired light to dark brown, black where thickest. Small portion of horizontal band preserved at lower break; horizontal band on upper wall below rim, extending onto outer face of handle; interior painted. Rim top decorated with thick, petal-like, opposed diagonals on either side of a solid half-moon.
Cf. **T47-3**, **T51-3**, **T124-3**.

26. (81.563) **Fig. 56**
Deposit type 2
TR 12 3#32
BASE AND LOWER BODY FRR.; WM AMPHORA
PH 0.063; D (base) 0.071
Three joining frr. preserving entire base and small portion of lower wall; chipped and slightly worn.
Local clay with mainly small white and light-colored inclusions and much mica, almost exclusively golden; occasional blowouts, some of which are large. Clay core fired light gray in parts only, elsewhere between reddish yellow 5YR 6/6 and light reddish brown 5YR 6/4; slip slightly lighter.
Low ring base with narrow, flat resting surface; underside flat; lower wall rising steeply; wheelmarks prominent on interior.
Slipped and painted; paint dull, unevenly applied, with a tendency to flake where thickest; variously fired from red through brown and in parts approaching black. Six thin horizontal bands on lower wall, at one point merging to form five; traces of three partially preserved thin bands on upper fr. at break.
Amphora type undetermined, but clearly quite small.
Cf. the bases of **T42-1**, **T65-1**, **T88-1**; also **T78-1**.

27. (81.1146) **Fig. 56**; **pl. 409**
Deposit type 3
TR 12 4#3
SHOULDER FR.; WM CLOSED VESSEL, PROBABLY AMPHORA; IMPORTED, PROVENANCE UNCERTAIN, CONCEIVABLY ATTIC
PH 0.045; PL 0.050
Single fr., broken on all sides, preserving small portion of shoulder; only slightly worn.
Imported fabric, finer than local, with almost no visible inclusions and only a fine dusting of surface mica. Clay evenly fired close to light brown/pink 7.5YR 6/4–7/4; rather thick slip closer to very pale brown 10YR 7/4.
Thin-walled sloping shoulder.
Slipped and painted: thick, lustrous paint with a tendency to flake, fired black. Portion of one set of mechanically drawn concentric circles preserved, set comprising three circles, the outer two merging at one point, with dot at center.
Provenance uncertain, but likely to be Attic; cf. **10**, which is locally manufactured.

28. (81.625) **Fig. 57**
Deposit type 3
TR 12 4#3
RIM, BODY, AND HANDLE FRR.; WM SKYPHOS
PH 0.109; PL 0.090; D (rim) N/R
Two joining and one nonjoining frr. preserving portion of body, rim, and part of one handle; chipped.
Local clay with some small to medium white and light-colored inclusions and quite a bit of mica, golden tending to predominate.

Clay evenly fired close to reddish yellow 5YR 6/6; slip slightly lighter.

Lower wall curved; upper wall vertical, with the junction of the upper and lower walls marked by a very slight carination; flaring rim with rounded lip. Horizontal handle, round in section, attached to upper wall and tending to rise vertically.

Slipped and painted: paint dull, rather thickly applied, mostly fired dark brown approaching black, in parts with a reddish-brown to maroon tinge. Parts of three preserved thin horizontal bands on lower wall. Upper wall decorated with "ugly sausage" motif that extends onto body from the painted outer and upper faces of the handle (whether opposed or continuous "sausage" is uncertain); area above handle painted; reserved below handle arch. Narrow lip barred as shown with tiny strokes approaching blobs; interior painted.

Shape and decoration common especially for Type 1 skyphoi. Cf. **T23-1**, **T101-7**, **T103-1**, **T105-1**, **T106-1**, **T108-1**, **and 38**; also **T117-1** (Type 2).

29. (81. 1147) **Fig. 57**; **pl. 410**

Deposit type 4

TR 12 5#1

HANDLE FR.; HM BOWL WITH SQUARE-CUT HANDLES

PH 0.046; PW 0.065

Single fr. preserving upper portion of handle; only slightly worn.

Local clay with many small to medium, and occasional larger, white and light-colored inclusions and much mica, predominantly golden. Clay core fired dark gray/brown, elsewhere clay and surface fired close to light reddish brown 5YR 6/4.

Thick square-cut handle with centrally cut hole; sides of handle slightly flaring. All edges including central circle chamfered.

Surfaces burnished with faint tooling marks following the contour of central hole.

For general form cf. **T67-2**.

30. (81.665) **Fig. 57**; **pl. 411**

Deposit type 4

TR 12 5#2

RIM FR.; HM PITHOS

PH 0.069; D (rim) est. 0.380(?)

Single fr. preserving small portion of rim; only slightly worn (more possible frr. of same vessel not inventoried).

Coarse local clay with a great many small to large white and light-colored inclusions and much mica, exclusively golden. Clay body and exterior surface fired close to light brown 7.5YR 6/4; interior surface closer to brown 7.5YR 5/4.

Preserved portion of upper wall sloping in to rim; vertical rim, thickening toward top with upper outer face chamfered and rim top slightly concave. Junction of rim and body decorated with applied band of clay (rope pattern), bearing impressed notches, rather crudely executed, as shown.

Preserved interior and exterior surfaces wet-smoothed, with interior somewhat better finished than exterior.

Cf. Hochstetter 1984: pl. 19, no. 2; pl. 26, no. 5; pl. 61, no. 8.

31. (81.1149) **Fig. 57**

Deposit type 4

TR 12 5#34

RIM FR.; HM KANTHAROS, Type 1

PH 0.029; approx. D (rim) est. 0.250

Single fr. preserving small portion of rim and upper wall.

Local clay with fewer than normal small to medium white and light-colored inclusions but much mica, tending fine, predominantly golden; occasional pinprick blowouts. Clay and surfaces evenly fired close to reddish brown 5YR 5/3 and brown 7.5YR 5/4.

Upper wall curved; short vertical rim offset from body and tapering slightly to chamfered lip.

Interior and exterior surfaces burnished with tooling marks running horizontally, producing a good surface with a slight sheen.

For shape cf. **T10-1** and **1a**, **T10-3**, **T82-4**, **T82-5**.

TRENCH 13

The locations of the following frr. are discussed more fully in the preceding trench summaries (see

also **fig. 26**); they are here presented according to find numbers given in the field.

32. (81.386) **Fig. 57**
Deposit type 1
TR 13 S.F.30
BODY FRR.; WM AMPHORA
PH 0.235; PL 0.256
Six joining frr. preserving portion of body; chipped and much worn.
Local clay with many small to medium, and occasional larger, white and light-colored inclusions and much silver and golden mica; occasional blowouts. Clay core fired light gray, elsewhere close to reddish yellow 7.5YR 7/6–6/6; slip lighter, close to very pale brown 10YR 7/4.
Rather thick walled, with lower wall relatively steep; shoulder more curved.
Slipped and painted but much worn, with most of paint having flaked off, attested by impression left on slip; where preserved, paint evidently dull and fired black. Point of max. D decorated with broad horizontal band enclosed by two thin bands below and three above. Row of mechanically drawn concentric circles on shoulder, two sets preserved, each comprising five circles with dot at center. Above is a horizontal band, above which in turn, up to the break, the fr. is painted solid; whether the latter represents another band or the lower part of a solidly painted neck is uncertain. If the neck is painted solid then the vessel is more likely to be a belly-handled amphora, if reserved then neck-handled.
For belly-handled amphorai with similar decoration cf. **T51-1**; also **T67-1** (belly-and-shoulder-handled amphora). The system of decoration is far more common among neck-handled amphorai: cf. **T41-1**, **T77-1** and especially **T124-1**; also **T52-1**, **T74-1** with semicircles rather than full circles.

33. (81.607A) **Fig. 57**
Cf. deposit type 1
TR 13 S.F.37
BASE FRR.; WM AMPHORA
PH 0.033; D (base) est. 0.130
Two joining frr., much affected by burning, preserving small portion of base and lower wall.
Local clay with small to medium white and light-colored inclusions and much mica, golden tending to predominate; clay variously discolored gray, brown, and in parts blackened.
Flat disk base; thick lower wall, rising steeply.
No painted decoration preserved.
Cf. the bases of, among others, **T51-1**, **T52-1**, **Tl04-1**.

34. (81.607B) **Fig. 57**
Cf. deposit type 1
TR 13 S.F.37 bis
BODY FR.; WM OPEN VESSEL, PROBABLY KRATER RATHER THAN LARGE SKYPHOS
PH 0.038; PL 0.035
Single fr., broken on all sides and much affected by burning, preserving small portion of body.
Local clay with small white and light-colored inclusions and much mica, tending fine, predominantly golden; clay discolored light gray; slip appears to have been originally lighter.
Thick-walled, almost vertical sherd, from upper body of large open vessel.
Slipped and painted: paint evidently dull, thickly applied, with a tendency to flake; fired red on interior, black on exterior. Portion of one set of mechanically drawn concentric circles preserved on exterior, with the two inner circles and central dot clear; interior painted.
Wall thickness and decoration suggest a krater; cf. **11** and, more generally, **T48-1**, **T102-1**. There are no certain examples of local "circles skyphoi" at Torone.

35. (81.607c) **Fig. 57**
Cf. deposit type 1
TR 13 S.F.37 ter
RIM FR.; WM SKYPHOS
PH 0.018; PL 0.030
Single fr., much affected by burning, preserving small portion of rim.

Local clay with small to medium white and light-colored inclusions and much mica, tending fine, predominantly golden. Clay discolored light gray to light brown.
Gently flaring/outcurved rim, rounded on top.
No painted decoration preserved.
Cf. **16**.

In addition to 33–35, the following Early Iron Age frr. were also recovered from the same area of loose blackened earth: two handle frr. WM skyphos (cf. **35**); one painted body fr. of undetermined shape; one vertical handle fr. of HM vessel, probably jug; twenty other body frr. All frr. were either partially or much affected by burning.

36. (81.606A) **Fig. 58**
Cf. deposit type 1
TR 13 S.F.38
BODY FRR.; WM AMPHORA
PH 0.180; PL 0.160
Eight joining frr., broken on all sides, preserving portion of body; much worn.
Local clay with many small to medium, and occasional larger, white and light-colored inclusions and much mica, predominantly golden. Clay core fired light gray, elsewhere close to reddish yellow 5YR 6/6; slip slightly lighter.
Lower wall rising steeply, shoulder more curved.
Slipped and painted: rather worn, paint dull, evenly applied with a tendency to flake; mostly fired red, in parts approaching brown. Three thin horizontal bands on lower wall; broad band at point of max. D, enclosed by two thinner bands above and below. Tremulous line approaching zigzag on upper shoulder, above which, up to the break, the fr. is painted. On one side, portion of a vertical stripe is preserved representing the extension onto body of the painted decoration of the handle (itself not preserved).
Handle type undetermined; details of shape and decoration similar to the fragmentary **T68-1**; cf. the belly-handled amphora **T75-1**.

TRENCH 22

37. (82.1172) **Fig. 58**
Deposit type 4
TR 22 4#53
RIM FR; WM LEKANIS, Type 1
PH 0.049; D (rim) est. 0.260
Single fr. preserving small portion of rim and upper body; much worn.
Local clay with many small to medium white and light-colored inclusions and much mica, golden tending to predominate. Clay core fired light gray, elsewhere close to reddish yellow 7.5YR 7/6–6/6; slip slightly lighter.
Curved lower wall; vertical upper wall, terminating in thickened rim, flat to obliquely cut on top.
Slipped and painted: paint dull, evenly and rather thickly applied with a tendency to flake; fired red. Broad horizontal band on exterior upper wall extending up to rim; interior painted. Rim top barred as shown with diagonal strokes evidently set in groups around rim.
For general shape and decoration cf. **T47-3**, **T51-3**, **T124-3**; rim form closer to fragmentary examples like **T104-15**, **T115-9**, **T117-10**.

38. (82.89A–C) **Fig. 58**; **pl. 412**
Deposit type 4
TR 22 7#57
RIM, BODY, AND HANDLE FRR.; WM SKYPHOS
PH 0.133; PL 0.121; D (rim) N/R
Seven joining and two nonjoining frr. preserving portion of body, rim, and part of one handle stump; slightly chipped.
Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden; occasional blowouts. Light-colored clay close to very pale brown 10YR 7/4; thick slip, closer to 10YR 8/3 and white 10YR 8/2.
Lower wall rising at about 45°; vertical upper wall; gently flaring rim tapering slightly to rounded lip. Portion of one handle preserved, round in section, attached to upper wall.

Slipped and painted: paint dull, tending to streak, with brushmarks clearly visible; fired dark brown where thickest, lighter brown where more dilute and approaching reddish brown on parts of exterior. Four thin horizontal bands on lower wall, merging at points. Upper wall decorated by preserved "ugly sausage" (probably one of two "opposed sausages"), which extends from the painted outer face of the handle. Interior painted; possible reserved band at rim on interior (uncertain due to state of preservation).

Shape and decoration consistent with Type 1 skyphoi, but with details particularly close to **T90-1** and **T117-1**, which are Type 2.

39. (82.1116) **Fig. 58**; **pl. 281**

Deposit type 4

TR 22 7#57

FRR. OF WM AMPHORA WITH BELLY AND SHOULDER HANDLES

Lower wall frr.: PH 0.114; PL 0.186

Belly handle fr.: PH 0.080; PL 0.104

Shoulder frr.: PH 0.056; PL 0.167

Four joining frr. preserving portion of lower wall; one nonjoining fr. preserving portion of body and belly handle; four joining frr. preserving portion of shoulder, including one complete shoulder handle; and two other nonjoining frr.; chipped and worn.

Local clay with many small to medium, and occasional larger, white and light-colored inclusions and much silver and golden mica, with some flakes exceptionally large. Clay core fired gray where wall is thickest, elsewhere more evenly fired close to reddish yellow 5YR 6/6; slip slightly lighter.

Lower wall rising steeply; shoulder more curved; large horizontal belly handle, round in section, attached at point of max. D. Small, loop-shaped, vertical handle, with concave upper face, attached to upper shoulder immediately below neck (only the very lowest portion of the neck is preserved).

Slipped and painted: paint dull, thickly applied, with a tendency to flake in parts; fired red on preserved frr. of lower body, darker red approaching brown on shoulder, black on top of shoulder handle. Horizontal band on lower wall near bottom break; broad band below belly handle at point of max. D, below which are at least three and probably more thinner bands. Nonjoining body fr. preserves parts of three large crosshatched triangles on upper wall in the belly region, their apices partially running onto horizontal band above. Row of smaller crosshatched triangles on shoulder, their apices also running onto horizontal band above, arranged on either side of the shoulder handle (with portions of three triangles preserved). Row of mechanically drawn concentric circles on upper shoulder also arranged on either side of vertical handle, each set comprising two circles with dot at center (two sets completely preserved, a third only partially). Traces of paint preserved at upper break indicating that neck was probably painted solid. Upper and outer faces of belly handle decorated with two stripes, which extend onto body below; concave upper face of vertical shoulder handle decorated with three parallel vertical stripes, which run into a horizontal bar on top of handle arch. Splashes of paint preserved at points, especially on shoulder. The crosshatched triangles are executed with lines that are slightly curved in a manner similar to those of the kantharos **T13-1**.

Cf. **T56-1**, **T83-1**; also **T81-1**, **T82-1**, **T125-1**.

TRENCH 25

40. (82.1108) **Fig. 58**; **pl. 413**

Deposit type 4

TR 25 2#13

RIM FR.; WM KRATER

PH 0.050; D (rim) est. 0.280

Single fr., much affected by burning, preserving portion of body.

Local clay with many small to medium, and occasional larger, white and light-colored inclusions and much mica, predominantly golden. Clay discolored light gray due to burning.

Vertical upper wall; outward thickened, almost horizontal, rim, flat on top and with rounded outside edge.

Slipped and painted: paint dull, black as preserved with a tendency to flake where thickest; much worn, especially on interior. Upper wall decorated with two tremulous lines executed from right to left, with the actual point where the brush was lifted, redipped, and decoration continued preserved to the right of the fr. Broad horizontal band on upper wall extending onto outside edge of rim; interior painted. Rim top decorated with mechanically drawn concentric arcs, with one side of the set preserved comprising six arcs, with central dot at pivot point. The two inner arcs are more curved, outer arcs tending to straighten due to the increase of the radius. Tremulous lines on upper wall are perhaps executed with a multiple-brush device, although fr. too small to determine with certainty.

Fr. probably from the same vessel as a fire-affected sherd from Tomb 105 (**T105-3**).

For shape cf. **11**; for mechanically drawn arcs on rim top cf. **T25-3**.

41. (82.1107) **Fig. 58**; **pl. 303**

Deposit type 2

TR 25 3#18, 19

SHOULDER, NECK, AND HANDLE FR., WM VERTICAL-HANDLED AMPHORISKOS

PH 0.082; PL 0.068

Single fr. preserving portion of shoulder, neck, and one entire handle; chipped and worn.

Local clay, rather hard-fired, and with fewer than normal small to medium white and light-colored inclusions; much mica, golden tending to predominate; occasional pinprick blowouts. Clay fired close to reddish brown 5YR 6/3 and pinkish gray 7.5YR 6/2; slip lighter, closer to light brown 7.5YR 6/4 and pink 7.5YR 7/4.

Curved shoulder; vertical neck; vertical handle, with concave upper face, attached from shoulder to neck.

Slipped and painted: paint dull, thickly applied on exterior with a tendency to flake; more dilute on upper part of interior; fired dark brown to black where thickest, lighter brown where more dilute. Reserved band on shoulder with two preserved tremulous lines executed from right to left according to thickness of paint; neck painted solid on exterior; painted also on preserved interior of neck. Upper, and parts of the outer, faces of the handle painted, with decoration extending onto body below.

Cf. **T99-1**.

42. (82.1109) **Fig. 59**

Deposit type 2

TR 25 3#18, 19

BASE FR.; HM CLOSED VESSEL, PROBABLY JUG WITH CUTAWAY NECK

PH 0.035; approx. D (base) est. 0.060–0.070

Single fr. preserving portion of base and lower wall; slightly worn.

Local clay with many small to medium, and some larger, variously colored inclusions, mainly white and light gray but with some black and red; much mica, golden tending to predominate. Clay body and interior surface fired close to light red and red 2.5YR 6/6–5/6, exterior surface closer to yellowish red 5YR 5/6 and reddish yellow 7.5YR 6/6.

Flattened base; curved lower wall; relatively thick walled, suggesting a larger jug.

Exterior surface burnished with pronounced tooling marks diagonally opposed on lower wall, horizontal on underside, producing a good but dull surface.

43. (82.88) **Fig. 59**; **pl. 460**

Deposit type 2

TR 25 3#21, 22, S.F.11

BRONZE FINGER RING

D 0.024; H 0.007–0.008; WT 6.80 g

Intact; nicely patinated.

Closed, round finger band, fairly solid; plano-convex in section.

Cf. **57**; Popham, Sackett, and Themelis 1979–80:247, type 2.

44. (82.264a) **Fig. 59**; **pl. 414**

Deposit type 4

TR 25 4#43, S.F.23

RIM, BODY, AND HANDLE FRR.; WM SKYPHOS
PH 0.085; D (rim) est. 0.170
Three joining frr. preserving portion of rim, body, and one entire handle; chipped and slightly worn.
Local clay with small to medium white, light, and many red inclusions; mica tending fine, predominantly golden and slightly less than normal; occasional blowouts. Clay fired close to light reddish brown 5YR 6/4; slip slightly lighter. Curved lower wall; vertical upper wall; gently outcurved/ flaring rim with rounded lip. Horizontal handle, round in section, attached to upper wall.
Slipped and painted: paint dull, tending to streak on interior, thickly applied on exterior with a tendency to flake; mostly fired reddish brown with a maroon tinge, darker where thickest, approaching red where more dilute. Two horizontal bands preserved on upper part of lower wall. Upper wall decorated with "ugly sausages" extending from the painted decoration of the upper and outer faces of the handle; area above handle painted, reserved below handle arch. Interior painted, with possible reserved band at lip (difficult to determine due to state of preservation).
Cf. **28**, **45**.

45. (82.264b) **Fig. 59**
Deposit type 4
TR 25 4#43, S.F.23 bis
RIM, BODY, AND HANDLE FRR.; WM SKYPHOS
PH 0.090; PL 0.116
Three joining frr. preserving portion of rim, body, and one entire handle; chipped and much worn.
Local clay with many small, medium, and some larger white and light-colored inclusions and much mica, mainly fine, golden tending to predominate; occasional blowouts. Clay evenly fired close to reddish yellow 7.5YR 7/6; slip slightly lighter.
Curved lower wall; vertical upper wall; gently flaring rim, with preserved lip chamfered. Horizontal handle, rather thick and round in section, attached to upper wall and rising to level of rim.
Slipped and painted but much worn, especially on interior: paint dull, fairly thickly applied on exterior with a slight tendency to flake; fired red. Small portion of horizontal band preserved near lower break; upper wall decorated as **44**; reserved band at lip on interior; interior painted but with no paint actually preserved on lower part of fr.
Cf. **44**.

46. (82.268) **Fig. 59**; **pl. 332**
DEPOSIT TYPE 4
TR 25 4#48, S.F.33
WM JUG WITH CUTAWAY NECK
H 0.151; D (base) 0.057; D (rim) 0.058
Reconstructed from frr.; almost complete except for minor chipping on body and rim, restored.
Local clay with many small white, light-colored, and a few darker inclusions; much silver and golden mica, the latter tending to predominate. Clay mostly fired close to reddish yellow 5YR 7/6, in parts closer to very pale brown 10YR 7/4; slip slightly lighter.
Low narrow ring base; underside flat. Rounded body; tall vertical neck with small cutaway, terminating in plain rim rounded on top. Vertical handle, with concave upper face, attached from upper shoulder directly to rim at point where cut away. Tooling marks and other smears visible on exterior.
Slipped and painted: paint dull, rather thickly applied, and variously fired from black, through brown, and in parts red. Lower base on exterior reserved; horizontal band on upper base extending onto lower wall. Two thin horizontal bands at midpoint, above which is a broader band from which springs a row of eight crosshatched triangles (each triangle with five to seven cross strokes). Neck and rim painted solid; paint extending over rim onto interior for a short distance. Upper, and portion of outer, faces of handle painted, with the paint extending onto body but not below the broad band. Splashes of paint on interior and exterior.

Only WM example of the popular HM shape at Torone. System of decoration common among amphorai with belly and shoulder handles and also the kantharos **T13-1**. The WM version of the shape is a hallmark of Thessaly and its related region; cf. Heurtley and Skeat 1930–31:20–21, nos. 31–47; Verdelis 1958:19–22, pl. 6; Popham, Sackett, and Themelis 1979–80:324–325, although these differ from the Toronean. There is a noteworthy similarity between **46** and a painted jug from Asine of Early Helladic date: cf. Frödin and Persson 1938:229, fig. 167, no. 2 (= Persson 1931b:91, fig. 52), although the latter is handmade.

47. (82.269) **Fig. 59**

Deposit type 4

TR 25 4#48, S.F.34

FRAGMENTARY HM ROUND-BOTTOMED CUP

H 0.082; D (rim) est. 0.095

Four joining frr. preserving most of base and about one-quarter of the body and rim; slightly chipped; restored.

Coarse local clay with a great many small to large white and light-colored inclusions and much mica, predominantly golden. Clay and surfaces mostly fired something like reddish brown 5YR 4/4, in parts slightly lighter or darker.

Rounded base; vertical wall, terminating in plain rim, rounded on top; no trace of handle(s) preserved.

Interior and exterior burnished, producing a good surface with a very distinct sheen/polish.

Shape unique and burnishing unusual among Early Iron Age HM products; the vessel may well be considerably earlier in date. For related Early Bronze Age and earlier vessel forms cf. Heurtley 1939:137, no. 11; 168, no. 171; 183, no. 254; 184, no. 259; 190, no. 305.

48. (82.1100) **Fig. 59**; **pl. 415**

Deposit type 4

TR 25 4#28, 33, 48

SHOULDER FR.; WM AMPHORA; IMPORTED, PROBABLY EUBOIAN

PH 0.040; PL 0.080

Single fr., broken on all sides, preserving small portion of shoulder; chipped and worn. More possible frr. of the same vessel not inventoried.

Imported fabric, finer and better levigated than local, with only the odd white inclusion and a dusting of mainly fine surface mica. Clay fired close to light reddish brown 5YR 6/4; slip slightly lighter. Although probably Euboian, the fabric is not unlike Attic.

Curved shoulder; thin walled.

Slipped and painted: paint worn, but of good lustrous quality where preserved; fired black. Fr. at lower break painted, evidently a broad band, from which springs portion of one preserved set of mechanically drawn upright concentric semicircles; as preserved set comprises nine visible arcs, with more likely; center filled with "half hourglass" motif as shown.

Handle type undetermined; fr. may be from either neck- or belly-handled amphora; for Attic amphorai cf. Desborough 1952: pls. 2–5 and various examples; Kraiker and Kübler 1939: pls. 33–34, 40–46, 54–58; Kübler 1943: pls. 5–7, 9–11. For the central filling ornament cf. the amphora fr.: Popham, Sackett, and Themelis 1979–80: pl. 14, no. 61, and the fr. pl. 17, no. 220 (= pl. 32, no. 19), among others.

48 is perhaps from the same vessel as **49**.

49. (82.1101) **Fig. 59**

Deposit type 4

TR 25 4#28, 33, 48

RIM FR.; WM AMPHORA; IMPORTED, PROBABLY EUBOIAN

PH 0.059; D (rim) est. 0.190

Single fr. preserving about one-quarter of rim and smaller portion of neck; slightly chipped and worn.

Imported fabric as **48**.

Vertical neck; thickened, everted rim (almost knobbed), flat on top and with rounded outside edge.

Slipped and painted: paint as **48** but with a tendency to flake where thickest; fired black on exterior, ranging from black to dark red on rim top and neck on interior. Preserved exterior painted solid; rim top barred, with strokes set in groups of five around rim (one group preserved). Uppermost part of neck on interior painted.

Rim type consistent with Attic belly-handled amphorai of Desborough's Class I, Desborough 1952:20–23; 1972:33, 36, fig. 3; 148. For the decoration on rim top cf., among others, Brouskari 1980:23, pl. 4(a), no. 15 (EPK 546).

49 is perhaps from the same vessel as **48**.

50. (82.1104) **Fig. 59**

Deposit type 4

TR 25 4#28, 33, 48

RIM FR.; SMALL WM OPEN VESSEL

PH 0.032; D (rim) est. 0.100

Single fr. preserving portion of rim and body; slightly worn.

Local clay, but with fewer inclusions; much mica, exclusively golden. Clay core fired gray, elsewhere close to reddish yellow 5YR 6/8.

Body curved; small, outcurved to flaring rim, rounded on top and defining an S-curve with the body; vessel small and thin walled.

Slipped and painted: paint dull, fairly thickly applied, fired bright red. Preserved exterior decorated with thin vertical to diagonal strokes (six preserved); small dribble of paint on exterior; interior painted.

Exact shape undetermined, rim form not unlike **70**; shape and decoration are very close to a series of one-handled cups of Late Geometric date common in Euboea: cf. Popham, Sackett, and Themelis 1979–80: pl. 51, nos. 218–222; pl. 62, no. 216; Andreiomenou 1981b:213, fig. 55a; 1984: pl. 24, nos. 59–60; pl. 25, nos. 65–67, 69–72, 73–77. Also related in shape and decoration are a series of Attic Late Geometric kantharoi: cf. Kübler 1954: pl. 87, inv. 817, inv. 364; pl. 88, inv. 1341; Brann 1962:52, pl. 10, no. 173.

51. (82.1103) **Fig. 60**

Deposit type 4

TR 25 4#28, 33, 48

HANDLE FR.; HM BOWL WITH SQUARE-CUT HANDLES

PH 0.047; PW 0.050

Single fr. preserving portion of handle; slightly chipped and worn.

Local clay with small white and light-colored inclusions and much silver and golden mica, tending fine. Clay and surfaces evenly fired close to light red 2.5YR 6/6 and reddish yellow 5YR 6/6.

High square-cut handle with central hole and all edges chamfered.

Surface burnished with faint tooling marks either horizontal or following contour of central hole and producing a good surface with a slight sheen.

Cf. **29**; for general form see **T67-2**.

52. (82.1102) **Fig. 60**; **pl. 416**

Deposit type 4

TR 25 4#28, 33, 48

RIM FR.; HM OPEN VESSEL

PH 0.058; PL 0.050; D (rim) est. approx. 0.180–0.250

Single fr., much affected by burning, preserving small portion of rim and upper body.

Coarse local clay with many small to large white and light-colored inclusions and much mica, almost exclusively golden. Clay and surfaces blackened due to burning. Vertical upper wall; flaring rim with flange set 0.017 m below rim on interior, presumably seating for lid; slight concavity on rim top produced by shallow groove.

Interior and exterior surfaces burnished smooth producing a dull surface, with interior rather better finished than exterior. Thin applied band of clay on exterior below rim, as preserved Λ-shaped.

Shape and applied decoration are unusual among local HM products; the coarse clay and seating for lid may suggest a cooking vessel (cf. the tripod cauldrons). The decoration is not unlike that of the often illustrated vessel from Korakou of so-called Barbarian Ware: cf. Rutter 1975: pl. 1; cf. also the applied decoration on Hochstetter 1984: pl. 111, no. 3; pl. 145, nos. 4–5; pl. 164, no. 3; pl. 250, no. 6.

53. (82.1106) **Fig. 60**
Deposit type 4
TR 25 4#28, 33, 48
RIM AND BODY FRR.; HM OPEN VESSEL; IMPORTED, PROBABLY CENTRAL MACEDONIAN
Rim frr.: PH 0.031; D (rim) est. 0.280
Body fr.: PH 0.033
Two nonjoining frr. preserving portion of rim and one nonjoining fr. preserving portion of body; slightly worn.
Imported fabric; clay dense and better levigated than local with almost no visible inclusions and only a dusting of fine mica. Clay core fired dark gray, elsewhere clay and surfaces close to reddish brown 5YR 5/4.
Preserved body fr. slightly curved; upper wall vertical, terminating in short, outward thickened, knobbed rim, flat on top and with outside edge chamfered. Vessel form open and rather deep.
Interior and exterior surfaces burnished, with broad and rather shallow tooling marks running horizontally and producing a very good surface with a pronounced sheen.
Incised decoration on rim top consisting of groups of opposed diagonals, each group comprising three strokes as shown.
The counterpart of **T102-5**, and of similar fabric to **54** and **T111-4**.

54. (82.1105) **Fig. 60**
Deposit type 4
TR 25 4#28, 33, 48
HANDLE FR; HM VESSEL; IMPORTED, PROBABLY CENTRAL MACEDONIAN
PH 0.066
Single fr. preserving portion of handle.
Imported fabric as **53**.
Vertical handle, round in section, with outer face diagonally grooved.
The counterpart of **T111-4**; fabric and feel as **53** and **T102-5**.

TRENCH 25 EAST BAULK

55. (L84.11) **Fig. 60**; **pls. 450c**, **i**
Deposit type 4
TR 25 East Baulk 4#128, S.F.6
TERRACOTTA SPINDLEWHORL, BEAD, OR BUTTON
H 0.032; D 0.032
Intact.
Local clay with small white and light-colored inclusions and golden mica visible on surface. Clay mostly fired close to reddish brown 5YR 5/3, in parts slightly blackened.
Biconical form consisting of two equal, symmetrical parts, marked by a carination.
Surface burnished smooth, with a slight sheen.
Cf. especially **T46-3** and **T51-5**.

56. (L84.19) **Fig. 60**; **pls. 450e**, **k**
Deposit type 4
TR 25 East Baulk 6#132, S.F.8
TERRACOTTA SPINDLEWHORL, BEAD, OR BUTTON
H 0.033; D 0.032
Intact except for minor chipping at both ends.
Fabric, color, and burnishing as **55**.
Biconical, consisting of two equal, symmetrical parts, but with faces concave unlike **55**.

57. (M84.34) **Fig. 60**
Deposit type 4
TR 25 East Baulk 4#128, S.F.5
BRONZE FINGER RING
D 0.023; H 0.008; WT 4.25 g
Intact; cracked in parts, with surface slightly blistered.
Closed, round finger band; plano-convex in section.
Cf. **43**.

58. (M84.53) **Fig. 60**
Deposit type 4
TR 25 East Baulk 6#132, S.F.10
BRONZE FR.
PL 0.025; WT 1.60 g
Single fr. broken at both ends; nicely patinated.
Shaft of pin, round in section and slightly bent; probably shaft of fibula pin rather than dress pin.
Cf. **T104-8**.

59. (84.193) **Fig. 60**
Deposit type 4

TR 25 East Baulk 6#133, S.F.13
SMALL BEAD OF BLUE GLASS COMPOUND/ FAIENCE
D 0.0065; TH 0.003
Intact.
Small disk bead in the form of a ring; square in section.
Bead is similar to thousands found at Lefkandi of faience and blue compound: Popham, Sackett, and Themelis 1979–80:223, pls. 219a, 234a (mostly SPG I–II); cf. Smithson 1968:114, no. 78a (EG II).

TRENCH 26

60. (82.66) **Fig. 60**; **pls. 341a–b**
Deposit type 1
TR 26 S.F.5
FRR. OF RIM AND UPPER BODY; HM TWO-HANDLED JAR
PH 0.087; D (rim) est. 0.138
Many small joining and several nonjoining frr., reconstructed as far as possible and partially restored, preserving about one-quarter of rim and neck, and small portion of upper body including one entire handle; chipped and much worn, with little left of the original surface.
Local clay with many small white and light-colored inclusions and much silver and golden mica, tending fine. Clay fired fairly evenly close to brown 7.5YR 5/4 and yellowish red 5YR 4/6.
Shoulder curved; neck vertical and offset from body by slight angle on interior; rim flaring out to chamfered lip. Horizontal handle, round in section, tending to rise vertically, and attached to upper shoulder by piercing, with two small knoblike projections of clay preserved on interior (**pl. 341b**).
Exterior surface evidently burnished smooth but very poorly preserved.
For shape (belly-handled variety) cf. **T63-1**, **T100-1**, **T118-1**, **T128-1**, **T130-1**.

61. (82.1090) **Fig. 60**
Deposit type 1
TR 26 S.F.5 bis
BASE FRR.; WM AMPHORA
PH 0.045; PL 0.142; D (base) N/R
Five joining frr. preserving small portion of base and lower wall; chipped and much worn.
Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden. Clay evenly fired close to light reddish brown 5YR 6/4; slip lighter.
Flat disk base; lower wall thick, rising fairly steeply.
No painted decoration preserved.
Cf. **12**.

TRENCH 43

62. (82.446) **Fig. 60**
Deposit type 1
TR 43 7#343, S.F.23
BASE FRR.; SMALL WM AMPHORA
PH 0.058; D (base) 0.067
Three joining frr. preserving entire base and portion of lower wall; slightly chipped, cracked and much worn.
Local clay with many small to medium, and some large, white and light-colored inclusions and much mica, predominantly golden; occasional blowouts. Clay fired two-toned, close to light brown 7.5YR 6/4 toward the interior, reddish yellow 5YR 6/6 toward the exterior; slip, where preserved, noticeably lighter.
Flat disk base with shallow groove near outer edge on underside; lower wall rising steeply indicating an ovoid body form.
Slipped and painted but much worn: as preserved, paint dull, evidently applied thickly on one side, more dilute on the other and variously fired light red to light brown, tending to flake where thickest. Lower outside edge of base reserved; horizontal band on upper portion of base extending onto lower wall. Seven preserved thin bands on lower wall.
Cf. **80**.

63. (82.1138) **Fig. 61**; **pl. 417**
Deposit type 1
TR 43 2#321–322
BODY FR.; LARGE OPEN VESSEL, PROBABLY KRATER; IMPORTED, PERHAPS EUBOIAN

PH 0.031; PL 0.047
Single fr., broken on all sides, preserving small portion of body; chipped and worn. Imported fabric, finer than local, with a few small variously colored inclusions, some of which are red, and a dusting of fine surface mica. Clay evenly fired close to reddish yellow 5YR 7/6.
Preserved sherd vertical, slightly thicker toward bottom.
Slipped and painted, but worn: good lustrous paint, thickly applied, especially on interior, fired black where thickest, dark red where more dilute. Portion of one preserved set of mechanically drawn concentric circles on exterior, set comprising at least seven circles; interior painted.
Shape, decoration, and fabric not unlike **78**.

64. (82.1174A–D) **Fig. 61**
Deposit type 1
TR 43 2#323
BODY AND NECK FRR.; WM CLOSED VESSEL, PERHAPS JUG; IMPORTED, PROVENANCE UNCERTAIN
Fr. A: PH 0.059; PL 0.050
Fr. B: PH 0.045; PL 0.049
Fr. C: PH 0.044; PL 0.054
Fr. D: PH 0.038; PL 0.038
Four nonjoining frr., broken on all sides, preserving portions of body, shoulder, and neck; worn.
Imported fabric, fine and well levigated with almost no visible inclusions, and a fine dusting of surface mica. Clay evenly fired close to light brown 7.5YR 6/4.
Provenance uncertain, fabric and feel not unlike **T93-1**.
Small closed vessel with curved shoulder and tall vertical neck. Probably jug, perhaps small amphora/iskos; judging by the PD of neck vessel unlikely to be lekythos.
Slipped and painted: somewhat worn, good lustrous paint, fired black. Body frr. C and D preserve decoration consisting of vertical, horizontal, and diagonal lines and areas painted solid; exact decorative scheme difficult to reconstruct, although fr. C may preserve part of a solid double-axe motif? Upper shoulder (frr. A and B) preserves group of vertical lines to the right of which is an area painted solid; a diagonal line to the left and the beginning of what appears to be a horizontal zigzag. Horizontal band at junction of shoulder and neck, above which is a row of pendent crosshatched triangles, above which is another horizontal band and a poorly preserved horizontal zigzag near upper break. Traces of paint on upper neck on interior.
The general scheme of the decoration is common on vessels from various regions throughout the later stages of Protogeometric and Geometric. In LPG-SPG/EG the decoration finds its closest parallels among a series of jugs and other closed vessels in the general region comprising Ithaka, Achaia, and Phokis; cf. Desborough 1952: pl. 37, nos. 19–31; 75, 77; Snodgrass 1971: 85, figs. 42–44; Schachermeyr 1980: pls. 52, 56a (various examples); Coldstream 1968, pls. 47f, 48j; Vokotopoulou 1969a: pl. 46; Vatin 1969: fig. 59; Desborough 1972:248, pl. 57A–B; see further Papadopoulos 2001.

TRENCH 44

65. (82.1173) **Fig. 61**
Deposit type 3
TR 44 15#269
SHOULDER FR.; WM AMPHORA
PH 0.040; PL 0.066
Single fr., broken on all sides, preserving small portion of shoulder and lower neck; slightly worn.
Local clay with a great many small to medium, and some larger, white and light-colored inclusions and much mica, predominantly silver. Clay fired close to pink 5YR 7/4 and reddish yellow 5YR 7/6; slip lighter, close to pink 7.5YR 8/4–7/4.
Shoulder curved; neck becoming vertical and offset from shoulder by ridge; vessel clearly quite large.
Slipped and painted: paint dull, evenly and rather thickly applied with a tendency to flake, fired dark brown. Upper shoulder, as preserved, decorated with what appear to be

crosshatched panels, above which is a horizontal band. Reserved band on lower neck, above which, up to the break, the fr. is painted.

Probably amphora with belly and shoulder handles: cf. **T81-1**, **T82-1**, **T83-1**, **T56-1**; the crosshatched panels are unique and may signify a slightly later date: cf. Bernard 1964:121, fig. 33, no. 134 (Thasos).

66. (82.1099) **Fig. 61**

Deposit type 3
TR 44 15#273
SHOULDER FR.; WM AMPHORA
PH 0.034; PL 0.030
Single fr., broken on all sides, preserving small portion of shoulder; slightly chipped and worn.
Local clay with many small to medium white and light-colored inclusions and much silver and golden mica, mainly fine. Clay evenly fired close to light brown 7.5YR 6/4; thickish slip, slightly lighter.
Shoulder sloping; comparatively thin walled.
Slipped and painted: paint evenly and rather thickly applied, with a slight luster; fired black. Preserved at lower break are parts of the two outer circles of a set of mechanically drawn concentric circles or semicircles, above which, at upper break, is a horizontal band or area painted solid.
Cf., for instance, **10**.

67. (82.1098) **Fig. 61**

Deposit type 3
TR 44 15#273
RIM FRR.; HM KANTHAROS, Type 1
PH 0.045; approx. D (rim) est. 0.180
Five frr. of which two join, at least partially affected by burning, preserving portion of rim and upper body.
Local clay with some small white and light-colored inclusions and a great deal of mica, predominantly silver. Clay and most of exterior surface discolored light gray due to burning; interior close to brown 7.5YR 5/4.
Upper wall curved; short vertical rim, sharply offset from body, with chamfered lip.
Interior and exterior surfaces burnished, with pronounced tooling marks running horizontally and producing a good but dull surface.
For shape cf. **T10-1** and **1a**, **T10-3**, **T82-4**, and **74**.

TRENCH 47

68. (84.410) **Fig. 61**

Deposit type 1
TR 47 11#940
SHOULDER FR.; WM CLOSED VESSEL, PROBABLY AMPHORA
PH 0.075; PL 0.065
Single fr., broken on all sides, preserving small portion of shoulder and neck; slightly chipped.
Local clay with some, but fewer than normal, white and light-colored inclusions and much silver and golden mica, mainly fine. Clay and slip fired close to light yellowish brown 10YR 6/4; in parts approaching gray.
Steep curved shoulder; neck becoming vertical and offset from body by narrow groove.
Slipped and painted: paint dull, evenly and rather thickly applied, fired black. Thin horizontal band near lower break; thin band on upper shoulder from which hang portions of two preserved sets of mechanically drawn pendent semicircles; set comprising four arcs with small dot at center, outer arc of each set touching the other. Preserved neck, above groove, painted.
Both shape and especially the decoration do not find close parallels among tomb pottery, although pendent semicircles are occasionally met on tomb amphorai (cf. **T88-1**, **T114-1**) but without the thin bands above and below. Cf. **94**.

69. (84.411) **Fig. 61**

Deposit type 3
TR 47 15#1302
RIM AND HANDLE FR.; WM LEKANIS, Type 1
PH 0.037; D (rim) est. 0.200
Single fr. preserving small portion of rim and handle stump; slightly worn.

Local clay with many small white and light-colored inclusions and much mica, mainly fine, golden tending to predominate. Clay evenly fired close to light brown 7.5YR 6/4; slip slightly lighter.

Lower wall curved; upper wall vertical; outward thickened, almost horizontal, rim, flat on top and with rounded outside edge. Horizontal ribbon handle, with concave outer face, attached to upper wall, directly below rim.

Slipped and painted: paint dull, evenly applied, fired black. Traces of paint on outer face of handle continuing onto body as broad band; interior painted. Rim top decorated with groups of opposed diagonals flanking a central stroke; probably one of four such groups around the rim.

Cf. **5** and **37** and parallels cited there.

70. (84.412A and B) **Fig. 61**

Deposit type 3

TR 47 15#1302

RIM AND BODY FRR.; SMALL WM OPEN VESSEL

PH 0.045; D (rim) est. 0.110

Two joining frr. preserving about quarter of rim and upper body; slightly chipped.

Local clay with many small, medium, and some larger white and light-colored inclusions and much mica, almost exclusively golden. Clay evenly fired close to reddish yellow 5YR 6/6; slip only slightly lighter.

Body curving in to vertical rim, rounded on top.

Slipped and painted: paint dull, evenly and rather thickly applied, fired red. Small portion of horizontal band or solidly painted area preserved at lower break. Thin horizontal band near junction of body and rim, horizontal band on upper face of rim, which define a band decorated with horizontal zigzag. Small splash of paint on lower body near break; interior painted.

The fr. does not find any close parallel among the tomb pottery, but it does appear to be related in shape to **50**. The general form and especially the decoration recall some of the vertical-handled amphoriskoi (cf. **T123-1**), but the painted interior and the absence of a neck exclude the possibility of an amphoriskos.

Cf. **50**.

71. (84.413) **Fig. 61**

Deposit type 3

TR 47 15#1304

RIM AND UPPER BODY FR.; MINIATURE WM CLOSED VESSEL

PH 0.056; D (rim) est. 0.060

Single fr. preserving about one-third of upper part of vessel, including rim and one handle; very slightly worn.

Local clay with fewer than normal, mainly small, white and light-colored inclusions and much mica, mainly fine, golden tending to predominate. Clay and slip evenly fired close to light brown 7.5YR 6/4 and reddish yellow 7.5YR 6/6.

Body slightly curved; vertical neck offset from shoulder by small ridge; thickened rim, almost everted, flat on top and with round outside edge. Horizontal belly handle, attached to upper wall, with outer face round and inner face coming to a point. One neatly drilled hole preserved on upper wall near break—perhaps mending hole (no trace of clamp preserved), although the hole is rather large for such a small vessel and may therefore be a suspension or air hole?

Slipped and painted: paint dull, evenly and rather thickly applied, fired black. Thin horizontal band on lower preserved wall above break from which springs one almost complete crosshatched triangle, the apex of which extends onto another thin band on the small ridge at junction of body and neck. Horizontal band on upper neck below rim; rim top decorated as shown, but poorly preserved. Upper neck painted on interior. Outer face of handle decorated with thin stripe; small triangle below handle arch (not illustrated).

The shape is essentially a miniature version of the belly-handled amphora with straight neck and everted rim (cf. for instance **T104-**

1, **T75-1**), although the decoration is closer to some examples of belly-and-shoulder-handled amphorai (cf. especially **T81-1**); it remains, however, unique for its size. Close parallels are offered by a series of Attic Late Geometric amphoriskoi: cf. Mylonas 1975, vol. 3: pl. 422a, especially Γ18–185; Kübler 1954: pl. 110, inv. 259. A number of earlier shapes may also be cited for comparison, such as the handled bottle-shaped vase (Desborough 1972:48, pl. 2A [=Kraiker and Kübler 1939: pl. 27, and Desborough 1964: pl. 16]), which are particularly common in Cyprus: cf. Pieridou 1973: 99, form 6 and pl. 12, esp. nos. 3–4, although their necks are usually taller and narrower than **71**. Not unlike for general features of shape and size are some of the *stamniskoi* and *alabastroeide* in Iakovides 1969–70, vol. •:198–205, 207–209. There is also an interesting Submycenaean handled pyxis from Lefkandi with a different rim to **71** and no neck, but which in decoration and general form of the body is similar, also noted for its suspension hole: Popham, Sackett, and Themelis 1979–80:328, fig. 17H; pl. 98, S Tomb 19, no. 4.

72. (84.414) **Fig. 61**

Deposit type 3
TR 47 16#1303
RIM AND BODY FR.; WM LEKANIS
PH 0.068; PL 0.071
Single fr. preserving portion of upper body and very small portion of rim; slightly chipped and worn.
Local clay with fewer than normal, mainly small, white and light-colored inclusions and much mica, almost exclusively golden. Clay evenly fired close to light reddish brown 5YR 6/4 and light brown 7.5YR 6/4; slip lighter, close to pink 7.5YR 7/4.
Curved lower wall; vertical upper wall, which is slightly thicker walled toward the bottom. Outer face of rim not preserved but probably thickened to horizontal as **69**; flat on top.
Slipped and painted: paint dull, evenly and rather thickly applied, fired black. Lower body to break painted, above which is a thin horizontal band. Upper body, below rim, decorated with two thin horizontal bands enclosing horizontal zigzag, not unlike **70**, executed from right to left according to thickness of paint; zigzag termination preserved on right side of fr., probably near handle attachment, which is not preserved. Interior painted; one preserved stroke on rim top indicating barred decoration.
Standard lekanis shape, especially Type 1, although the decoration is a little unusual: cf. **T41-2** and **T84-4**.

73. (84.416) **Fig. 61**

Deposit type 3
TR 47 17#1306, 1307
SHOULDER FR.; WM CLOSED VESSEL
PH 0.037; PL 0.082
Single fr., broken on all sides, preserving small portion of shoulder; slightly worn.
Local clay with fewer, mainly small, white and light-colored inclusions and much mica, tending fine, predominantly golden; occasional blowouts. Clay evenly fired close to light brown 7.5YR 6/4.
Shoulder curved.
Slipped and painted: paint dull, evenly and quite thickly applied, fired black to very dark brown. Preserved exterior painted solid except for what appears to be a reserved panel that is decorated with two partially preserved horizontal tremulous lines.
Fr. probably of vertical-handled amphoriskos as **T99-1** (cf. **41**), although the panel effect is a little unusual.

74. (84.415A–C) **Fig. 62**

Deposit type 3
TR 47 17#1306, 1307
BODY, RIM, AND HANDLE FRR.; HM KANTHAROS, Type 1
PH 0.058; D (rim) est. 0.16
At least three nonjoining frr. (more possible frr. uninventoried) preserving portion of rim, body, and part of one handle; slightly chipped.
Local clay with many small to medium white and light-colored inclusions and much mica,

golden tending to predominate. Clay core fired dark gray, elsewhere clay and surfaces fired close to light red 2.5YR 6/6.

Shape as **67**, with portion of one preserved high-swung handle, thin in section and with edges chamfered, attached from upper wall directly to rim. Vessel thin walled.

Interior and exterior surfaces burnished, with pronounced tooling marks running horizontally on body and rim, vertically on face of handle, and producing a good surface with a slight sheen.

Cf. **67** and parallels cited there.

75. (84.417) **Fig. 62**

Deposit type 3

TR 47 17#1306, 1307

RIM AND NECK FR.; HM TWO-HANDLED JAR

PH 0.044; D (rim) est. 0.120

Single fr. preserving small portion of neck and rim; chipped and slightly worn.

Local clay with fewer than normal, mainly small, white and light-colored inclusions and a great deal of mica, predominantly golden. Clay and surfaces evenly fired close to light red 2.5YR 6/6.

Vertical neck; gently flaring rim, chamfered lip; vessel thin walled.

Exterior and preserved interior burnished, with faint tooling marks running vertically on exterior, horizontally on interior and producing a good surface with a distinct sheen.

For general shape cf. **T63-1**, **T100-1**, **T118-1**, **T128-1**, **T130-1**.

76. (84.419) **Fig. 62**

Deposit type 3

TR 47 17#1306, 1307

BODY FR. WITH HANDLE AND LEG ATTACHMENT; HM TRIPOD CAULDRON

PH 0.087; PL 0.075

Single fr., broken on all sides, preserving portion of body and attachment of leg and handle; chipped and worn.

Coarse local clay with a great many small to very large white and light-colored inclusions and much mica, exclusively golden. Clay and surfaces evenly fired close to brown 7.5YR 5/4.

Thick-walled, curved body; leg and handle attachment in one piece with thick leg, oval to rectangular in section, forming continuous attachment with handle, of which only the scar is preserved. The fr. is broken in such a way as to make it difficult to determine whether handle is vertical or horizontal.

Preserved interior and exterior burnished smooth; surface dull.

Cf., among others, **T123-2** and **3** (with vertical handle), **T47-4** (with horizontal handle), **77**.

77. (84.418) **Fig. 62**

Deposit type 3

TR 47 17#1306, 1307

BODY AND LEG FR.; HM TRIPOD CAULDRON

PH 0.050; PL 0.040

Single fr., broken on all sides, preserving portion of body and upper part of leg; chipped and worn.

Clay and coloring as **76** but slightly blackened on lower body and foot exterior. Curved body; thick leg, almost rectangular in section.

Burnishing as **76**.

Cf. **76** but smaller; cf. also **T70-3**.

78. (84.420 + 84.337) **Fig. 62**; **pl. 402**

Deposit type 3

TR 47 Units 14, 15, 16, 17

BODY FRR.; WM KRATER; IMPORTED, PROBABLY EUBOIAN

Largest fr. (that drawn): PH 0.093; PL 0.097

Eight frr., of which only two join, preserving portion of body near point of max. D; chipped but only slightly worn.

Imported fabric, better levigated and more dense than local, with only a few small, variously colored inclusions and the odd speck of mica. Clay evenly fired close to pink 5YR 7/4 and reddish yellow 5YR 7/6; slip only slightly lighter.

Curved lower wall; vertical upper wall, with a slight thickening at point of max. D.

Slipped and painted: good, semilustrous paint, evenly and rather thickly applied, variously

fired, mostly reddish brown, in parts approaching red, in others black. Preserved frr. are from both sides of the body of the vessel. Lower preserved wall to break painted solid, above which are two thin horizontal bands that define the lower limit of panel, which is vertically defined by the painted decoration extending onto body from the upper and outer faces of the handle; this is partially preserved on four frr., although neither handle was recovered. This panel, on the upper wall of the vessel, appears to be decorated on both sides by three large sets of mechanically drawn concentric circles, each set comprising eleven circles with dot at center and with the outer circles of each set overlapping with those of the adjacent. Interior painted.

Cf. **63** and **85**. For the kraters from Lefkandi see Catling and Lemos 1991:23–31. Shape and decoration also consistent with Thessalian: cf. Heurtley and Skeat 1930–31:30–33, pls. IX–XI; Desborough 1952: pl. 23; Verdelis 1958:22–26, pls.7–8; Doumas and Marangou 1978:193, pl. 44.

TRENCH 48

The preserved frr. of **79** were mostly recovered from topsoil in TR 48, but with one joining fr. encountered in topsoil in TR 47.

79. (84.392 + 84.59) **Fig. 62**; **pl. 418**

Deposit type 1

TR 48 7#1314; TR 47

RIM AND HANDLE FRR.; WM KRATER

PH 0.075; D (rim) est. 0.310

Four joining frr. preserving small portion of rim, upper body, and one virtually complete handle; slightly chipped and worn.

Local clay with many small to medium white, light, and occasional darker inclusions; much mica, fine mainly golden, larger flakes silver. Clay evenly fired close to light brown 7.5YR 6/4; slip lighter, close to pink 7.5YR 7/4.

Vertical upper wall curving in to knobbed rim, flat on top and with rounded edges on interior and exterior. Pierced spur handle with double attachment to upper wall and a comparatively long, slightly down-turned spur, oval in section; handle pierced vertically at point near attachment to body.

Slipped and painted, rather worn: paint dull, in parts more thickly applied than others, fired dark brown approaching black. Upper wall decorated with group of five vertical strokes (one group on either side of handle). To the left is a small portion of a solidly painted but undetermined motif. Horizontal band at junction of rim and wall, above which is a row of Ss; upper outside edge of rim painted; row of solid triangles on rim top. Handle attachment framed by thin continuous line following its contour. Top of handle and lower raised attachments decorated with diagonal strokes as shown; interior painted.

Shape and decoration are Late Geometric. Handle type unusual, related to the stirrup handle common on Late Geometric kraters but lacking the horizontal member below. Cf. the spur handle on the Late Geometric bowl: Popham, Sackett, and Themelis 1979–80:72, pl. 57, no. 324. For the Ss on rim cf., for instance, Boardman 1967:106–107, figs. 62–63, pls. 19–28, various examples.

TRENCH 56

80. (84.143) **Fig. 62**

Deposit type 1

TR 56 Pot 1

BASE FRR.; SMALL WM CLOSED VESSEL, PROBABLY AMPHORA/ISKOS

PH 0.033; D (base) 0.052

Five joining frr. preserving entire base and small portion of lower wall; slightly chipped and worn.

Local clay with small white and light-colored inclusions and much mica, predominantly golden. Clay evenly fired close to reddish yellow 7.5YR 6/6; slip slightly lighter, closer to 7.5YR 7/6.

Flat disk base; lower wall slightly curved.

Slipped and painted: paint dull, evenly applied, fired red. Exterior face of base painted; parts of three preserved thin horizontal bands on lower wall.

Cf. **62**.

TRENCH 59

81. (84.428) **Fig. 62**
Deposit type 1
TR 59 1#191
HANDLE FR.; HM BOWL WITH SQUARE-CUT HANDLES
PH 0.050; PL 0.072
Single fr. preserving upper portion of handle; slightly chipped and worn.
Local clay with many small to medium white and light-colored inclusions and much mica, mainly fine, golden tending to predominate. Clay and surfaces evenly fired something like brown 10YR 5/3.
Square-cut handle with all edges and central hole chamfered.
Surfaces burnished smooth, dull; surface facing interior of vessel somewhat better finished.
For general form cf. **T67-2**.

TWO LOOMWEIGHTS (TRENCH 43)

The loomweights **82** and **83** were encountered in TR 43 and are probably associated with the Early Iron Age kiln; both were identified by Carington Smith as Early Iron Age.

82. (82.421) **Fig. 63**
Deposit type 6
TR 43 3#341, S.F.13
FRAGMENTARY TERRACOTTA LOOMWEIGHT
Papadopoulos 1989a:35, 42, ills. 40–41
PH 0.067; base: 0.081 × 0.067
Upper part of loomweight not preserved; reconstructed from many frr. and partially restored.
Local clay with some small to medium white and light-colored inclusions and much mica, predominantly golden. Clay and surfaces mostly blackened, elsewhere fired close to brown 7.5YR 5/4 and reddish brown 5YR 5/4.
Large and heavy pyramidal loomweight, roughly formed; suspension hole not preserved.
Surfaces roughly smoothed.
Cf. **83**.

83. (82.658) **Fig. 63**
TR 43 S.F.22; built into wall *d*
TERRACOTTA LOOMWEIGHT
Papadopoulos 1989a:35, 42, ills. 42–43
H 0.090; base: 0.072 × 0.058
Intact but slightly chipped; surfaces worn.
Local clay with small to large white and light-colored inclusions and much mica, predominantly golden. Surface partially blackened, elsewhere fired close to brown 7.5YR 5/4.
Large and heavy pyramidal loomweight, roughly formed; single elliptical suspension hole toward top.
Surfaces roughly smoothed but worn.
Cf. **82**.

SELECTED SHERDS AND OTHER SMALL FINDS OF EARLY IRON AGE DATE FROM OTHER PARTS OF THE SITE

The following pieces are presented according to the area in which they were found. In all cases they represent stray pieces encountered in later or mixed deposits. All these pieces appear in *Torone I* (Cambitoglou, Papadopoulos, and Tudor Jones 2001), where they are fully described and discussed. I have renumbered them here in order to facilitate cross-reference. They represent all material that can be assigned as Early Iron Age with any degree of certainty from areas of the site other than Terrace V, but not including the material from the more recent excavations on Promontory 1.

The Gate Area. Only four frr. of Early Iron Age date were found in the Gate Area of the Late Classical/Early Hellenistic fortification system and mostly derive from different units or strata.

84. (75.248) **Fig. 63**; **pl. 419**
TR 1 TR 2 Unit 2
SHOULDER FR; WM CLOSED VESSEL, PROBABLY AMPHORA. IMPORTED, PROBABLY EUBOIAN (?)
Torone I: **4/1**

85. (76.764) **Fig. 63**; **pl. 419**
TR 6 TR 3 Unit 4
BODY FR; WM KRATER; IMPORTED, UNCERTAIN PROVENANCE
Torone I: **4/2**

86. (75.385) **Fig. 63**; **pl. 419**
TR 3 E Unit 3
SHOULDER FR.; WM AMPHORA
Torone I: **4/3**

87. (75.381) **Fig. 63**; **pl. 419**
TR 3 E Unit 3
BODY FR., LARGE WM OPEN VESSEL (SKYPHOS OR KRATER)
Torone I: **4/6**

88. (75.789) **Fig. 64**; **pl. 419**
TR 3 S Unit 2
BODY AND LEG FR.; HM TRIPOD CAULDRON
Torone I: **4/9**

Structure I: Frr. of two vessels (**89**, **90**) as well as two terracotta spindlewhorls, beads, or buttons (**91**, **92**) found in deposits that yielded primarily Classical pottery: Cambitoglou 1975:126–128; Cambitoglou, Papadopoulos, and Tudor Jones 2001:89–272, 293–308.

89. (75.794) **Fig. 64**; **pl. 419**
TR 1 TR 1 Unit 6
RIM FR.; WM LEKANIS, Type 1
Torone I: **4/7**

90. (75.790) **Fig. 64**; **pl. 419**
TR 1 TR 1 Units 6, 7, 8
BODY, NECK, AND RIM FRR.; HM JUG WITH CUTAWAY NECK
Torone I: **4/8**

91. (75.356) **Fig. 64**; **pl. 419**
TR 1 TR 3 Unit 6
TERRACOTTA SPINDLEWHORL, BEAD, OR BUTTON; INCISED DECORATION
Torone I: **4/10**

92. (75.324) **Fig. 64**; **pl. 419**
TR 1 TR 3 Unit 6
TERRACOTTA SPINDLEWHORL, BEAD, OR BUTTON
Torone I: **4/11**

The Lower City: Only one fr. was encountered of possible Early Iron Age date from a deposit that otherwise yielded primarily Archaic and Classical material. For excavations at the Lower City see the preliminary reports: Cambitoglou 1978:84–86; 1981:33–35; 1982:69. These deposits are fully treated in Cambitoglou, Papadopoulos, and Tudor Jones 2001: 236–253.

93. (78.2427) **Fig. 64**; **pl. 419**
TR 3 SW Unit 3
SHOULDER FR.; WM AMPHORA
Torone I: **4/4**

Promontory 1 (Lekythos): Before the 1986 excavation season only one Early Iron Age fr. was encountered on the promontory in a mixed deposit that also yielded material of Turkish, Late Roman, Hellenistic, Classical, Archaic, and Early Bronze Age date; for the 1978 excavation on Lekythos see Cambitoglou 1978:91–93, and especially Cambitoglou, Papadopoulos, and Tudor Jones 2001:89–272.

94. (78.1600) **Fig. 64**; **pl. 419**
TR 2 Unit 5
SHOULDER FR.; WM AMPHORA
Torone I: **4/5**

Fragments of the later Early Iron Age (Late Geometric and Archaic) are published in *Torone I* (Cambitoglou, Papadopoulos, and Tudor Jones 2001:309–329).

THE KILN POTTERY

The Early Iron Age kiln on the NNE edge of Terrace V has been published (Papadopoulos 1989a), so too the pottery found within its firing chamber, while a more recent study has looked into the petrographic and chemical composition of the kiln pottery (Whitbread, Jones, and Papadopoulos 1997). Although it is not my intention to republish this material here, the pottery from the kiln does feature throughout in both the discussion of the pottery in chapter 5, and the petrographic and chemical analysis of the Toronean Early Iron Age pottery in appendix E. In order to facilitate cross-reference, therefore, the fourteen pots and pottery fragments from the kiln are listed here; for full descriptions and illustrations of the pottery, the reader is referred to the original publication.

KP-1 (82.604) HM PITHOS
Papadopoulos 1989a:29, 36–37, ills. 12–13

KP-2 (82.1185) HM PITHOS, FRAGMENTARY
Papadopoulos 1989a:29, 37, ills. 14–15

KP-3 (82.1186) HM PITHOS; BODY FRR.
Papadopoulos 1989a:30, 38, ills. 16–17

KP-4 (82.1184) WM KRATER
Papadopoulos 1989a:30, 38–39, ills. 18–19

KP-5 (82.1188) WM AMPHORA WITH BELLY AND SHOULDER HANDLES
Papadopoulos 1989a:30–31, 39, ills. 20–21

KP-6 (82.1189) WM (BELLY-HANDLED?) AMPHORA
Papadopoulos 1989a:31–32, 40, ills. 22–23

KP-7 (82.1192) BODY FRR., LARGE WM CLOSED VESSEL, PROBABLY AMPHORA
Papadopoulos 1989a:32, 40, ills. 24–25

KP-8 (82.1190) BODY FRR., WM CLOSED VESSEL, PROBABLY SMALL AMPHORA
Papadopoulos 1989a:32, 41, ills. 26–27

KP-9 (82.1191) BODY FRR., LARGE WM CLOSED VESSEL, PROBABLY AMPHORA
Papadopoulos 1989a:32–33, 41, ills. 28–29

KP-10 (82.1196) SHOULDER FRR., WM CLOSED VESSEL, PROBABLY AMPHORA
Papadopoulos 1989a:33, 41, ills. 32–33

KP-11 (82.1195) BASE FRR., WM OPEN VESSEL, PROBABLY LEKANIS (Type 2)
Papadopoulos 1989a:33, 41, ills. 30–31

KP-12 (82.1194) NECK AND RIM FRR., LARGE WM CLOSED VESSEL, PROBABLY AMPHORA
Papadopoulos 1989a:33–34, 41, ills. 34–35

KP-13 (82.1193) FRAGMENTARY WM JAR OR SMALL PITHOS
Papadopoulos 1989a:34, 42, ills. 36–37

KP-14 (82.1187) FRAGMENTARY HM VESSEL, PROBABLY CHYTRA
Papadopoulos 1989a:34–35, 42, ills. 38–39

NOTES

1. More significant Early Iron Age pottery was found on Lekythos in the excavations of 1986–1990 (Cambitoglou and Papadopoulos 1988; 1990; 1991; 1994).
2. The excavated baulks were 13 East Baulk, 22 North Baulk, 25 North Baulk, 25 East Baulk, 46 East Baulk, 47 North Baulk, 47 East Baulk, 56 East Baulk, and 57 East Baulk.
3. A good deal of slightly earlier, sixth-century B.C. material was encountered in various deposits, but in all cases it was associated with later Classical pottery and would therefore represent either residual debris of an earlier phase of occupation not otherwise preserved, or fill brought in from another part of the site.
4. See, among others, Tombs 7, 15 (along with 101), 25, 43, 46, and 106; contrast the state of preservation of the three tombs near the center of Trench 22 where Tombs 115 and 117 were fairly well preserved whereas Tomb 116 was poorly preserved. For further discussion of the Classical building activity on Terrace V see Papadopoulos 2000a.
5. I am grateful to Olwen Tudor Jones for her patience, skill, and good humor in helping me sort through this copious body of material.
6. Inhumation Tombs 5, 9, and 16, each of which contained the skeletal remains of two, three, or four, individuals, are considered intentional multiple burials where an earlier grave was evidently reopened. For multiple cremation tombs, where two or more ash-urns were placed in the same tomb pit or the cremated remains of more than one individual were placed in the one ash-urn see chapter 4.
7. The few scraps of Late Roman fineware (the total does not exceed ten frr.) were all of the common Phocaean Red-Slip Ware (= Late Roman C Ware, Hayes 1972:323–370; 1980a: 525–527). The fabric is the most common of all imported finewares at Torone from the late fourth through the late sixth century A.D. (Cambitoglou, Papadopoulos,

and Tudor Jones 2001: 515–646). No more than thirty frr. of Late Roman amphorai were found on the terrace, and this figure represents even fewer actual vessels; for the amphorai see Papadopoulos 1989b.

8. In this case the result of decayed vegetable matter from the pear tree just to the west, see **fig. 13**; cf. the south scarp section of Trench 25, **fig. 31c**.
9. The Byzantine and post-Byzantine pottery from Torone is currently being prepared for publication by Pamela Armstrong. Comparison of the small quantities of fragmentary post-Byzantine pottery from Terrace V with the stratified and better preserved contemporary material from Promontory 1 suggests that most of it is quite late, perhaps even as late as the eighteenth and nineteenth centuries A.D. Although difficult to date, the fragments of post-Byzantine pottery in deposit type 2, predominantly lead-glaze ware, were similar to more complete vessels found in the Isthmus area and on Promontory 1, associated with Turkish coins and quite a number of Turkish tobacco pipe bowls, evidence that may suggest deposit type 2 was associated with the later, rather than earlier, part of the period. For the chronology of the tobacco pipes see Hayes 1980b:3–9; R. C. W. Robinson 1983, and esp. 1985. For the Turkish coins see Hardwick 2001: 773–783.
10. There were too few coins to be of much chronological assistance. The notes in the trench summaries dealing with the Classical pottery are based on the notes Olwen Tudor Jones and I took during sorting and I am grateful to her for providing most of the dates for the black gloss; in dating Attic and local black gloss, *Agora XII* (Sparkes and Talcott 1970) has been the main guide; for a more detailed account see Cambitoglou, Papadopoulos, and Tudor Jones 2001:391–437 (cf. Blondé 1985:281–344). For Classical local painted wares see Pierce 2001:473–493 (cf. D. Robinson 1933a; 1950).
11. Any given deposit type in any one trench may have been dug in two or more unit designations arbitrarily defined either vertically or horizontally, with numbers of *zembilia* (rubber buckets) normally determined by the quantity of pottery recovered. In the respective catalogues (chapters 2 and 3) I give the relevant unit and zembili designation (e.g., Trench 47 16#1303 = Unit 16 zembili 1303) in order to facilitate inspection at first hand (*context* pottery is stored in labeled tins in the courtyard of the Polygyros museum). Further notes on the context pottery are to be found in the context pottery notebooks, stored with the original excavation notebooks in the Australian Archaeological Institute office at the University of Sydney.
12. Some minuscule fragments and chips of pottery, as well as some roof-tile fragments, were subsequently discarded at the dump established at the south side of Promontory 2, but only after they were carefully studied for joins, counted, and weighed.
13. The south scarp of Trench 1 was flush with that of Test Trench 1, and its west scarp was sited 0.42 m west of Test Trench 1 in order to bring it in line with the west scarp of Trench 6 and with the overall grid (**figs. 12–13**).
14. These are not indicated on the plan; of the four, two may well have been tomb pits. One was located near the corner formed by walls *a* and *b*, thus the jug **3** may have belonged to it; the other was located toward the SE, not far from the NE face of wall *b*.
15. The saltcellars were almost exclusively of the footed variety (Sparkes and Talcott 1970:137, fig. 9, nos. 942–950). A few frr. preserved rouletted decoration (Sparkes and Talcott 1970:30–31, where the fifth-century dates for some examples published in D. Robinson 1950 and Ghali-Kahil 1960 are shown to be incorrect).
16. This figure represents the minimum number of certain vessels of post-Byzantine date encountered in Trench 12; the total minimum number of such vessels in deposit type 2 in all trenches is at least nineteen. How much of the associated coarseware pottery is contemporary is difficult to determine on account of the fragmentary nature of the material.
17. The pottery recovered was mixed. It included Archaic and Classical frr. as well as a few Early Iron Age sherds, among them the selected frr. **27–28**; nothing later than the end of the fifth century was noted. The deposit may represent surface accumulation prior to the laying of deposit type 2.
18. The six joining frr. of **32** were near the NE corner of Trench 46, about 0.50 m south of Tomb 68 and 0.65 m SE of Tomb 73. They were originally thought to represent the poorly preserved remains of another cremation tomb, but this later seemed unlikely as no tomb pit or any cremated bone was found.
19. The pottery recovered in the area east of wall *e* was of mixed date, including frr. of the Classical period. From the Early Iron Age was a fr. of a

handmade kantharos and several joining and nonjoining frr. of a wheelmade small closed vessel (inv. 84.443) of unusual shape (not catalogued). There was also one small fr. of cremated bone displaced from one of the disturbed tombs in Trench 22.

20. It was accordingly designated Trench 22 North Baulk Pot 1 and inventoried as 84.243. The recovered frr., none of which displayed any signs of burning, were all very small; the largest, consisting of four joining frr. preserving portion of the body of a handmade open vessel, had a PL of only 0.056. In addition there was a fr. of a wheelmade closed vessel (part of **T107-1**?), as well as one rim and one body fr. of a wheelmade vessel (or vessels).
21. The western extent of Pithos Inhumation Tomb 12 and Cremation Tomb 106 were first noticed with the excavation of Trench 25. The east portion of Tomb 98 was located in Trench 22 and Trench 22 North Baulk, and the eastern extent of Tomb 101 was partially cleared with the excavation of Trench 22. The west portion of Tomb 99 (also excavated as part of Trench 22) extended slightly into Trench 25 East Baulk, accounting for the cleared area about 2.30 m north of the SE corner (**figs. 32a–c**).
22. The unfortunate location of this tomb and the fact that the immediate vicinity was excavated piecemeal over two seasons, as part of three trench designations, made the task of locating joining fragments of the ash-urn particularly difficult.
23. The fire-affected sherds are catalogued under Tomb 102 (**T102-2–T102-5**); with them were found two partially preserved bronze objects (**T102-6**, **T102-7**), both much misformed by burning. The quantity of cremated human bone recovered from the pit was slight, only 69 g compared to 254 g found inside **T102-1** (the total weight of cremated human bone associated with Tomb 102 was 400 g, which includes the bone found in the ash-urn, in the immediate vicinity, and from the pit below Tomb 15). The ash-urn of Tomb 101 contained 331 g of cremated human bone. It should be stressed that the quantity of cremated bone varied considerably from tomb to tomb, depending on the care with which it was gathered at the conclusion of the cremation (cf., among others, the 693 g inside **T70-1** with the meager 52 g from **T106-1**; for further discussion see chapter 4 and appendix A).
24. Similar foundation trenches, completely robbed of their stone, were encountered in the SE quarter of Trench 13 (**fig. 26**), in Trench 6 (**fig. 21a**, the cutting continuing the line of wall *a*), and in Trenches 58 and 13 East Baulk (**fig. 50b**) in the form of the cutting defining the line of the return wall of Trench 58 wall *a*.
25. The pottery recovered from topsoil was, again, primarily Classical, with at least one post-Byzantine fr. noted as well as small, worn frr. of what appeared to be an Early Iron Age skyphos (not catalogued).
26. The Early Iron Age material recovered includes at least thirty frr. of local handmade ware, representing a minimum of three (and probably more) individual pots, in addition to five very small frr. of wheelmade painted pots. Similarly, the pottery recovered from the deposit in Trench 12 was predominantly of handmade wares (see above and cf. **29–31**). A small quantity of Early Iron Age sherds representing at least one, and probably two, handmade vessels, and one wheelmade vessel (not catalogued) was also recovered from deposit type 3.
27. What was originally designated as "*wall f*" by the excavator is here presented as Feature f; there is no wall *i*.
28. A similar and slightly more substantial floor was encountered in the NE quarter associated with wall *j* (**fig. 38b**). Such was also the characteristic floor makeup of the fifth-century B.C. structure on Promontory 2 excavated in 1982 (Cambitoglou 1982:77–78, pl. 56b). A simpler packed mud floor was usually the case with the fifth- and fourth-century B.C. structures on Terrace IV (Cambitoglou 1982:69–73, esp. 72, fig. 3, pls. 53b, 54a) and with the fourth-century B.C. structure in the Lower City area (Cambitoglou 1981: 33–35, 37, fig. 4). See also Cambitoglou 1977: 102–105, pls. 61–70; 1978:80, pl. 70.
29. This was only a very thin layer immediately above bedrock and the odd sherd encountered in it mostly represents intrusive material from above. A good many later illustrations in Greek vase-painting depict a kiln attendant in the process of what is normally interpreted as "stoking the fire" (see, among others, Rhodes 1968:14–15, figs. 16–17; Cuomo di Caprio 1984:78–80, nos. 1–18, notably nos. 1, 3–4, 14; Noble 1988: figs. 230–231, 238). A few of these representations may equally depict the attendant raking out burned debris.

30. The Early Iron Age material includes a handle fr. of a wheelmade belly-handled amphora, a skyphos rim fr., two frr. of a handmade jug with cutaway neck, and a rim fr. of a handmade open vessel.
31. In addition to the catalogued material, frr. of at least four other Early Iron vessels were encountered, including at least one wheelmade skyphos, two different handmade jugs with cutaway neck, and one handmade open vessel, probably a kantharos. Of the material catalogued, **67** was at least partially affected by secondary burning; **65** and **66** were unaffected.
32. Of the four, two were small body frr. of a wheelmade vessel or vessels and two were frr. of handmade vessels. The fifth was a nondiagnostic body fr.
33. Among other ancient wells at Torone, two in Cambitoglou 1978 (80, 82, fig. 2; 88, fig. 6, pl. 74b) measured 2.0 m and 0.8 m in diameter, respectively. At this point the terrace is about 27.0 m above sea level, and the shaft, if a well, would have had to be rather deep in order to reach water; this may suggest it was the shaft of a cistern, or possibly a storage pit. Of the three black-gloss fragments, one was the base of a stemless cup (84.364), probably of the first half of the fifth century B.C., another the base of a bolsal broadly dated to ca. 430–380 B.C. The fact that the fill comprised bedrock chips may indicate that the water level was never reached, the excavators refilling the aborted shaft with the bedrock chips they had dug out; it is equally likely that this feature was simply a deep pit.
34. The Early Iron Age material included two joining frr. of a handmade kantharos, as well as one handle and nine body frr. of other handmade vessels. A small quantity of bone and seashell material was also noted.
35. The roof tiles were predominantly of the Lakonian type, but some Corinthian cover tiles were also noted. One of the tile frr. (inv. 84.384) preserved a stamped rosette similar to that below the rim of an eschara in Sparkes and Talcott 1970: 378, pl. 98, no. 2033; for stamped roof tiles, see Felsch 1979. The coin (inv. M84.310) was an issue of Philippi minted ca. 356–350 B.C. (the identification was made by Dr. Manto Oikonomidou). There was also a lamp fr. of Howland type 23 (Howland 1958:56–62) dating late in the third quarter of the fifth into the first quarter of the fourth century B.C. (cf. Broneer 1930: type VI, and further examples in Tidmarsh 2001:647–667).

3

A catalogue of tombs and their contents

THE INHUMATION TOMBS (TOMBS 1–16)

TOMB 1 (**FIG. 19A**; **PL. 71**; CONTENTS: **FIGS. 65A–B**; **PLS. 372**, **380**)

Test TR 1 S.F.3 + 4
PARTIALLY PRESERVED "PITHOS" TOMB: PERHAPS SINGLE CHILD INHUMATION?
Fragments of the large pithos T1-1, preserving about one-third of the body of the vessel but nothing of its rim or base, were encountered at a depth of 0.15–0.20 m. The fragmentary vessel was clearly in situ, having been placed on bedrock that had been slightly worked, and defined an area approximately 0.65 m × 0.44 m. Judging by the curvature of the fragments, the vessel was oriented east–west; resting on top of it was the almost complete, but also fragmentary, kantharos **T1-2**. No trace of human bone was found in situ, but topsoil in the immediate vicinity[1] contained a small quantity of human and animal bone; among the former was at least one fragment of a tooth of a child aged 6+ years at the time of death. Given its fragmentary condition, and on the analogy of Tomb 12 (cf. Tombs 7 and 89), **T1-1** was unlikely to have been a complete vessel at the time of burial, but rather a large body fragment of a pithos that had been laid as bedding for the presumed inhumation.

Unless otherwise specified, all measurements are in meters.

T1-1 (81.12) **Fig. 65a**; **pl. 380**

Test TR 1 S.F.3
FRAGMENTARY BODY; HM PITHOS
PH 0.598; max. PL 0.425
Many joining frr. preserving about one-third of the body lengthways; chipped and worn.
Coarse local clay with a great many small to large white and light-colored inclusions and much silver and golden mica. Clay and surfaces evenly fired close to yellowish red 5YR 4/6.
Body tall, thick walled, slightly curved.
Exterior surface wet-smoothed, producing a good but dull surface; interior less well finished.
Cf. **T12-1**.

T1-2 (81.04) **Fig. 65b**; **pl. 372**

Test TR 1 S.F.4
HM KANTHAROS, SMALL VARIETY
H (to rim) 0.070; H (to handles) 0.089; D (rim) 0.064; D (base) 0.046
Reconstructed almost complete, except for missing frr. of body; restored.
Local clay with small white and light-colored inclusions and much mica, predominantly silver. Clay and surfaces evenly fired close to reddish yellow 5YR 6/6.
Flattened base; rounded body curving in to gently flaring/outcurved rim; chamfered lip. Two vertical high-swung handles, oval in section, attached from body directly to rim.
Exterior surface burnished smooth, producing a dull finish; tooling marks visible on interior.
Cf. **7**.

TOMB 2 (**FIGS. 19A**, **20**; **PL. 72**)

TR 1 3#24, Skeleton 2
PIT GRAVE; SINGLE CHILD/ADOLESCENT INHUMATION
Tomb encountered at a depth of 0.30 m; skeleton oriented SE–NW, the cranium toward the

NW, facing SSW. Tomb poorly preserved with only the left collar bone, some of the ribs, and the right humerus, with a portion of the cranial vault and the better preserved lower jaw in situ. These remains of a child or adolescent aged 13–14 years at death were found in a shallow pit cut into bedrock, in an interleaving of fine, loose-textured, dark-colored earth. The roughly oval pit, 0.64 m long × 0.35 m wide, was only a few centimeters deeper than the surrounding rock. The body had been laid on its back, probably fully extended, but with the lower body (not preserved) outside the shallow pit.[2] The original size of the tomb thus remains unknown, although traces of dark-colored earth, similar to the preserved tomb fill, were encountered for at least 0.80 m SE of the pit, suggesting the tomb may have had an original length of 1.20–1.30 m or more. The tomb was located near the cutting in bedrock associated with TR 1 walls 'B' and 'C' and consequently the damage caused to the lower body may have been largely the result of Classical building activity. A few centimeters above the level of the skeleton and ca. 0.70 m east of the skull the excavator found two stones in line, which she later thought may have been part of a possible grave marker or partial stone covering; such a possibility could not be confirmed.

No *kterismata* were encountered.

TOMB 3 (**FIGS. 19A, 20; PL. 73**)

TEST TR 1 7#12, Skeleton 1
PIT GRAVE; SINGLE CHILD INHUMATION
TOMB STRATIGRAPHICALLY RELATED WITH CREMATION TOMB 18

Long shallow pit cut into bedrock, measuring 0.90 m × 0.30 m as preserved but only ca. 0.05 m deeper than the level of the surrounding rock. The bottom of the pit lay at 0.20–0.25 m below surface. Within the pit the body of a child aged ca. 7 years at death was laid out on its back in what was probably a fully extended supine position. The skeleton was oriented SE–NW with the cranium, which was largely not preserved, toward the NW. Although only partially preserved, the skeleton was mostly articulated and included portion of the left collarbone, left humerus, left and right ulnae and radiae, as well as some of the right ribs, portion of the backbone, some of the bones of the left hand (including the tips of the fingers), some fragments of the pelvic girdle, and the greater part of the left and right femurs. Near the collarbone were scattered a number of teeth in addition to some more fragments of bone, including a few small fragments of the cranium. No distinct fill was found in any way different from topsoil. At the SE end of the grave the pit for the later Cremation Tomb 18 cut across part of Inhumation Tomb 3 resulting in some damage to the lower body of the earlier inhumation; the left fibula was found, displaced, slightly to the SE, while at least one unburned tooth and several unburned human bone fragments were noted in the pit of Cremation Tomb 18.

No *kterismata* were encountered.

TOMB 4 (**FIG. 19A; PL. 74**)

TR 1 6#11, 26, Skeleton 3
POORLY PRESERVED PIT GRAVE;
PROBABLY SINGLE ADULT FEMALE(?) INHUMATION

Tomb found in poor state of preservation with only a few small fragments of a tibia, fibula, and what appeared to be one of the radiae and ulnae in situ in a shallow pit, cut into bedrock near the SW corner of TR 1. As with most of the inhumation tombs, the bones that were not displaced had, with time, become attached to the natural rock, making their removal rather difficult and indicating that the preserved remains were in situ. According to the excavator's observations in the field, the preserved bones, probably those of an adult, were oriented SW–NE (unlike Tombs 2 and 3), with the cranium, of which no trace was recovered, probably to the SW. No distinct fill was encountered, and the original size of the tomb could not be determined. The largest bone fragment measured 0.26 m in situ, and lay at a depth of 0.25 m below surface. A *Murex trunculus* shell was recovered from the tomb pit (appendix C).

No *kterismata* were encountered.

TOMB 5 (**FIGS. 37A, C; PLS. 75–76**)

TR 40 3#222–225, Skeletons 1 and 2
PIT GRAVE; TRIPLE INHUMATION

Large and irregularly shaped pit ca. 2.0 m × 1.60 m, cut 0.30 m deep into bedrock. Immediately

west of the tomb the level of unworked bedrock was higher, defining the western extent of the cemetery area (see TR 40 trench summary). Within the pit the remains of three skeletons lying one on top of the other were uncovered in an interleaving of fine, loose-textured, dark-colored earth with an average depth of 0.16 m. The lower of the three, laid out on a thin layer of bedrock chips covering the bottom of the tomb pit (cf. deposit type 5), was of an adult, probably female, aged 20–25 years at death. The skeleton, although slightly disturbed, was mostly articulated, having been laid out fully extended on its back, oriented WSW–ENE, with the cranium (slightly displaced) toward the WSW. The second skeleton, found on top of the first, was of an adolescent or younger adult, aged ca. 17 at death, of undetermined sex. Most of the bones of the upper body of the later skeleton were slightly displaced but lay mostly within the tomb pit. The cranium was found near the pelvic girdle of the lower skeleton; its orientation, roughly that of the lower skeleton, was established from the larger leg and arm bones that were still articulated and that further indicated the body of the deceased was also laid on its back in what was probably a fully extended supine position. The skeletal remains of a third individual, a child aged 10–12 years at death, also lay over the body of the lower skeleton and evidently on a similar orientation. The small quantity of sherd material recovered from the tomb pit included some fragments that were clearly intrusive as well as several small seashells. Although fragments of at least four handmade vessels and some eight small sherds with painted decoration could be assigned as Early Iron Age, they were insufficient to determine precise date and may well have been intrusive.

Although it is almost certain the upper skeletons represent later inhumations, the positioning and state of preservation of the three was such that the possibility that two—or all three—were interred simultaneously cannot be dismissed out of hand. Immediately west of the tomb the concentration of stones encountered on higher, unworked bedrock is probably best seen as a continuation of deposit type 2 rather than as representing the remains of a stone covering or marker.

No *kterismata* were encountered.

TOMB 6 (**FIGS. 24A, C**; **PLS. 77–78**; CONTENTS: **FIGS. 66A–C**; **PLS. 346A–B**)

TR 12 SW Skeleton 1
PIT GRAVE; SINGLE ADULT MALE INHUMATION; TOMB STRATIGRAPHICALLY RELATED WITH CREMATION TOMB 96

Tomb 6, together with Tombs 7 and 8, was laid out in an area of carefully leveled bedrock in the SW quarter of TR 12 (**pls. 26–28**), which was part of the Early Iron Age cutting (see **fig. 17**). Encountered at a depth of 0.65–0.70 m below surface, the skeleton was of an adult male aged ca. 40 years at death, laid out on his back in a fully extended supine position, his arms by his side. Oriented SE–NW with the cranium toward the SE, the skeleton measured 1.74–1.80 m in situ and was found in a reasonable state of preservation, well articulated, but with many of the bones, and especially the skull, crushed by the weight of earth above. The whetstone **T6-2** was found directly on the left temple region of the cranium. Just to the right of the skull was the handmade jug **T6-1**, placed upright but tilted slightly toward the north; the base of the jug was at the same level as the skull. A fragment of the leg of a tripod cauldron (**T6-3**) was also found in the tomb pit.

At a slightly higher level, directly over the right lower arm of the inhumation, was Cremation Tomb 96, the ash-urn of which could be assigned as Submycenaean. This ash-urn was first encountered at a depth of 0.315 m below surface; its lowest part lay at 0.47 m—that is, ca. 0.20 m above the level of Tomb 6. (The relationship of Tombs 6 and 96 is discussed in chapter 2.) Although Tomb 6 appeared to be earlier than Tomb 96, it is possible that the latter represents an earlier cremation that was disturbed by the interment of Tomb 6 and redeposited above the inhumation. A small quantity of sherd material recovered from the immediate vicinity of Tomb 6 included one of the handles of the ash-urn of Tomb 96; this material could not, however, be dated more closely than Early Iron Age.[3] Two small seashell fragments noted in the immediate vicinity of the tomb could not be directly associated with it. Cremation Tomb 97 was located only 0.15 m SE of the skull of Tomb 6, Inhumation Tomb 7 only 0.55 m and also to the SE.

T6-1(81.231) **Fig. 66a**; **pl. 346a–b**
TR 12 S.F.6
HM JUG WITH CUTAWAY NECK
H 0.176; D (base) approx. 0. 065; D (rim) max. 0.060
Intact, but with broken handle stuck on.
Local clay with some small to medium white and light-colored inclusions and much silver and golden mica, tending fine. Clay and surfaces variously fired from light red 2.5YR 5/6–6/6 through light brown 7.5YR 6/4; surface blackened at certain points.
Flattened base; rounded body, almost spherical, and tending to bulge slightly on side opposite handle; short concave neck, cut away, and offset from body by shallow groove on exterior; lip chamfered. Neck thinner walled than body and made separately. Vertical handle, round in section, attached to body by piercing.
Exterior burnished, with tooling marks running horizontally on body, vertically on neck, producing a good but dull surface.
Cf. especially **T10-2**.

T6-2(81.1157) **Fig. 66b**
TR 12 S.F.6
WHETSTONE
L 0.074; W 0.040; TH 0.020
Perhaps intact; slightly chipped.
Sedimentary stone, probably sandstone.
Roughly rectangular, with long sides straight; one end rounded, the other straight. It is not clear whether the straight shorter end is original or represents a broken edge. Flat on top and bottom, with surfaces smoothed; one side rounded, the other oblique.
Cf. **T104-5**.

T6-3(81.1157A) **Fig. 66c**
TR 12 cf. S.F.6
LEG FR.; HM TRIPOD CAULDRON
PH 0.060; max. W 0.027
Single fr. preserving lower portion of leg, including resting surface.
Coarse local clay with many small to large white and light-colored inclusions and much mica, almost exclusively golden. Clay and surfaces evenly fired close to pinkish gray 7.5YR 6/2.
Leg rectangular in section, tapering slightly to rounded resting surface.
Surfaces burnished smooth, producing dull finish.
Cf., among others, **20**, **22–23**.

TOMB 7 (**FIGS. 24A, D**; **PLS. 79–86**; CONTENTS: **FIGS. 67A–H**; **PLS. 374**, **379**, **391**, **450F, L**, **458–459**, **461A–B**)

TR 12 SW Skeleton 2
PIT GRAVE; SINGLE ADULT FEMALE INHUMATION
Cambitoglou 1981:38, pl. 52a
Tomb 7, a simple pit grave of an adult female aged ca. 30 years at death, was laid out on the same area of leveled bedrock as Tomb 6 in the SW quarter of TR 12 and at a depth of 0.65 m. It lay approximately 0.55 m SE of Tomb 6 and on exactly the same SE–NW orientation, with the cranium, of which only the lower jaw was preserved, toward the SE. The skeleton measured 1.62 m long in situ (with a stature, as determined in appendix A, of 159.21 ± 4.24 cm—160.03 ± 4.30 cm). It was found in a good state of preservation with bones such as the terminal phalanges of both hands still articulated; only the upper cranium, as noted, was not preserved. The skeleton lay supine and fully extended, arms by the side of the body. The upper vertebrae and lower jaw (which were still articulated) were found resting on a large rim fragment of the pithos **T7-1** that was set into position and supported by a number of small stones; the partial bedding that resulted slightly propped up this part of the body. Also on the pithos fragment was the bronze spiral **T7-6**, almost certainly a hair ring (**pls. 81–82**, **461a–b**). That the upper cranium was missing was unusual, especially in view of the articulation of the lower jaw and upper vertebrae; it renders not totally satisfactory the explanation of cause as a consequence of later disturbance.[4]

The greater than normal quantity of dark-colored loose-textured earth in the fill of Tomb 7 indicated some form of decayed organic material, most reasonably timber. No real trace, however, of a constructed coffin was observed, although some form of wooden covering, perhaps little more than

branches, seems likely—or even some form of timber bedding (cf. Popham, Sackett, and Themelis 1979–80:198–199). The form and depth of the tomb pit, coupled with the pithos cushion under the cranium, would seem to preclude a real coffin.

Kterismata, in addition to the hair ring **T7-6**, included two bronze anklets (**T7-7**, **T7-8**) worn by the deceased, one around each ankle; a handmade kantharos (**T7-2**) placed upside-down over the left elbow; and a fragmentary handmade jug (**T7-3**) found upright beside the left knee. A terracotta spindlewhorl, bead, or button (**T7-5**) was found near the outstretched fingers of the left hand, while over the right thigh was the fragment of a leg of a tripod cauldron (**T7-4**) similar to **T6-3**. Although the tomb was poorly furnished in comparison with some contemporary tombs from other parts of the Greek world, the deceased of Tomb 7 was clearly one of the most richly equipped individuals in the Terrace V cemetery.

T7-1 (81.562) **Fig. 67a**; **pl. 379**
TR 12 S.F.33 + 40
FRAGMENTARY RIM; HM PITHOS
PH 0.284; max. PL 0.387
Seven joining frr. preserving portion of rim and neck; slightly chipped.
Coarse local clay with many small to very large white and light-colored inclusions and a great deal of mica, exclusively golden. Clay and surfaces evenly fired close to brown 7.5YR 5/4.
Small portion of preserved shoulder sloping; tall vertical to slightly concave neck, thick walled and rising to thickened rim, flat on top and with chamfered outer edge.
Applied band of clay at junction of shoulder and neck, decorated with thickly incised diagonal strokes; finer diagonal strokes, more lightly incised, around outer edge of rim but evidently not continuous around the vessel.
Preserved interior and exterior surfaces burnished smooth, producing a good but dull finish.
Cf. Wells 1983b:212–213, fig. 156, no. 395; Hochstetter 1984: pl. 128, no. 3.

T7-2 (81.735) **Fig. 67b**; **pl. 374**
TR 12 S.F.32
HM KANTHAROS, Type 2
Cambitoglou 1981, pl. 53β
H (to rim) 0.114; H (to handles) 0.157; D (base) max. 0.075; D (rim) 0.180
Intact, but with one broken handle stuck on.
Local clay with some small to medium white and light-colored inclusions and much mica, predominantly golden; occasional blowouts. Clay core, at broken handle, fired gray; interior surface close to reddish brown 5YR 5/4; exterior ranging from light red 2.5YR 6/6 to brown 7.5YR 5/4.
Flattened base; lower wall rising at an angle of about 45°; upper wall curving in to rim thickened on the interior and obliquely cut/chamfered. Two vertical high-swung handles, each surmounted by a disk knob; lower part of the handle is round in section, the upper part plano-convex.
Interior and exterior surfaces burnished, with tooling marks running horizontally, vertically, and diagonally, producing a good finish, dull on the interior, and with a very slight sheen on exterior.
Cf. **T10-4**.

T7-3 (81.734) **Fig. 67c**
TR 12 S.F.34
FRAGMENTARY HM JUG
PH 0.146; D (base) approx. 0.070
Fifteen joining frr. preserving entire base and about one-half of body; neck and rim not preserved.
Local clay with some small to medium white and light-colored inclusions and much mica, predominantly golden and tending fine; occasional blowouts. Clay core fired gray, gray/brown; interior surface close to reddish yellow 5YR 6/6; exterior slightly darker.
Base slightly flattened; round, almost spherical body, thin walled; shallow groove at junction of body and neck at break.
Exterior burnished, with tooling marks running horizontally on upper body, diagonally opposed on lower body, producing a good surface with a slight sheen.
Almost certainly jug with cutaway neck. Form of body as **T6-1** and **T10-2**.

T7-4 (81.548) **Fig. 67d**; **pl. 391**
TR 12 S.F.39
LEG FR.; HM TRIPOD CAULDRON
PH 0.103; W (max.) 0.063; TH 0.024
Single fr., broken at both ends, preserving portion of leg.
Coarse local clay with many small to large white inclusions and much mica, almost exclusively golden, tending large flaked. Clay and surfaces variously fired from brown 7.5YR 5/4 to reddish brown 5YR 4/4.
Leg rectangular in section, tapering toward resting surface, which is not preserved.
Exterior surface on three sides burnished smooth producing a distinct sheen, with a rather soapy feel; inner-facing side of leg less well finished.
Clearly from a large cauldron; cf., among others, **20**, but larger.

T7-5 (81.547) **Fig. 67e**; **pls. 450f, l**
TR 12 S.F.38
TERRACOTTA SPINDLEWHORL, BEAD, OR BUTTON
H 0.018; D (max.) 0.031
Intact; slightly chipped
Local clay with some small light-colored inclusions and a little golden mica. Clay fired close to reddish brown 2.5YR 5/4.
Roughly globular in shape, approaching biconical; a more flattened version of examples such as **T46-3**, **T51-5**.
Cf. Heurtley 1939:203, figs. 67o–p; 213, fig. 83n; 231, fig. 104h.

T7-6 (81.546) **Fig. 67f**; **pls. 461a–b**
TR 12 S.F.35
BRONZE SPIRAL ORNAMENT; HAIR RING
D (max.) 0.025; L of wire uncoiled 0.193; WT 2.60 g
Intact; condition good, nicely patinated.
Thin bronze wire, round in section, coiled to form spiral. Slightly thickened at one end, slightly flattened at the other.

T7-7 (81.651) **Fig. 67g**; **pl. 458**
TR 12 S.F.36
BRONZE ANKLET (right leg)
D (max.) 0.080; L uncoiled 0.325; overlap 0.065; WT 34.10 g
Intact; condition good.
Strip of undecorated bronze, plano-convex in section, coiled over, and tapering slightly to flattened, overlapping terminals.
Cf. **T7-8**.

T7-8 (81.650) **Fig. 67h**; **pl. 459**
TR 12 S.F.37
BRONZE ANKLET (left leg)
D (max.) 0.077; L uncoiled 0.270; overlap 0.033; WT 33.80 g
Intact; condition good.
As **T7-7**, but slightly thicker in parts.

Both anklets (**T7-7**, **T7-8**) and the terracotta (**T7-5**) find good parallels in grave 488 at Bologna (San Vitale): see Müller-Karpe 1959:1.253, G5, G1; 2.64.

TOMB 8 (**FIGS. 24A, D**; **PL. 87**)

TR 12 SW Skeleton 3
PARTIALLY PRESERVED PIT GRAVE; SINGLE ADULT INHUMATION
Only a very small portion of this tomb was preserved, with most of its west end destroyed by the foundation of TR 12 wall *a*. The remains of the skeleton lay only some 0.20 m west of the left shoulder of Tomb 7 and at the same depth; unlike Tombs 6 and 7, it was oriented east–west, with the cranium, of which no trace was recovered, toward the west. The preserved remains, located in the same area of leveled bedrock as Tombs 6 and 7, measured 0.58 m long in situ; they included both tibiae and fibulae, both feet, parts of both kneecaps, and a small portion of one femur. What little remained of the skeleton, encountered in an interleaving of fine, loose-textured, dark-colored earth, was remarkably well preserved with all the smaller bones of the ankles and feet articulated. The skeleton was that of an adult (aged perhaps 18–20 years at death) laid out on its back, but with the legs crossed over below the knees, the left leg over the right.

No *kterismata* were encountered.

TOMB 9 (**FIGS. 32A–C, E; PLS. 88–92**; CONTENTS: **FIG. 68**)

TR 25 North Baulk Burial 2
CIST GRAVE; MULTIPLE ADULT AND ADOLESCENT INHUMATION (FOUR INDIVIDUALS)

Tomb 9 was exceptional in that it represents the only instance of an inhumation cist tomb in the cemetery (cf. Tombs 102 and 104, cremation cist tombs) and contained the greatest number of individuals in any one tomb. The somewhat damaged, but fairly clearly defined, cist had been constructed primarily of green schist slabs set on edge, but of these only several on the east and west sides of the tomb were preserved. Bedrock in the area of the tomb had been worked in order to receive it. The cist was oriented SE–NW, almost exactly parallel to Tomb 10 (**fig. 32c**). Its overall length, as preserved, was ca. 1.70–1.80 m, although neither the NE nor the SE ends were very clear. The width of 0.80–0.90 m was clearly defined toward the SE. The cist was found partially covered by a number of large flat slabs of schist and several smaller pieces of limestone (**fig. 32b**; **pl. 88**); their removal revealed a pile of human bones in almost total disarray and often intermingled and partially covered by smaller pieces of schist (**fig. 32e**; **pls. 89–92**).

Three skulls are indicated on **fig. 32e** (designated the east, west, and north skulls according to their respective positions), but it proved difficult to associate with any certainty postcranial bones with any of the skulls in situ. The later study of the crania by Dr. Musgrave provided useful information: the east skull, consisting mainly of the cranial vault, was probably female and aged no more than 35 at death on the evidence of the preserved dentition; also probably female and adult was the more poorly preserved west skull. The better preserved north skull was of a male aged 35+ years at death, but who had not reached senescence. According to the osteological report, he appears to have suffered in life from appalling dentition (appendix A). It is possible some of the larger limb bones toward the SE belonged with this skull and if so would define an inhumation oriented SE–NW, with the cranium toward the NW.

In addition to the remains of these three adults, Dr. Musgrave was able to separate a handful of immature postcranial fragments of a younger adult or adolescent aged perhaps 18 at death. Consequently the remains of four people were accommodated within a tomb, the dimensions of which were consistent with tombs of single adults. Little articulation was encountered among the postcranial bones, although near the west skull a pelvis still articulated with the femur and also with parts of the spine was noted, and nearer the north skull parts of one hand, at least partially articulated, were found. However minimal, enough articulation was preserved to suggest that most, if not all, the inhumations were primary, and that the tomb, presumably originally intended for a single inhumation, had been opened on several occasions. The bones of earlier interments would have been rearranged (as was clearly the case in Tomb 16) before the cist was closed again. This would account for the smaller pieces of stone intermingled with the bone, as well as the fact that there was only a minor quantity of loose dark-colored earth that was more intense in areas were articulated fragments of bone were noted. It was evident, furthermore, that most of the damage to the actual cist itself was the result of it having been reopened, especially as part of the stone covering was preserved in situ. Nevertheless, the final appearance of the human remains as preserved, and notably the fragments of the younger adult or adolescent, raised the possibility that at least this interment may have been secondary. This possibility, though noted, remains unverified.[5]

The only *kterisma* encountered was the poorly preserved amphoriskos **T9-1**, part of which was evidently in situ at the SE end of the cist but with fragments also found strewn throughout the tomb. The vessel was particularly fragile and crumbled into a mass of unrestorable fragments and chips on removal. A small quantity of sherd material, all evidently Early Iron Age, was also noted.[6] Traces of charcoal were recovered from the water-sieved sample of dark earth in the area under the west skull. This burned debris probably derives from the pyre refuse of the cremation tombs in the area of the Early Iron Age cutting. In addition, some 8 g of seashell and land-snail material was recovered from the tomb pit, much of it from the water-sieved dark earth in the area of the west skull already noted. At least four of the shell fragments

were burned. It is possible the seashell material derives from a funeral feast or some similar ritual performed near the grave, but the fact that the tomb appears to have been opened at least once, and probably on several occasions, suggests debris more likely swept in from the surrounding area.

The cover slabs of the tomb were first encountered at a depth of 0.40 m below surface; the tops of the slabs set on edge, which defined the sides of the cist, were met at 0.63 m, the skulls and most of the other human remains at 0.85–0.91 m.

T9-1 (84.208) **Fig. 68**

TR 25 North Baulk Pot 4

UNRESTORABLE WM AMPHORISKOS

D (base) est. 0.080; main shoulder fr. (illustrated) PH 0.039; PL 0.051

Apart from several small frr. the vessel mostly crumbled into a mass of tiny chips, beyond repair; fabric extremely fragile and perhaps originally underfired.

Local clay with some small light-colored inclusions and golden mica clearly visible. Clay core evidently fired light gray, elsewhere close to reddish yellow 7.5YR 7/6.

Vessel clearly a small belly-handled amphora/iskos. Low ring base with narrow resting surface and with lower exterior edge chamfered; horizontal handles, round in section (one complete and portion of the second preserved). Exact form of body undetermined.

Slipped and painted: preserved paint thickly applied, fired bright red; off-white, thickish slip where visible. Upper part of base and lower wall painted solid. Shoulder decorated with vertical strokes tapering to points and connected by horizontal band at lower break (necklace pattern). Preserved neck painted solid.

Shape as **T101-1** and **T109-1**; for shoulder decoration cf. Mountjoy 1986:195, fig. 258, no. 11.

TOMB 10 (**FIGS. 32B, C, F; PLS. 39A–B, 93–96B**; CONTENTS: **FIGS. 69A–G** [SEE ALSO **191A–B**]; **PLS. 347A–B, 368A–C, 377A–B, 450A, G, 462, 474, 476A–B**)

TR 25 North Baulk Burial 1

PIT GRAVE; SINGLE ADULT MALE? INHUMATION; TOMB STRATIGRAPHICALLY RELATED WITH INHUMATION TOMB 11

Neat, almost rectangular pit 1.95 m long × 0.60 m wide on average, cut 0.13–0.37 m deep into bedrock. The pit cut across Inhumation Tomb 11, destroying the NE end of that tomb, including the knees and lower legs of the skeleton. Within the pit of Tomb 10 the body of an individual possibly aged at least 45 years at death was placed on its back fully extended, arms by the side of the body, and with the cranium slightly propped up, facing straight ahead. The skeleton, described as possibly a male,[7] was oriented SE–NW with the cranium toward the SE, and measured 1.70 m long in situ. Contained wholly within the pit, it was surrounded by an interleaving of fine, loose-textured, dark-colored earth and was found complete and fully articulated, although with individual bones rather poorly preserved. Only a small portion of the upper part of the skeleton (the cranium and part of the rib cage) at the SE end was partially covered by three flat slabs laid in line (**fig. 32B**), the tops of which were encountered at 0.71–0.81 m below surface. Less than 0.20 m to the north several smaller stones as well as fragments of two handmade kantharoi (**T10-1, T10-1A**) were found immediately above the right elbow; a few more fragments of the same vessels were encountered slightly further to the north, beyond the area of the tomb pit. Although catalogued as part of this tomb, these fragments were not clearly in situ and may represent displaced remains of vessels originally associated with the earlier Tomb 11, or possibly part of another aspect of funeral ritual for either tomb (discussed further in chapter 4).

Kterismata for Tomb 10 in situ included three handmade pots placed in the NE corner of the tomb pit beside the left foot and lower leg; two of these (**T10-2**, **T10-3**) were recovered almost complete; the third (**T10-4**) was found only about one-half preserved and may have been offered in its broken state. A large terracotta spindlewhorl, bead, or button (**T10-5**) lay on the left side of the skull; nearby was a thin piece of bronze wire (**T10-8**) coiled to form a spiral. Beneath the chin, which was propped slightly forward, was the poorly preserved bead of glass compound, **T10-6**. During

the process of cleaning the skull in the dig-house, Dr. Musgrave came across a small cylindrical bone bead (**T10-7**) that originally would have been underneath the cranium.

The process of taking up the skeleton revealed a small quantity of sherds, among them a fragment of a horizontal handle (probably of a wheelmade skyphos or perhaps an amphoriskos), six small painted body sherds, and two handmade body fragments. Two more body sherds of a handmade vessel were noted below the skeleton, and a fragment of a seashell (*Murex trunculus*, see appendix C) also lay in the immediate vicinity of the human remains. The sherd material could not be more precisely dated than Early Iron Age. Tomb 10, like Tomb 7, was comparatively well furnished with offerings.

T10-1 (84.22) **Figs. 69a, 191a**

TR 25 East Baulk Pot 1

FRAGMENTARY HM KANTHAROS, Type 1

POTTER'S MARK fig. 191a (= Papadopoulos 1994:448–449, fig. 8, pl. 114, no. B4)

H (to rim) 0.096; H (to handles) 0.142; D (base) approx. 0.070; D (rim) est. 0.155

Many joining frr. preserving almost entire base, about one-half of body, including one complete handle and the scar of the second, but only small portion of rim; chipped and worn.

Local clay with many small to medium white and light-colored inclusions and much mica, golden tending to predominate. Clay core fired two-toned: red toward exterior (close to light red 2.5YR 6/8), gray toward interior (not unlike weak red 2.5YR 5/2); surface on interior fired a yellow color, something like reddish yellow 7.5YR 7/6; exterior mottled red/gray.

Flattened base, slightly pushed up on underside; lower wall rising at an angle of about 45° to point of max. D, from where the upper wall curves in to short, slightly thickened, vertical rim, offset from body on exterior by scraped groove; lip chamfered. Vertical high-swung handles, thin and strap in section, edges chamfered, attached from point of max. D directly to rim. Inner handle face decorated with oval-shaped finger impression, creating a slight bulge on the other side.

Interior and exterior surfaces burnished, with tooling marks mainly horizontal on upper wall, underside, and interior, and diagonally opposed on lower exterior wall, creating a good but dull surface.

Potter's mark, incised prior to firing, at lower handle attachment on one side only. *Lambda*-shaped mark comprising two converging diagonals with the space between filled by short, slightly hooked strokes; cf. mark on **T82-3**.

For shape cf. **T10-1a**, **T10-3**.

T10-1a (84.22A) **Fig. 69b**

TR 25 East Baulk Pot 1 bis

RIM AND HANDLE FRR.; HM KANTHAROS, Type 1

PH (to top of handle) 0.093; D (rim) est. 0.150

Six joining and several nonjoining frr. preserving about one-quarter of rim and one entire handle; chipped, but only slightly worn.

Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden. Clay and surface fired mottled two-toned, not unlike **T10-1**, light red 2.5YR 6/6 to light reddish brown 2.5YR 6/4, in parts reddish gray 5YR 5/2.

Upper wall curving in to short vertical rim, offset from body by scraped groove on exterior corresponding to slight thickening on interior; lip chamfered. One completely preserved vertical high-swung handle, thin and strap in section with edges chamfered, attached from upper wall directly to rim. Inner handle face decorated with finger impression as **T10-1**.

Preserved surfaces burnished, with pronounced tooling marks running horizontally on body and rim (on interior and exterior), vertically at handle, and producing a good surface, mostly dull, but with a slight sheen in parts.

Shape as **T10-1**, **T10-3**.

T10-2 (84.05) **Fig. 69c**; **pls. 347a–b**
TR 25 North Baulk Pot 1
HM JUG WITH CUTAWAY NECK
H 0.225; D (base) 0.080; D (rim) 0.060–0.070
Recovered almost complete but in frr., with only minor chips of body and rim not preserved; reconstructed and restored.
Local clay with many small to medium white and light-colored inclusions and much mica, tending fine, predominantly golden. Clay and surfaces mostly evenly fired close to brown 7.5YR 5/4, in parts approaching red 2.5YR 5/6, in others gray.
Flattened base; rounded, almost spherical body; comparatively short vertical to concave neck, offset from body by slight groove on exterior corresponding with angle formed on interior; neck cut away; lip mostly chamfered, but in parts slightly more rounded. Vertical handle, oval in section, attached to body by piercing, with slight projection of clay on interior; upper attachment directly to rim where cut away.
Exterior burnished, with rather faint tooling marks running vertically on neck, horizontally on upper wall and diagonally opposed on lower body, producing a good surface, mostly dull, but with a very slight sheen in parts.
Shape as **T6-1**.

T10-3 (84.04) **Figs. 69d**, **191b**; **pls. 368a–c**
TR 25 North Baulk Pot 2
HM KANTHAROS, Type 1
POTTER'S MARK fig. 191b (= Papadopoulos 1994:448–449, fig. 8, pl. 114, no. B5)
H (to rim) 0.12; H (to handles) 0.165; D (base) 0.07–0.08; D (rim) 0.2
Recovered almost complete but in frr., with only minor chips of body not preserved; reconstructed and restored.
Local clay, as **T10-2**, but fired closer to yellowish red 5YR 5/6 and strong brown 7.5YR 5/6, in parts closer to red 2.5YR 5/8.
Shape as **T10-1** but slightly larger; base more flattened, and lip tending rounded rather than chamfered.
Surfaces burnished, with tooling marks horizontal on rim and upper body on exterior; diagonally opposed on lower body; vertical at handles; crisscrossing on underside; horizontal and diagonally opposed on interior; and producing a good surface with a slight sheen on exterior.
Potter's mark, incised prior to firing, below lower handle attachment on one side. Three vertical strokes; cf. mark on **T38-2**.

T10-4 (84.24) **Fig. 69e**; **pls. 377a–b**
TR 25 North Baulk Pot 3
FRAGMENTARY HM CUP/KYATHOS, Type 2
H (to rim) 0.110; H (to handle) 0.160; D (base) 0.070; D (rim) approx. 0.160
Many frr. preserving entire base, slightly more than one-half of body and rim, and one complete handle; reconstructed and completely restored.
Local clay with many small to medium white and light-colored inclusions and much fine mica, predominantly golden. Clay and surfaces mostly evenly fired close to red 2.5YR 5/6–4/6; at one point on exterior fired gray/brown.
Flattened base; lower wall rising at an angle of about 45° to point of max. D, from where the upper wall curves in to rim; rim thickened on interior, chamfered on top. One vertical high-swung handle attached from point of max. D directly to rim and surmounted by a disk knob. Enough of the rim is preserved to be almost certain that the vessel is one-handled; a second presumed handle would have to be considerably off center and not aligned with that preserved.
Surfaces burnished, with tooling marks running horizontally on interior and on upper wall on exterior, diagonally opposed on lower body, and producing a good surface with a rather more distinct sheen, especially on exterior.
A one-handled version of the kantharos **T7-2**.

T10-5 (84.111) **Fig. 69f**; **pls. 450a**, **g**
TR 25 North Baulk S.F.3
TERRACOTTA SPINDLEWHORL, BEAD, OR BUTTON
H 0.037; D (max.) 0.051
Almost intact, but with one end and side heavily chipped.

Local clay with many small to large white and light-colored inclusions and a little fine golden mica. Clay fired close to reddish brown 2.5YR 5/4; surface closer to red 2.5YR 5/6, but slightly blackened in parts.

Large and heavy globular shape, pierced vertically. As illustrated, the sides are convex on upper part, concave on lower; round when viewed from above.

Surface worn, but burnished smooth, with a dull finish.

Cf. Heurtley and Hutchinson 1926–27:36, fig. 21, no. 13; Heurtley 1939:231, fig. 104d.

T10-6 (84.125) Not illustrated

TR 25 North Baulk S.F.4

BEAD OF GLASS COMPOUND

Object shattered beyond restoration on removal, but preserving enough frr. to determine original form; drawing and photograph not possible.

Clearly a bead shaped as **T10-7** and of similar dimensions, consisting of a cylinder of black colored glass with silver/yellow colored applied bands of glass, the latter clearly visible on several tiny frr. when viewed under microscope.

Bead especially close to Boardman 1967:239–240, fig. 162, no. 554 (described as an "Early type"); cf. Brock 1957: pl. 174, no. 1117; Jacopi 1933:326, fig. 71 (center right).

T10-7 (84.405) **Fig. 69g**; **pl. 474**

TR 25 North Baulk S.F.6

BONE BEAD

L 0.022; D (min.) 0.010; D (at preserved raised band) 0.012

Bead complete, but chipped.

Bead made of antler fr. (end of tang); possibly red deer.

Cylindrical bead worked in such a way to create three thin horizontal relief bands, one at each end and one slightly off center, which have mostly chipped off.

Not unlike Young 1949a:297, pl. 72, no. 30; cf. also the Early Bronze Age examples in Heurtley 1939:202, fig. 66j.

T10-8 (M84.118) **Pl. 462**

TR 25 North Baulk S.F.5

FRR. OF BRONZE SPIRAL ORNAMENT, PROBABLY HAIR RING

Largest fr.: max. PL 0.025; L of wire uncoiled 0.152; TH 0.002; WT 1.40 g

Eight frr., mainly nonjoining, preserving portion of spiral.

Fine bronze wire, round in section, coiled to form continuous spiral; three frr. preserve overlaps; terminations not clearly preserved.

Almost certainly a spiral hair ring as **T7-6**.

TOMB 11 (**FIGS. 32C, F**; **PLS. 93, 97–99**; CONTENTS: **FIGS. 70A–C**; **PLS. 477A–B**)

TR 25 East Baulk Burial 5

PIT GRAVE; SINGLE ADULT MALE INHUMATION; TOMB STRATIGRAPHICALLY RELATED WITH INHUMATION TOMB 10

Shallow pit cut into bedrock to a maximum depth of 0.16 m, within which the body of an adult male, aged not more than 35 years at death, lay fully extended on its back, the right arm by his side and the left lower arm and hand over his left hip (**fig. 32f**). The skeleton was oriented SE–NW with the cranium toward the SE, and was found well articulated and in a reasonable state of preservation. The tomb was cut across by the pit for Inhumation Tomb 10, with the result that the skeleton of Tomb 11 was not preserved below the knees (**fig. 32c**; **pls. 93**, **95a**, **97**);[8] Tomb 11 was therefore earlier than Tomb 10 (cf. the case of Tombs 13 and 14). As preserved, the tomb was 1.35 m long with a maximum width of 0.48 m, and was encountered at a depth of 0.70 m below surface. The human remains were encountered in an interleaving of fine, loose-textured, dark-colored earth; no stone or other tomb covering was noted.

There were no *kterismata* clearly in situ, although a fragmentary bronze ring (**T11-1**) was found near the cranium; the possibility that the two fragmentary kantharoi **T10-1** and **T10-1a** may have belonged to this tomb originally has already been noted. In the process of taking up the skeleton a total of sixteen sherds were recovered from the tomb pit, of which two (**T11-2**, **T11-3**)

are catalogued.[9] Two small seashell fragments and one land snail were recovered from the tomb pit (appendix C).

T11-1 (m84.64) **Fig. 70a**
TR 25 East Baulk S.F.11
FRAGMENTARY BRONZE FINGER RING
PL 0.020; L of band uncoiled 0.037; WT 0.90 g
One main fr. (illustrated) preserving about one-half of ring, plus two very small non-joining frr.; condition otherwise reasonable.
Thin band made of flat, hammered strip, coiled into a ring.
Cf. Popham, Sackett, and Themelis 1979–80: 247, type 3; Kraiker and Kübler 1939:85, fig. 3 (fourth on the right).

SELECTED SHERDS FROM TOMB PIT

T11-2 (84.421) **Fig. 70b**
TR 25 East Baulk 8#135
RIM FR.; WM CLOSED VESSEL, PROBABLY AMPHORA
PH 0.052; D (rim) est. 0.150
Single fr. preserving portion of rim; chipped and worn.
Local clay with small to medium white and light-colored inclusions and much mica, predominantly golden. Clay evenly fired close to very pale brown 10YR 7/3; slip slightly lighter.
Vertical neck; flaring/outcurved rim, slightly thickened; rounded lip.
Slipped and painted: paint dull, rather thickly applied with a tendency to flake; fired black. Neck painted solid except for reserved band toward top; outer face of rim reserved. Upper neck on interior painted as shown.
For rim form cf., among others, **T52-1**, **T75-1**.

T11-3 (84.422) **Fig. 70c**
TR 25 East Baulk 8#135
HANDLE FR.; HM SMALL (CLOSED) VESSEL
PH 0.033
Single fr. preserving lower portion of handle.
Local clay with small white and light-colored inclusions and much mica, predominantly silver; clay fired close to dark grayish brown 10YR 4/2.
Small vertical handle, oval in section, with lower part pinched to form knob/mastos.
Cf. the handles of jugs **T75-2** and **T86-2**.

TOMB 12 (**FIGS. 31C**, **32C**; **PLS. 39A**, **100**; PITHOS: **FIGS. 71A-B**; **PL. 381**)

TR 25 East Baulk Burial 7
PITHOS GRAVE; SINGLE CHILD INHUMATION

A very small portion of this tomb was excavated in 1982 as part of TR 25, at which time a single fragment of a pithos and a few fragments of a skull described as that of a child were encountered along the east scarp of the trench (**fig. 31c**, east scarp). It was only in 1984 with the excavation of TR 25 East Baulk that this feature was more fully uncovered and established as a tomb. The tomb consisted of a shallow pit cut into bedrock to a depth of 0.10 m, within which the large fragment(s) of the pithos **T12-1** were placed as bedding and on top of which lay the poorly preserved remains of a child aged about 6 years at death. Owing to the condition of the bones and the fact that the tomb was excavated over two seasons, it was not possible to determine the orientation of the skeleton with certainty, although the cranial fragments noted were encountered toward the NW. The preserved human remains were found in an interleaving of fine, grayish-brown earth, immediately above which a number of stones had been placed as a covering (**fig. 31c**, east scarp). This stone covering verified that the pithos was not complete at the time of burial, but that only fragments had been used as a bedding in much the same way as the pithos rim and neck fragment **T7-1** was used for the cranial region of Tomb 7 (cf. Tomb 1).

As preserved, Tomb 12 measured approximately 0.75 m long × 0.50 m wide and was encountered at a depth of 0.80 m below surface. No *kterismata* were preserved in situ, although some of the small finds in the immediate vicinity may have been displaced from this tomb (especially **43**, **46–47**, **55–59**). The excavator suggested that the jug **46**, found 0.30 m to the SW, was probably originally associated with this tomb. During sorting of pottery from deposits in the vicinity of the tomb, a

pithos rim fragment was recorded that may belong to the pithos **T12-1** (see catalogue below). One complete *Patella caerulea* shell was recovered from the tomb (appendix C).

T12-1 (84.151) **Fig. 71a**; **pl. 381**
TR 25 East Baulk Pot 7
BODY FRR.; HM PITHOS
PH 0.567; est. max. D (body) 0.720
Eight joining and nine nonjoining frr. preserving about one-third of body lengthways; slightly chipped and worn.
Coarse local clay with a great many small to very large white and light-colored inclusions and much mica, golden tending to predominate. Body clay evenly fired close to reddish brown 5YR 5/3–5/4, as has most of exterior surface, though in parts slightly more red; interior surface blackened.
Surface on interior and exterior wet-smoothed, producing a dull finish.
Cf. especially **T1-1**.

84.427 PITHOS RIM FR. **Fig. 71b**
TR 25 East Baulk 12#142
PH 0.087; PL 0.096; D (rim) N/R
Single fr. preserving small portion of rim, probably from same pithos.
Fabric and color as **T12-1**.
Upper neck vertical; heavy, outward thickened, knobbed rim, flat on top; outer face marked by double concavity formed by two broad shallow grooves. Slight thickening on interior.
Form of rim not unlike Hochstetter 1984: pl. 194, no. 1 (and cf. pl. 21, no. 2; pl. 25, no. 4).

TOMB 13 (**FIGS. 31A–B, D**; **PLS. 38, 101–106**; CONTENTS: **FIGS. 72A–B**; **PLS. 331, 348A–B**)

TR 25 4#902 Skeleton 5
PIT GRAVE; SINGLE ADULT MALE INHUMATION; TOMB STRATIGRAPHICALLY RELATED WITH INHUMATION TOMB 14
Shallow pit 1.84 m long × 0.62 m wide (max.), cut into bedrock to a depth of only 0.06–0.10 m. The pit cut across the NW end of Tomb 14, causing considerable damage to the lower part of that skeleton; Tomb 13 was therefore later than Tomb 14 (cf. the relationship of Tombs 10 and 11). Within the pit of Tomb 13 the body of a male, aged 25–35 years at death, was laid fully extended on his back. The right hand, which lay by the side of the body, was found clenched with the bones of the fingers curled under the metacarpus; part of the left hand was found tucked under the pelvis, just beneath the socket where the femur and pelvis connect. The skeleton, encountered at a depth of ca. 0.70 m below surface, was oriented SE–NW with the cranium toward the SE and measured 1.66 m long in situ. It was surrounded by an interleaving of fine, loose-textured, dark-colored earth and in a good state of preservation, with bones such as the terminal phalanges and sternum still articulated. Above the cranium and upper part of the body were a number of medium-size stones, which formed a partial cover for only this part of the tomb (**fig. 31a**).

Kterismata comprised the wheelmade kantharos **T13-1** and the handmade jug **T13-2**, both of which were placed in the area above the left hand of the deceased. The tomb pit fill also yielded a good quantity of sherd material, including at least thirty-six body fragments of wheelmade painted vessels as well as some twenty-nine sherds from handmade pots (unit designated 4#902, 908); although the diagnostic fragments were all Early Iron Age, none could be dated more precisely. The 67 g of seashell material recovered from the tomb pit represented the largest amount of marine material found with any inhumation tomb on the terrace; the marine remains also included a crab claw (*Cancer pagurus*); a land-snail fragment was also found in the tomb (appendix C). The earth in the immediate vicinity of the tomb (deposit type 4) yielded a quantity of Early Iron Age sherds (thirty-nine body fragments and two handle fragments of wheelmade painted vessels, and twenty-two body fragments from handmade pots).

T13-1 (82.266) **Fig. 72a**; **pl. 331**
TR 25 S.F.22
WM KANTHAROS
H (to rim) 0.141; H (to handles) 0.182; D (base) 0.074; D (rim) 0.172–0.185

Almost complete, reconstructed from frr. and partially restored; portion of one handle and small frr. of rim and body not preserved.

Local clay but with fewer than normal small light-colored inclusions; quite a bit of silver and golden mica. Clay evenly fired close to light brown 7.5YR 6/4; slip slightly lighter.

Low ring base with narrow, flat resting surface (cf. the base of the amphoriskos **T99-1**); underside flat. Rather deep, slightly curved body with wheelmarks prominent on interior. Tall vertical rim, articulated from body as shown, and terminating in a plain rounded lip. Two vertical high-swung handles, thin and strap in section, attached from junction of rim and wall directly to lip.

Slipped and painted: paint dullish, but not as dull as normal, fairly evenly and rather thickly applied with a tendency to flake; mostly fired brown, in parts with a maroon tinge, in others a lighter reddish brown. Base and lower wall reserved; remainder of body painted solid, with the paint extending slightly onto the lower part of the rim. Rim decorated with crosshatched triangles, five on either side of the vessel; exterior faces and parts of the outer edges of the handles painted. Interior evidently painted solid but much worn at center of floor and perhaps originally with reserved disk at the center of floor (?).The lack of preserved paint at the center of floor suggests use/cleaning.

Although the shape, paint, and fabric are a little unusual, the vessel is probably local. The shape is the only WM example at Torone, although the HM version is common. Similar WM and painted kantharoi are a hallmark of Thessalian Protogeometric, and are especially common at Marmariani (cf. Heurtley and Skeat 1930–31:26–27, fig. 12; Verdelis 1958:29–31, pls. 9–10), although the vast majority of the Thessalian examples are flat based as well as differing in other details from **T13-1**.

T13-2 (82.265) **Fig. 72b**; **pls. 348a–b**

TR 25 S.F.24

HM JUG WITH CUTAWAY NECK

H 0.223; D (base) approx. 0.088; D (rim) max. 0.079

Almost complete, reconstructed from frr. and partially restored, with only minor chips of body not preserved.

Clay probably local (although vessel perhaps imported from elsewhere in Macedonia). Many small to medium white and light-colored inclusions and much silver and golden mica. Clay color ranging from yellowish red 5YR 5/6 to reddish brown 2.5YR 5/4; parts of neck, rim and body discolored gray/black on exterior.

Flattened base; rounded body, almost spherical; neck of medium height, and concave profile, offset from body by scraped groove on exterior corresponding with an angle formed on interior. Neck cut away, terminating in plain rounded lip (including at point where cut away). Vertical handle, round in section, attached relatively high on the shoulder by piercing, with a sharp projection of clay on the interior.

Exterior burnished smooth, with very faint tooling marks visible only at certain points.

Cf. **T67-3**. Details of shape, manner of burnishing and fabric are very similar to jugs from Vergina and Tsaousitsa (cf. Andronikos 1969:194–201; Casson 1919–21:20, fig. 14; 1923–25:18, fig. 7). Shape and other details also close to Bernard 1964:127, fig. 38 (Thasos).

TOMB 14 (**FIGS. 31B, D**; **PLS. 38**, **102–103**, **107–109**)

TR 25 4#909 Skeleton 4

PIT GRAVE; SINGLE ADULT (MALE?) INHUMATION; TOMB STRATIGRAPHICALLY RELATED WITH INHUMATION TOMB 13

Shallow pit cut into bedrock to a depth of 0.10 m and within which the body of an adult male(?), aged 45+ years at death, was laid out on its back in what must have been originally a fully extended position. The inhumation, encountered at 0.75 m below surface, was oriented on a similar, but not exactly parallel, SE–NW alignment as Tomb 13, with the cranium to the SE, facing SW. The NW end of the tomb had been cut across by the pit for

the later Inhumation Tomb 13, causing considerable damage to the lower parts of the skeleton of Tomb 14. On account of this, the original dimensions of the tomb could not be established; as preserved, the tomb measured 1.30 m long × 0.50 m wide (max.). The preserved remains of the cranium and upper body were encountered within an interleaving of fine, loose-textured, dark-colored earth. Two femurs and a number of other bones found scattered in the NE quarter of TR 25 were most likely displaced from this tomb (**fig. 31a**). At least one medium-size unworked stone was placed above the cranium (**fig. 31b**) as a partial covering.

No *kterismata* were encountered in situ but a number of the small finds found strewn in the vicinity may well have been displaced from this tomb (e.g., **43**, **46–47**, **55–59**; **pl. 109**). Recovered from the tomb pit was a small quantity of Early Iron Age sherd material that included one small handmade handle fragment, a rim and a handle fragment of a tripod cauldron, and at least six other sherds of handmade vessels, all too small or too poorly preserved to be of any intrinsic value. A small quantity of seashell material was also recovered from the tomb (appendix C).

TOMB 15 (**FIGS. 32B–D, G–I**; **PLS. 41, 110–113**; CRANIUM: **PLS. 478A–F**)

TR 25 East Baulk Burial 6
PIT GRAVE; SINGLE ADULT MALE INHUMATION; TOMB STRATIGRAPHICALLY RELATED WITH CREMATION TOMBS 101 AND 102

An account of the excavation of this tomb and its relationship with Cremation Tombs 101 and 102 has already been detailed in chapter 2. It is clear that at some time, probably not long after the ash-urns of Tombs 101 and 102 had been interred, a pit was dug through earth (deposit type 4) to reach the level of the cremations. The cist of Tomb 102 was partially dismantled, the ash-urn removed, and its interior leveled but not completely cleared, while any stone cover slabs for Tomb 101 were also tampered with.

The bedrock between Tombs 101 and 102 appears to have been at least slightly worked in order to create a level surface. The ground having been thus prepared, the body of an adult male aged 25–30 years at death was laid out on its back in an extended position but with the cranium propped up against the preserved SW corner of the earlier cist, with the result that the skull faced NW. The feet of the skeleton were found placed over the ash-urn of Tomb 101 (**figs. 32h–i**; **pl. 113**), a process that appears to have caused only very minor damage to the rim of the ash-urn **T101-1**. Tomb 15 measured ca. 1.90 m long in situ × 0.60 m wide (see also appendix A). The skeleton, which was fully articulated although with individual bones rather poorly preserved, was found with the arms by the side of the body, the right hand resting over the right hip at a point where it touched the earlier cist (**fig. 32i**; **pl. 112**). The skeleton was oriented SW–NE with the cranium toward the SW, and although the remains of the cist for Tomb 102 were now probably intended as an enclosure of sorts for the upper body of Inhumation Tomb 15, the position of both the cranium and the right hip show the body was not perfectly aligned with the cist. The deceased was subsequently covered by a number of medium-size to relatively large flat slabs of schist and limestone laid out in line (**figs. 32g–h**; **pls. 110–111**). At the SW end of the tomb the ash-urn of Tomb 102 (**T102-1**) was placed upright on one of the cover slabs (**figs. 32d**, **g**; **pl. 110**); the NE end of the tomb lay partially beneath the Classical TR 22 wall *d*. The cover slabs for Tomb 15 were encountered at a depth of 0.48–0.68 m below surface, the skeleton itself at 0.70–0.80 m.

Found scattered around the bones of Inhumation Tomb 15, which was encountered in an interleaving of fine, not very substantial brown earth, were a number of Early Iron Age sherds, mainly fragments of the ash-urns **T101-1** and **T102-1**, as well as fire-affected sherds that joined with fragments mainly from Tomb 101; the few sherds that could not with certainty be associated with either Tombs 101 or 102 were of limited chronological value.[10]

No *kterismata* were encountered.

TOMB 16 (**FIGS. 31B, E**; **PLS. 114–115**; CONTENTS: **PL. 455**)

TR 25 4#32 and 5#41 Skeletons 1 and 2
PIT GRAVE; DOUBLE ADULT INHUMATION (MALE AND FEMALE?)

Tomb 16, with Tomb 15, was the southernmost of the inhumations and also the westernmost tomb of the cemetery. It consisted of a pit with a maximum preserved width of 1.72 m × 0.65, cut ca. 0.10–0.20 m deep into bedrock. At its deepest point the bottom of the tomb pit lay l.00 m below surface.

The tomb had been cut across and partially destroyed by the foundation of the poorly preserved TR 25 wall *a* (**figs. 31b**, **e**; **pl. 114**). In the pit the remains of two adult inhumations were uncovered within an interleaving of fine, loose-textured, dark-colored earth; the pit was oriented SE–NW. At its SE end a pile of human bones included a fragmentary cranium, many of the larger leg and arm bones, a few rib fragments, and at least two fragments of a pelvis. These were the remains of an adult, probably a male aged 35 years at death and perhaps older, designated Skeleton 1. It appeared that the bones of this skeleton had been intentionally pushed to one side of the tomb pit in order to make room for the later inhumation, designated Skeleton 2. The appearance of Skeleton 1 in situ was not unlike the preserved human remains encountered in Tomb 9, the stone-constructed cist that seems to have been opened on several occasions. It was the later Skeleton 2 that had been cut across and partially destroyed by the Classical wall *a*. What remained of this skeleton east of the wall was found in a good state of preservation with most of the joints still articulated. The remains in situ comprised the cranium, which was slightly tilted toward the right shoulder, the right and left scapulae and clavicles, much of the rib cage, and part of the left humerus. The lower parts of the body were almost completely destroyed, although in the small part of the tomb pit preserved to the west of wall *a* a few scattered bones, including a fragment of one fibula and several fragments of the feet, were noted. The skeleton may have been of a female aged 20–35 years at death. It was oriented more or less east–west, with the cranium toward the east; the body was laid out on its back in what was probably a fully extended position originally.

The only *kterisma* found in the tomb pit was the fragmentary bronze spectacle fibula **T16-1**, located 0.10 m to the south of the cranium of Skeleton 2, among the piled-up bones of Skeleton 1, and was probably an offering or dress fastener worn by the earlier inhumation (for a useful diagram depicting all the possible positions on an inhumed body where a fibula may be found see Alexander 1973a:186, fig. 2). From the tomb pit and its immediate vicinity, a number of both Early Iron Age and Classical sherds were recovered, the latter representing intrusive material associated with the construction of wall *a*.[11]

T16-1 (82.182) **Pl. 455**

TR 25 S.F.31

FRAGMENTARY BRONZE SPECTACLE FIBULA

Max. PD largest spiral 0.034; PL of wire uncoiled (all frr.) 0.618; WT 11.03 g

Seventeen frr., beyond restoration, preserving the central portions of two spirals, plus many small frr. of the outer spirals. There is in addition a single fr., slightly thicker and clearly bent, that was probably the central connection of the two spirals. No part of the pin or catch plate appears to have been preserved.

The spirals were formed from continuous and very thin bronze wire, round in section.

Cf. Blinkenberg 1926: type XIV; and especially Alexander 1965:7–23.

THE CREMATION TOMBS (TOMBS 17–134)

TOMB 17 (**FIG. 19**; **PL. 116**; CONTENTS: **FIG. 73**)

TR 1 S.F.23

URN CREMATION; POORLY PRESERVED; NO CREMATED BONE ENCOUNTERED

The northernmost of the cremations, Tomb 17 was located 0.75 m SE of Inhumation Tomb 2 and was much damaged by the later cutting in bedrock associated with TR 1 walls '*b*' and '*c*' (**fig. 19**). Only about one-half of the tomb was preserved, consisting of a shallow pit with a maximum preserved length of 0.75 m, cut into bedrock to a depth of 0.18 m. Within the pit were fragments of the wheelmade coarse two-handled jar **T17-1**, which presumably served as the ash-urn. No cremated bone was recovered from the tomb pit itself, although a few pieces of cremated human bone were noted in topsoil in the immediate vicinity, as was a

complete *Patella caerulla* shell (appendix C). The original position of the vessel could not be determined but, judging by the preserved fragments, it may have been laid on its side rather than upright. The tomb was first encountered at a depth of 0.15 m below surface.

T17-1 (81.827) **Fig. 73**

TR 1 S.F.23

FRAGMENTARY WM COARSEWARE TWO-HANDLED JAR

PH 0.180; D (base) 0.078

Sixteen joining and two nonjoining frr. preserving about one-half of base and lower body lengthways and small portion of upper body, including parts of one handle.

Coarse clay, probably local, but not unlike **T54-1** and **T97-1** (considered imported), with many small to medium mainly light-colored inclusions but only a dusting of fine silvery mica; occasional blowouts. Clay core toward upper body fired dark gray approaching black; two-toned toward base (dark gray toward interior, close to red 2.5YR 5/6 toward exterior). Surfaces mainly fired close to red 2.5YR 5/6 and reddish yellow 5YR 6/6, but much blackened on interior and exterior.

Flat base; thin-walled body, curved; portion of one vertical handle preserved, thin and oval in section, attached immediately above point of max. D. Vessel probably with two shoulder or neck handles (not preserved).

Interior and exterior surfaces finished smooth on the wheel, with turning marks clearly visible.

Vessel unique among tomb pots in that it represents the only instance of a WM vessel in fabric normally used for HM.

Cf. **KP-13**. For HM jars with vertical handles cf. **T19-1** and **T46-1**, also the imported **T97-1** with vertical shoulder handles.

TOMB 18 (**FIG. 19A**; **PL. 117**; CONTENTS: **FIG. 74**; **PLS. 339**, **465**)

Test TR 1 S.F.5

URN CREMATION; SINGLE ADULT; TOMB STRATIGRAPHICALLY RELATED WITH INHUMATION TOMB 3

Shallow circular pit 0.62 m in diameter (max.), cut 0.09–0.20 m deep into bedrock. The pit cut across the SE end of the earlier inhumation Tomb 3, causing damage to the lower parts of that skeleton. Within the pit the ash-urn (and only pot) **T18-1** was placed upright with two chocking stones on the east side to set the vessel firmly in place; the rest of the tomb pit fill comprised recompacted bedrock chips. Just to the north of **T18-1** a flat piece of schist perhaps represents the displaced stone covering of the tomb. The pit fill yielded a few fragments of unburned human bone, no doubt displaced from inhumation Tomb 3. Inside the ash-urn, tiny fragments of fire-affected bronze (**T18-2**) as well as one seashell fragment (appendix C) were encountered, as was a collection of burned and unburned animal bone fragments, representing both sheep/goat and cattle (appendix B). The preserved top of the tomb was first revealed at a depth of 0.10 m below surface, and the damage caused to the upper part of the ash-urn was probably the result of modern plowing.

T18-1 (81.10) **Fig. 74**; **pl. 339**

Test TR 1 S.F.5

FRAGMENTARY HM TWO-HANDLED JAR (BELLY-HANDLED)

PH 0.200; D (base) 0.110–0.120

Many joining frr. preserving almost entire base and much of the lower body on one side, as well as portion of upper body, including one handle; chipped and slightly worn.

Local clay with many small white and light-colored inclusions and much mica, tending fine, predominantly golden. Clay core mostly fired dark gray/brown, elsewhere close to red 2.5YR 5/8; interior surface fired more evenly close to reddish brown 5YR 5/3.

Flattened base; rounded, thin-walled body. One preserved horizontal belly handle, round in section, attached immediately above point of max. D.

Exterior burnished, with pronounced tooling marks tending horizontal on upper body, diagonally opposed on lower body and producing a good but dull surface.

Cf. **T63-1**, **T100-1**, **T118-1**, **T130-1**, **T133-1**.

T18-2 (81.1218) **Pl. 465**
Test TR 1 S.F.5 bis
FIRE-AFFECTED BRONZE FRR.
Max. PL of largest fr. 0.006
Four minuscule frr., very thin, burned beyond recognition; original object unidentified.
Cf. **T58-3**.

TOMB 19 (**FIG. 19A**; **PL. 118**; CONTENTS: **FIG. 75**; **PL. 344**)

Test TR 1 S.F.1
URN CREMATION; SINGLE ADULT (FEMALE?)
Oval-shaped pit 0.50 m long, cut 0.15 m deep into bedrock; tomb encountered at a depth of 0.10–0.15 m below surface. Within the pit the ash-urn (and only pot) **T19-1** was placed upright; the pit fill consisted of three slightly larger than normal chocking stones and compacted bedrock chips, which set the ash-urn firmly in place. No stone covering was encountered and the upper part of the ash-urn was not preserved.

T19-1 (81.01) **Fig. 75**; **pl. 344**
Test TR 1 S.F.l
HM TWO-HANDLED JAR (NECK-HANDLED)
PH 0.162; D (base) 0.078
Base and lower body recovered complete; upper body fragmentary, reconstructed. Upper neck, rim, and upper handle attachments not preserved; surface worn.
Local clay with many small to medium white and light-colored inclusions and much mica, tending fine, predominantly golden. Clay core fired light gray, surfaces ranging from reddish yellow 5YR 6/8 to light brown 7.5YR 6/4.
Flat base; rounded body; lower preserved neck vertical to slightly flaring. Lower portions of both vertical handles preserved, oval in section.
Exterior surface burnished smooth, but worn; finish evidently dull.
Cf. **T46-1**.

TOMB 20 (**FIG. 19A**; **PLS. 20**, **119–120**; CONTENTS: **FIGS. 76A–B**; **PL. 268**)

TR 1 S.F.18 + 19
URN CREMATION; SINGLE YOUNG ADULT
Circular pit 0.56 m in diameter, cut 0.24–0.30 m deep into bedrock; tomb encountered at a depth of 0.20 m below surface. Within the center of the pit the belly-handled amphora **T20-1**, which served as ash-urn, was placed upright. As the tomb pit was sufficiently deep to accommodate it the vessel was recovered almost intact, even though no stone covering was encountered; the amphora had as lid the reused foot of the open vessel **T20-2** placed upside-down. The pit fill consisted of a number of chocking stones placed around the ash-urn, especially on the north side, and compacted bedrock chips, which set the vessel firmly in place. Inside the ash-urn seashell and land-snail fragments among the cremated human bone included one echinoid spine; a few seashell fragments were also encountered in the immediate vicinity of the tomb (appendix C).

T20-1 (81.371 + 81.830) **Fig. 76a**; **pl. 268**
TR 1 S.F.18
WM BELLY-HANDLED AMPHORA
H 0.255; D (base) 0.085; D (rim) 0.120
Vessel recovered almost intact, with one handle and frr. of rim stuck on; minor chipping at rim where mended in antiquity. Surface extremely worn with much of the painted decoration not preserved.
Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden; occasional blowouts. Clay evenly fired close to reddish yellow 5YR 6/6, slip slightly lighter.
Flat disk base; body tending ovoid with point of max. D near middle; small ridge, much worn, at junction of shoulder and neck. Tall neck; flaring rim, tapering slightly to rounded lip. Two horizontal handles, round in section, attached at midpoint.
Slipped and painted, but much worn: paint, where preserved, dull and quite thickly applied, fired red. Three evenly spaced horizontal bands around body, the middle one extending round the handles. Neck above small ridge painted solid, with paint extending over rim onto interior as shown.
Vessel mended in antiquity with three lead clamps at neck where wall is noticeably thinner; largest clamp 0.032 long.

Cf. **T51-1** and generally Desborough 1972: 35, fig. 2.

T20-2 (81.640) **Fig. 76b**
TR 1 S.F.19
BASE FR.; WM LEKANIS, Type 1; REUSED AS LID FOR **T20-1**
PH 0.047; D (base) 0.100
Single fr. preserving entire base and small portion of lower wall, chipped and worked around the edges to serve as lid.
Local clay with many small to medium light-colored inclusions and much silver and golden mica; occasional blowouts. Clay evenly fired close to reddish yellow 5YR 6/6–7/6.
Tall flaring/conical foot, tapering slightly toward resting surface; groove at midpoint of foot on exterior and at junction with wall.
Slipped and painted: paint dull, dilute on exterior, thicker on preserved interior; fired light red. Foot painted solid; lower wall on exterior reserved; interior painted.
Cf. **T21-2**; and for shape and decoration **T51-3**, **T124-3**.

TOMB 21 (**FIG. 19A**; **PLS. 20**, **121–122**; CONTENTS: **FIGS. 77A–D**; **PLS. 342**, **396A–C**, **479**)

TR 1 S.F.11 + 12 + 20 + 21
URN CREMATION; SINGLE INFANT (AGED 7–8 MONTHS AT DEATH)
Small irregular-shaped pit 0.40 m long (max.), cut ca. 0.14 m deep into bedrock; upper level of tomb first encountered at a depth of 0.20 m below surface. Within the pit the small handmade jar **T21-1**, which served as ash-urn, was placed upright complete with lid **T21-2**, being the reused base of a lekanis placed upside-down (cf. **T20-2**). The pit fill consisted of compacted bedrock chips, which set the ash-urn firmly in place. Over the top of **T21-1** the handmade bowl **T21-3** was placed upside-down as a cover, while beside it were fragments of a handmade jug **T21-4**, the original position of which could not be determined with certainty. Around the bowl **T21-3**, especially on the south side, were three small stones that also covered the ash-urn.

T21-1 (81.368A) **Fig. 77a**; **pl. 342**
TR 1 S.F.20
HM TWO-HANDLED JAR, SMALL VARIETY
H 0.120; D (base) 0.065; D (rim) 0.105
Intact except for minor chipping at rim.
Local clay with many small to medium white and light-colored inclusions and much silver and golden mica; occasional blowouts. Clay evenly fired close to reddish yellow 5YR 6/6 and 7.5YR 6/6.
Flat base; small rounded body; sharply everted rim with chamfered lip. Two small horizontal handles, round in section, attached high on body and tending to rise vertically.
Exterior surface burnished smooth, resulting in dull finish.

T21-2 (81.368B) **Fig. 77b**
TR 1 S.F.21
BASE FR.; WM LEKANIS, Type 1; REUSED AS LID FOR **T21-1**
PH 0.038; D (base) 0.091
Single fr. preserving entire base chipped and worked around the edges to serve as lid; worn.
Local clay with small to medium white and light-colored inclusions and mica, predominantly golden. Clay evenly fired close to light brown 7.5YR 6/4.
Tall flaring/conical foot, with rounded lower edge and narrow resting surface.
Slipped and painted: paint dull, thickly applied with a tendency to flake; mostly fired black, in parts reddish brown. Foot exterior painted solid; lower preserved wall reserved; no preserved paint on interior.
Cf. **T20-2** and the base of **T51-3**.

T21-3 (81.370) **Fig. 77c**; **pls. 396a–c**
TR 1 S.F.12
HM BOWL; IMPORTED, MACEDONIAN
H 0.088; D (rim) approx. 0.177
Recovered in frr., reconstructed and restored. Many frr. preserving greater part of base, body, rim, one complete handle and scars of the second.

Imported fabric similar to that of **T54-1** and **T97-1**, with many, mainly small, and some medium light-colored inclusions and much silver and golden mica, tending fine. Clay and interior surface evenly fired close to reddish brown 5YR 5/3; exterior surface mostly blackened.

Base essentially rounded, only slightly flattened; lower wall curving up to plain vertical rim with chamfered lip. Two horizontal handles (only one completely preserved), triangular in plan, slightly downturned, square in section, attached directly to rim. Vessel thick walled.

Interior and exterior surfaces burnished smooth, resulting in dull finish. Top of preserved handle decorated with incised zigzag, along edge on either side as shown.

Cf. generally: Heurtley 1939:232, pl. XXI, no. 469; 236, fig. 110c, h; Andronikos 1969: 207–208, figs. 46–47.

T21-4 (81.894) **Fig. 77d**

TR 1 cf. S.F.11

FRAGMENTARY HM JUG, PROBABLY WITH CUTAWAY NECK

PH 0.090; PL 0.127

Four joining frr. preserving portion of body and lower handle; chipped and slightly worn.

Local clay with many small to medium white and light-colored inclusions and much silver and golden mica, tending fine. Clay, interior surface, and parts of exterior fired close to light red 2.5YR 6/8 and red 2.5YR 5/8; upper body on exterior partially blackened.

Rounded body, thick walled; portion of vertical handle, oval to round in section, attached to upper body by piercing, with projection of clay on interior worked away. Junction of body and neck offset by scraped groove on exterior corresponding to angle formed on interior.

Exterior surface mostly burnished smooth, with tooling marks visible only at points; dull finish. Interior quite rough.

Cf., among others, **T26-3**, **T43-2**, **T73-2**.

TOMB 22 (**FIG. 19A**; **PLS. 20**, **123**; CONTENTS: **FIGS. 78A–C**; **PLS. 305A–C**, **306**)

TR 1 S.F.13 + 17

URN CREMATION, SINGLE ADULT

Elliptical-shaped pit 0.55 m long (max.), cut 0.18 m deep into bedrock; tomb encountered at a depth of ca. 0.20 m below surface. Within the center of the pit the wheelmade amphoriskos **T22-1**, which served as ash-urn, was placed upright; beside it, to the SE, the small imported amphoriskos **T22-2** was placed on its side with the rim to the SW. The pit fill consisted of compacted bedrock chips that set both vessels firmly in place; from it were recovered several joining fragments of the handmade pitharion **T22-3**, the exact position and function of which were not clear (they may have served as chocking sherds, or perhaps represent a displaced lid/cover for the ash-urn). No stone or other tomb covering was preserved and the upper parts of **T22-1** and **T22-2**, as encountered in situ, were slightly damaged.

T22-1 (81.603) **Fig. 78a**; **pl. 306**

TR 1 S.F.17.

FRAGMENTARY WM AMPHORA/ISKOS WITH HORIZONTAL HANDLES RISING VERTICALLY

PH (body) 0.132; H (to handles) 0.153; D (base) 0.075

Reconstructed from ten joining frr. preserving entire base, about one-half of body, and one handle; neck and rim not preserved. Much worn. Hole created at base by splitting, probably during forming or firing, rendering vessel useless for purposes of storage of liquids.

Local clay(?) with many small light-colored inclusions and much silver and golden mica. Clay evidently misfired, core (at points) light gray, elsewhere more evenly fired close to light reddish brown 5YR 6/3–6/4; interior surface and much of exterior color as clay, in parts blackened.

Low conical base with narrow resting surface; lower wall curving to point of max. D, which is set rather high; shoulder curving sharply into neck and forming a slight carination

with lower wall. Neck (not preserved) offset from shoulder by shallow groove on exterior. Horizontal handles (only one preserved), attached to shoulder, round in section, rising vertically with an inward curve. Vessel thin walled, with wheelmarks prominent on interior. Very faint traces of paint(?) on lower body.

Shape as **T87-1**.

T22-2 (81.719) **Fig. 78b**; **pls. 305a–c**

TR 1 S.F.13

WM AMPHORISKOS WITH VERTICAL HANDLES FROM SHOULDER TO LIP; IMPORTED, EUBOIAN

H 0.152; D (base) 0.052; D (rim) 0.075

Papadopoulos 1996a:155–156, fig. 8, no. 7

Reconstructed from frr. almost complete, with only minor frr. of body not preserved, restored. Base slightly chipped.

Imported fabric, well levigated and more dense than local, with only the occasional white inclusion; no mica. Clay and slip fired close to pink 5YR 7/4.

Low conical base with narrow resting surface, lower outside edge chamfered; underside obliquely hollowed out. Slender ovoid body rising to tall concave neck; flaring rim with chamfered lip. Two vertical handles, oval in section, attached from shoulder to lip.

Slipped and painted: good, semilustrous paint, unevenly applied and tending to streak; mostly fired black, approaching reddish brown where more dilute. Base (except for chamfered lower edge), body, and neck painted solid except for reserved band at midpoint decorated with horizontal tremulous line enclosed by bands in dilute paint. Paint extends over rim onto interior for a short distance (not shown on drawing). Handles barred, each with nine horizontal strokes.

For the shape in Euboia cf. especially Popham, Sackett, and Themelis 1979–80:311; Popham, Touloupa, and Sackett 1982a: 232, pl. 18, no. 2; pl. 22, no. 10. General form and decoration particularly close to neck-handled amphorai and amphoriskoi, as Popham, Sackett, and Themelis 1979–80:309, fig.12h, pl. 35, P18, 3; pl. 132, P13, 2; pl. 266a, S33, 6. LPG–SPG II.

T22-3 (81.1153) **Fig. 78c**

TR 1 S.F.17 bis

BODY FRR.; HM PITHARION

PH 0.113; PL 0.100

Three joining frr. preserving small portion of shoulder and neck; chipped and much worn.

Coarse local clay with many small to large white and light-colored inclusions and much mica, exclusively golden. Preserved frr. mostly blackened.

Steep shoulder curving slightly in to offset neck with concave profile.

Although much worn, exterior and preserved interior burnished with broad, shallow tooling marks running mainly horizontally and producing a good surface with a slight sheen.

Cf. **T95-2** and for general shape and burnishing **T38-1**.

TOMB 23 (**FIG. 19A**; **PLS. 20**, **124–125**; CONTENTS: **FIG. 79**; **PL. 307**)

TR 1 S.F.14

URN CREMATION; SINGLE ADULT

Circular pit 0.40 m in diameter, cut 0.14–0.20 m deep into bedrock; tomb encountered at a depth of 0.15 m below surface. Within the pit the ash-urn (and only pot) **T23-1** was placed upright, firmly set by compacted bedrock chips and at least one small chocking stone. The tomb was sealed by a single piece of limestone (inv. S81.09), roughly rectangular (0.295 m × 0.060 m), which rested directly over **T23-1** but did not entirely cover the tomb pit. One small seashell fragment was recovered from within the ash-urn (appendix C).

T23-1 (81.604) **Fig. 79**; **pl. 307**

TR 1 S.F.14.

WM SKYPHOS, Type 1

H 0.143; D (base) 0.074; D (rim) 0.172–0.180

Recovered almost complete and reconstructed from frr.; missing chips of body and rim restored. Vessel much worn.

Local clay with many small to medium white and light-colored inclusions and much mica,

tending fine, predominantly golden. Clay and slip fired something like pink 7.5YR 7/4.

Heavy ring base with comparatively broad resting surface and chamfered lower outside edge; underside flat. Lower wall curving to point of max. D; upper wall vertical. Short, gently flaring/outcurved rim, tapering slightly to rounded lip. Two horizontal handles, round in section, attached to upper wall and rising to level just below rim. Vessel slightly warped; wheelmarks prominent on interior.

Slipped and painted: paint dull, evenly and rather thickly applied but worn; fired light red. Brushmarks visible on exterior. Three thin horizontal bands immediately below point of max. D. Upper wall decorated with continuous "ugly sausage" motif extending from each handle. Area above handles painted, reserved below handle arch. Upper part of interior painted, reserved band at rim; no preserved traces of paint on lower part of interior; this is almost certainly the result of use/cleaning, indicating the vessel saw service in life prior to its use in the tomb.

Two well-preserved fingerprints at base on exterior.

Cf. **T106-1**, **T108-1**.

TOMB 24 (**FIG. 19A**; **PLS. 126–127**; CONTENTS: **FIGS. 80A–D**; **PLS. 273**, **405**, **480**, **512A–B**)

TR 1 S.F.22

URN CREMATION; SINGLE ADULT (FEMALE?)

Circular pit 0.70 m in diameter, cut 0.33 m deep into bedrock; tomb encountered at a depth of 0.10–0.15 m below surface. Within the center of the pit the wheelmade belly-handled amphora **T24-1**, which served as ash-urn, was placed upright and firmly set by a number of schist and conglomerate chocking stones placed around it, especially to the north and east. The remainder of the tomb pit was filled with blackened earth representing the remains of the pyre, one of the few tombs outside the area of the Early Iron Age cutting (see **fig. 17**) where such was the case. A number of burned sherds were recovered from the fill, of which a selection is catalogued below (**T24-3**, **T24-4**), as well as two small fragments of cremated human bone. No tomb covering was preserved, but fragments of the pithos **T24-2** were found partly over the rim of the ash-urn as well as scattered in the tomb pit; the rim and upper neck of **T24-1** was damaged. In the immediate vicinity of the tomb a number of unburned Early Iron Age sherds were recovered, in addition to fragments of later pottery.[12] Along with the cremated remains of the deceased a small quantity of animal bone was found inside the ash-urn (appendix B), the most interesting being the right radius and ulna proximal fragment of an adult goat. The medial part of the fragment was burned to different grades of decalcination, whereas the lateral part was unburned. Two further burned fragments of the same extremity were noted, as was an unburned fragment of a sheep/goat.

T24-1 (81.609) **Fig. 80a**; **pl. 273**

TR 1 S.F.22

WM BELLY-HANDLED AMPHORA

PH 0.277; D (base) 0.098; D (neck, at break) 0.085

Recovered almost complete and reconstructed from frr., with only the rim not preserved. Vessel extremely worn and fragile.

Clay probably local, but uncertain; fabric somewhat atypical, with small to medium light and dark-colored inclusions, including yellow and reddish-colored impurities; only a fine dusting of surface mica; occasional blowouts. Clay evenly fired a very light color with a greenish tinge, something like light gray 2.5Y 7/2 and light gray 5Y 7/2.

Low ring base with flat resting surface; underside flat; body rounded; neck vertical, and offset from shoulder by pronounced ridge. Two horizontal belly handles, thick and round in section, attached at point of max. D and tending to rise vertically; one handle set slightly askew.

Slipped and painted but much worn, at points not preserved: paint dull, rather unevenly applied, in parts rather dilute, with a tendency to flake only where thicker; fired black to dark brown. As preserved, two hor-

izontal bands below point of max. D. Outer faces of handles painted with the decoration extending onto body as shown. Upper part of neck, above the ridge, painted solid. No preserved traces of paint on shoulder- or belly zones.

For shape generally cf. **T65-1**; fabric atypical and may prove to be imported.

T24-2 (81.1143) **Fig. 80b**; **pl. 405**

TR 1 S.F.22 bis

BODY FRR.; HM PITHOS

PH 0.164; PL (main fr.) 0.192

Five joining frr. preserving small portion of body; slightly worn.

Coarse local clay with many small to very large white and light-colored inclusions and much mica, both silver and golden. Clay fired close to yellowish red 5YR 6/6.

Frr. from steep lower wall of vessel.

Interior and exterior wet-smoothed, producing a dull surface; exterior somewhat better finished than interior.

Cf., among others, **T46-2**, **T89-1**.

PYRE DEBRIS

In addition to the two catalogued pieces **T24-3** and **T24-4**, the following frr. were recovered, all clearly fire affected: two very small frr. of a WM closed vessel; one rim fr. of a HM jar; one handle fr. of a HM open vessel, and twelve body frr. of another HM vessel. There were, in addition, some twenty-seven tiny chips of pottery that probably belonged to one of the vessels listed above.

T24-3 (81.1144) **Fig. 80c**

FRAGMENTARY WM BLACK-SLIP SMALL BELLY-HANDLED AMPHORA

PH 0.120; D (base) est. 0.070

Two joining and twelve nonjoining frr. preserving portion of body, neck, both handles, and very small portion of base; partially fire affected.

Clay more dense than normal local pottery, also with fewer than usual small light-colored, and some red, inclusions; mica content very fine, predominantly silver. Fabric as that of other black-slip vessels, but with slightly more mica. Clay where less affected by burning fired light gray, close to gray/light gray 10YR 6/1.

Details of shape difficult to determine exactly due to preserved state. Low ring base with rounded resting surface; shoulder curving in to vertical neck; neck evidently flaring toward rim, which is not preserved. Junction of body and neck marked by a slight thickening on interior. Small portion of both handles preserved, clearly horizontal, round in section, and attached above point of max. D, tending to rise vertically. Small mastos-like knob preserved on one shoulder fr. near junction with neck, but impossible to determine its position in relation to the handles.

Entire preserved exterior and interior at neck slipped/painted, though much worn; underside reserved. Slip/paint, where preserved, fairly thickly applied, fired black, with a slight sheen.

Cf. especially **T50-1**.

T24-4 (81.1145) **Fig. 80d**

RIM FRR.; WM KRATER

PH 0.055; D (rim) est. 0.250–0.280

Six joining and nonjoining frr. preserving portion of rim and upper wall; much affected by burning.

Local clay with many small to medium white and light-colored inclusions and much mica, predominantly silver. Clay and surfaces discolored light grayish brown due to burning.

Upper wall vertical; short horizontal rim, flat on top, and tapering slightly toward rounded outside edge.

Vessel presumably slipped and painted, but with no traces of paint preserved.

For shape cf., among others, **T104-11**.

TOMB 25 (**FIG. 38B**; **PLS. 128–129**; CONTENTS: **FIGS. 81A–D**; **PLS. 312A–C**, **481**)

TR 43 S.F.5

URN CREMATION; SINGLE ADULT MALE

Circular pit 0.70 m in diameter, cut ca. 0.15 m deep into bedrock; tomb encountered at a depth of 0.08 m below surface. In the west part of the tomb pit the skyphos **T25-1**, which served as ash-urn,

was placed upright, but slightly tilted. Over it was placed the body fragment of the pithos **T25-2** as lid or cover, while above it a roughly rectangular slab of granodiorite (0.385 m × 0.170 m × 0.053 m) was laid flat in order to partly seal the tomb; the stone was partially supported by a smaller piece of schist (roughly rectangular, 0.210 m × 0.155 m, and quite thin) set on edge. The east half of the tomb pit was not used but instead was filled with compacted bedrock chips, which were also placed around the ash-urn to set it in position. The upper part of the pit was filled with a combination of bedrock chips and blackened earth representing the remains of the pyre (cf. Tomb 24). This upper fill contained a fair quantity of cremated human bone and although some of the cremated remains of the deceased was placed in the ash-urn **T25-1**, the remainder was found scattered in the tomb pit. Small sherds of two vessels were also recovered from the upper level of the fill, both catalogued: **T25-3** displayed traces of partial burning; **T25-4**, though blackened, did not appear to be significantly burned.

T25-1 (82.287) **Fig. 81a**; **pls. 312a–c**

TR 43 S.F.5

WM SKYPHOS, Type 1

H 0.160; D (base) 0.083; D (rim) 0.188–0.200

Recovered complete except for minor chipping; reconstructed from frr. and restored.

Local clay with small to medium white and light-colored inclusions but rather less mica, tending fine, predominantly golden. Clay hard fired; occasional blowouts; evenly fired close to light brown 7.5YR 6/4; slip slightly lighter.

Heavy ring base, comparatively tall, with broad, flat resting surface and with lower outside edge chamfered. Lower wall curved; upper wall vertical; short outcurved rim with rounded lip. Two rather small horizontal handles, round in section, attached to upper wall and rising to level just below rim. Upper part of vessel warped, caused by contact (while leather-to-bone hard) with the actual contact mark visible on exterior, which corresponds to a slight splitting of the clay on interior.

Slipped and painted: paint dull, thickly and evenly applied, fired dark brown approaching black; brushmarks visible. Base, above chamfered lower edge, painted solid. Three thin horizontal bands on lower wall, above which is a broad band near midpoint. Upper wall, on either side of vessel, decorated with opposed "ugly sausages," each of which extends from the painted outer faces of the handles; on one side only, the sausages run over the band below. Area above and below handles reserved, as is the upper rim on interior and exterior; remainder of interior painted solid.

Cf. especially **T103-1**.

T25-2 (82.1161) **Fig. 81b**

TR 43 S.F.5 bis

BODY FRR.; HM PITHOS

PH 0.177; PL 0.300

Four joining frr. preserving small portion of body.

Coarse local clay with many small to large white and light-colored inclusions and much mica, exclusively golden. Clay evenly fired close to yellowish red 5YR 5/6 and strong brown 7.5YR 5/6.

Frr. from steep lower wall of vessel near base.

Interior and exterior wet-smoothed, producing a dull surface; exterior somewhat better finished than interior.

Cf. **T24-2**.

PYRE DEBRIS, BURNED AND ASSOCIATED SHERDS

T25-3 (82.1086) **Fig. 81c**

RIM FR.; WM LEKANIS, Type 1

PH 0.035; D (rim) est. 0.25–0.29

Single fr. preserving small portion of rim and upper wall; much worn and at least partially affected by burning.

Local clay with somewhat fewer than normal light-colored inclusions and fine silver and golden mica; occasional blowouts. Clay discolored light gray due to burning.

Lower wall curves up to vertical upper wall; short horizontal rim, flat on top and with rounded outside edge.

Slipped and painted but much worn: as preserved paint dull, quite thickly applied with a tendency to flake; variously fired from reddish brown to black. No preserved paint on exterior except for slight traces of paint on underside of rim; interior painted solid. Rim top decorated with concentric mechanically drawn arcs, four of which are preserved with dot at center; central arc almost defining a circle.

For shape cf. **T47-3**, **T51-3**, **T124-3**; for mechanically drawn arcs on rim top cf. **40**.

T25-4 (82.1085) **Fig. 81d**

BODY, RIM, AND HANDLE FRR.; HM TRIPOD CAULDRON

PH 0.120; PL 0.137

Eight joining frr. preserving portion of body, rim, and handle; slightly worn. Although slightly blackened in parts, the frr. do not display the normal signs of secondary burning.

Coarse local clay with many small to medium white and light-colored inclusions and much mica, exclusively golden. Upper part of preserved wall slightly blackened, elsewhere clay fired close to reddish brown 5YR 4/4; surface slightly lighter.

Body rounded; tall concave neck; flaring rim with rounded lip. Body and neck offset by slight carination. Scar of one vertical handle preserved, thick in section, attached from upper body directly to rim. Corresponding wall thickness would suggest a leg attachment below handle, of which nothing is preserved.

Interior and exterior burnished smooth, surface dull, with faint tooling marks preserved only at points.

Cf. **T99-3**, **T123-2** and **T123-3**.

TOMB 26 (**FIG. 48A**; **PLS. 130–131**; CONTENTS: **FIGS. 82A–C**; **PLS. 285A–B**, **360**, **482A–B**)

TR 56 Pots 4 + 5

URN CREMATION; SINGLE ADULT

Roughly circular pit 0.80 m long (max.), cut ca. 0.30–0.40 m deep into bedrock; tomb encountered at a depth of 0.15–0.20 m below surface. In the south and deepest part of the pit, the amphora with belly and shoulder handles **T26-1**, which served as ash-urn, was placed upright complete with a lid that was the reused base of lekanis **T26-2** placed upside-down. Beside the ash-urn, to the west and also upright, was the handmade jug **T26-3**. Both vessels were firmly set in place by a comparatively large number of chocking stones (schist and limestone), especially to the north and east of the ash-urn, as well as compacted bedrock chips. No tomb covering was preserved and some damage to the upper parts of both vessels was noted.[13] At least two sea-urchin spines and several small shell fragments were found inside the ash-urn with the cremated human bone (appendix C).

T26-1 (84.162) **Fig. 82a**; **pls. 285a–b**

TR 56 Pot 4

WM BELLY-AND-SHOULDER-HANDLED AMPHORA

H 0.284; D (base) 0.110; D (rim) 0. 090

Vessel recovered almost complete with most of upper body reconstructed from frr. Both shoulder handles not preserved; upper body, neck, and rim chipped. Vessel worn and rather fragile.

Local clay with many small to large white and light-colored inclusions and much mica, predominantly golden. Clay core fired light gray, elsewhere close to light reddish brown 5YR 6/4; slip closer to light brown 7.5YR 6/4.

Flat base very slightly hollowed out on underside to create a tiny false ring base with rounded resting surface. Body rounded with point of max. D set rather low, resulting in a sagging profile. Narrow, vertical neck, offset from shoulder by small ridge, much worn. Neck terminates in plain rim, rounded on top, with the slightest possible thickening on exterior. Two horizontal belly handles, round in section, attached just above point of max. D. Scars only of two small vertical shoulder handles, set midway between belly handles.

Slipped and painted but extremely worn: where preserved paint dull, with a tendency to flake; fired dark brown to black on one side of the vessel, red on the other. Horizontal band on lower wall at junction with

base, above which are three thin bands. Above these the decoration is extremely worn; the vessel was decorated at this point either by a large band or area painted solid, or by many thinner bands (only the upper and lower limits of this area are indicated on the drawing). The lower shoulder appears to be reserved; thin horizontal band on upper shoulder, above which is a small reserved area that may have been decorated with hatched or crosshatched triangles—these are so poorly preserved that no attempt has been made to render them on the drawing. Neck and rim above the small ridge painted solid; this extends over rim onto interior for a short distance. Outer faces of both belly handles painted, with the decoration extending for some way onto lower body; area below handles reserved. Similarly, the upper faces of the missing shoulder handles were painted: on one side of the vessel there is clearly preserved part of the diagonal sweep of paint that extends from the handle scar to the bands below (only that part clearly visible is indicated on drawing).

Cf. **T86-1** and the smaller **T78-1**.

T26-2 (84.162A) **Fig. 82b**

TR 56 Pot 4 bis

BASE FR.; WM LEKANIS, Type 1; REUSED AS LID FOR **T26-1**

PH 0.045; D (base) 0.085

Single fr. preserving entire base, chipped and worked around the edges to serve as lid; much worn.

Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden. Clay evenly fired close to reddish yellow 5YR 6/6; slip slightly lighter; occasional blowouts.

Tall conical foot with flattened resting surface, somewhat misformed.

Slipped and painted: as preserved, paint dull, thickly applied with a tendency to flake; fired black. Exterior of foot and preserved lower wall reserved. Interior painted, except for reserved disk (D: 0.020 m) at center of floor.

Cf. **T20-2**, **T21-2**, and generally **T47-3**.

T26-3 (84.161) **Fig. 82c**; **pl. 360**

TR 56 Pot 5

FRAGMENTARY HM JUG WITH CUT-AWAY NECK

PH 0.130; D (base) approx. 0.065

Many frr., large toward base, smaller toward neck, preserving almost entire base, most of the body, lower portion of the handle, but only small part of the neck (rim not preserved); reconstructed and partially restored; chipped and worn.

Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden. Clay core fired gray; interior and exterior surfaces mostly fired close to yellowish red 5YR 5/6 and strong brown 7.5YR 5/6.

Flattened base; body tending squat, almost biconical; vertical to inward sloping neck offset from body by rather deep groove on exterior, corresponding to angle formed on interior. Vertical handle, oval in section, attached to upper wall by piercing, with small projection of clay on interior mostly worked away.

Exterior burnished, with tooling marks running horizontally on upper wall, vertically on neck, diagonally opposed on lower body, crisscrossing on underside, producing a good but dull surface.

Cf., among others, **T52-2**, **T58-2**, **T73-2**.

TOMB 27 (**FIG. 48A**; **PL. 132**; CONTENTS: **FIGS. 83A–B**; **PLS. 301**, **382**)

TR 56 Pots 2 + 3

URN CREMATION; SINGLE ADULT (PERHAPS FEMALE AND MATURE?)

Elliptical-shaped pit 0.70 m long (max.), cut 0.10 m deep into bedrock; tomb encountered at a depth of 0.20 m below surface. In the center of the pit the small vertical-handled amphoriskos **T27-1**, which served as ash-urn, was placed upright, its base resting on a small fragment of a pithos, **T27-2**. Although pithos sherds were often used for chocking or as lids/covers for ash-urns and other vessels, this was the only instance of a small sherd placed as a bedding for the ash-urn. There were no *kterismata* as such and the rest of the tomb pit, which was quite large, was filled with compacted

bedrock chips. No tomb covering was preserved, with the result that much of the upper part of the ash-urn was damaged; some, but not all, of the missing fragments were encountered in the immediate vicinity of the tomb.

T27-1 (84.132) **Fig. 83a**; **pl. 301**
TR 56 Pot 2
WM VERTICAL-HANDLED AMPHORISKOS
H 0.158; D (base) 0.075; D (rim) 0.120
Many frr., reconstructed and partially restored, preserving entire base and lower body, about one-half of upper body and about one-third of neck and rim; one handle attested by scars, the other not preserved. Vessel chipped and much worn; condition rather poor.
Local clay with many small to large white and light-colored inclusions and much mica, predominantly golden. Clay evenly fired close to reddish yellow 5YR 6/6; slip closer to very pale brown 10YR 7/4–8/4.
Flat disk base in part misformed; slight groove at junction of base and wall on exterior. Body rounded; tall vertical neck offset from shoulder by small ridge, much worn. Neck flaring slightly to plain rim with rounded lip. Vessel wide mouthed and of rather open form. Small portion of scar of one vertical handle preserved.
Slipped and painted, but much worn: as preserved, paint dull, with a tendency to flake; fired red. Thin horizontal band at junction of base and wall; three thin bands, merging at one point to become two, on lower wall, above which the entire body and lower neck are painted solid. Zigzag (executed from right to left according to thickness of paint) enclosed by bands on neck; upper band extends over rim onto interior as shown. Traces of paint extending onto body from the area of the preserved handle scar on one side indicating that handles were painted.
Cf. **T123-1**.

T27-2 (84.133) **Fig. 83b**; **pl. 382**
TR 56 Pot 3
BODY FRR.; HM PITHOS
PH (illustrated fr.) 0.082; PL 0.062
Ten very small frr., only a few of which join, preserving small portion of body (only fr. with incised decoration illustrated). Chipped and much worn; condition rather poor.
Coarse local clay with a great many small to large white and light-colored inclusions and much mica, exclusively golden. Clay evenly fired close to brown/strong brown 7.5YR 5/4–5/6.
Frr. vertical walled; exact position on vessel undetermined. Thin applied band of clay (H: ca. 0.075) on portion of preserved frr., decorated with two roughly parallel horizontal rows of impressed circles, some of which are only partially impressed as shown.
Applied band smoothed, elsewhere interior and exterior less well finished.
Cf. Seiradaki 1960:29, pl. 12a (Karphi); Jacob-Felsch 1996: pls. 6, 29, nos. 128, 130.

TOMB 28 (**FIG. 21A**; **PL. 133**; CONTENTS: **FIGS. 84A–D**; **PLS. 317A–D**, **403**)

TR 6 S.F.12 + 15
URN CREMATION; SINGLE CHILD (?)
Elliptical-shaped pit 0.70 m long, cut into bedrock to a maximum depth of 0.20 m; tomb encountered at a depth of 0.15–0.20 m below surface. In the deepest part of the pit, toward the south, the skyphos **T28-1**, which served as ash-urn, was placed upright and covered by a worked, flat, and round piece of schist **T28-2**, above which was placed the pithos body fragment **T28-3**, subsequently cracked in situ. The ash-urn was firmly set in place by compacted bedrock chips. Several complete seashells, as well as shell fragments, were encountered in the tomb pit fill immediately below **T28-1**, and a further three seashells were found inside the ash-urn with the cremated human remains; all the seashells were calcined (appendix C). To the NW, and within the shallower part of the tomb pit, was a concentration of sherds intermingled with small stones. Among these a small quantity of later, intrusive material was noted, whereas the larger fragments were all Early Iron Age; of the latter, fragments of only one vessel (**T28-4**) are here catalogued.[14] None of these sherds was fire affected.

T28-1 (81.736) **Fig. 84a**; **pls. 317a–d**
TR 6 S.F.15
WM SKYPHOS, Type 3
H 0.170; D (base) 0.090; D (rim) 0.178
Complete except for minor chipping; reconstructed from frr. and partially restored.
Local clay with many small white and light-colored inclusions and much mica, predominantly golden; occasional blowouts. Clay evenly fired close to light brown 7.5YR 6/4; slip slightly lighter.
Tall flaring foot with narrow resting surface; lower wall curved, upper wall vertical; gently flaring/outcurved rim, tapering slightly to rounded lip. Two horizontal handles, round in section, attached to upper wall and rising to level of rim. Vessel slightly warped; wheelmarks prominent on interior.
Slipped and painted: paint dull, in parts more thickly applied than others; fired dark brown to black; brushmarks visible on exterior. Three thin horizontal bands on lower wall below broad band, above which is another thin band. Rim painted, as are the outer faces of both handles. The handle zone, thus defined, is decorated on either side of the vessel with four tremulous lines, executed from right to left. Interior painted except for reserved disk (D: 0.042 m) at center of floor. Traces of paint on underside.
Cf. **T37-1**; also the system of decoration on the amphoriskos **T44-1**. Cf. the earlier skyphoi from Kastanas: Podzuweit 1979b: 211, fig. 20, no. 2; 213, fig. 21, no. 5; 216, fig. 22, no. 1.

T28-2 (S81.03) **Fig. 83d**
TR 6 S.F.15 bis
WORKED SCHIST DISK
D (max.) 0.240; TH 0.007–0.015
Cracked in situ; three joining frr. as preserved.
Dark silver-gray schist, edges worked and smoothed to form thin round disk; smoother on one side.
Similar schist disks were commonly used as lids for various sized vessels at the Geometric settlement at Zagora: cf. Cambitoglou 1968: pl. 347c; Cambitoglou et al. 1971:61.

T28-3 (81.1226) **Fig. 83b**
TR 6 S.F.15 ter
BODY FRR.; HM PITHOS
Dimensions of largest preserved fr.: PH 0.130; PL 0.110
Forty small joining frr. and chips preserving small portion of body; chipped and worn.
Coarse local clay with a great many small to large white and light-colored inclusions and much mica, tending small flaked, predominantly golden. Clay and interior surface fired close to light reddish brown 5YR 6/4; exterior surface closer to reddish brown 2.5YR 5/4–4/4 and red 2.5YR 4/6.
Frr. of large pithos with preserved wall vertical, probably near midpoint.
Exterior surface wet-smoothed, producing a good but dull finish; interior less well finished.
Cf., among others, **T12-1**, **T24-2**, **T25-2**.

T28-4 (81.362) **Fig. 83c**; **pl. 403**
TR 6 S.F.12
BODY FRR.; WM AMPHORA, PROBABLY NECK-HANDLED
PH 0.114; PL 0.128
Three joining frr. preserving portion of shoulder.
Local clay with some small to medium white and light-colored inclusions and much mica, tending fine, predominantly golden. Clay evenly fired close to reddish yellow 5YR 6/6 and light red 2.5YR 6/6; slip closer to pink 7.5YR 7/4.
Shoulder curved; frr. preserve point of max. D, which is set rather high on the vessel.
Slipped and painted: paint as preserved, dull, rather dilutely applied; fired pale brown. Four horizontal bands of various thickness on upper shoulder. From the uppermost band springs a row of mechanically drawn upright concentric semicircles; portions of two sets preserved, each comprising six arcs with small dot at center.
Frr. probably of neck-handled amphora: cf. especially **T52-1**.

TOMB 29 (**FIG. 24A**; **PL. 134**; CONTENTS: **FIG. 85**; **PLS. 289**, **483**).

TR 12 S.F.20
URN CREMATION; SINGLE CHILD/INFANT AGED <2 YEARS AT DEATH
Shallow circular pit 0.36 m in diameter, cut ca. 0.10 m deep into bedrock; tomb encountered at a depth of 0.07 m below surface. Within the center of the pit the small wheelmade amphora **T29-1**, which served as ash-urn, was placed upright. The entire upper part of the vessel and tomb was not preserved (damage probably the result of modern plowing). The base of the vessel as encountered, which still contained 10 g of cremated human bone, was firmly set in place by compacted bedrock chips.

T29-1 (81.569) **Fig. 85**; **pl. 289**
TR 12 S.F.20
BASE AND LOWER BODY; WM AMPHORA
PH 0.117; D (base) 0.098
Many joining frr., reconstructed, preserving most of base and about one-half of lower body.
Local clay with some small to medium white and light-colored inclusions and a little fine golden mica, somewhat less than normal; occasional blowouts. Clay evenly fired close to very pale brown 10YR 7/3–7/4; slip slightly lighter.
Flat disk base (very slightly hollowed out on underside); lower wall curving up to point of max. D; body tending slender, probably of ovoid form. Slight thickening for handle preserved as scar at one point near max. D (accompanied by painted decoration of handle extending onto body). Handle type uncertain; wheelmarks prominent on interior.
Slipped and painted: paint dull, quite thickly applied and with a tendency to flake; fired brown. Horizontal band at junction of base and wall; three horizontal bands on lower wall; traces of paint preserved at break representing painted decoration of handle extending onto body.
Shape and decoration as preserved consistent with either neck- or belly-handled amphorai. Fabric and feel particularly close to **T95-1**.

TOMB 30 (**FIG. 24A**; **PL. 135**; CONTENTS: **FIG. 86**; **PL. 316**)

TR 12 S.F.22
URN CREMATION; SINGLE ADULT
Circular to elliptical-shaped pit 0.45 m long (max.), cut ca. 0.15 m deep into bedrock; tomb encountered at a depth of 0.08 m below surface. Within the center of the pit the large wheelmade skyphos **T30-1**, which served as ash-urn, was placed upright. The vessel was firmly set in place by compacted bedrock chips, but as no tomb covering was preserved, broken fragments of its rim and upper body were found scattered at the top of the tomb pit; the vessel was recovered almost complete.

T30-1 (81.841) **Fig. 86**; **pl. 316**
TR 12 S.F.22
LARGE WM SKYPHOS, Type 3
H 0.218; D (base) 0.106; D (rim) 0.205–0.245
Vessel recovered almost complete, reconstructed from frr., with small parts of rim, upper body, and one handle not preserved; restored.
Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden; occasional blowouts. Clay evenly fired close to reddish yellow 7.5YR 7/6; slip closer to pink 7.5YR 8/4.
Tall flaring foot; deep body, with curved lower wall, vertical upper wall; short outcurved rim with rounded lip. Slight groove at points only at junction of rim and upper body on exterior. Two horizontal handles, round in section, attached to upper wall and rising to level just below rim; vessel warped, especially at upper body and rim; wheelmarks prominent on interior.
Slipped and painted: paint dull, in parts applied thickly, in others more dilute; variously fired from red to light and dark brown, in parts approaching black. Exterior of foot and lower wall painted solid; seven thin horizontal bands on lower wall, merging at points. Upper wall decorated on either side of the vessel with opposed "ugly

sausages" that extend onto body from the painted outer faces of the handles. Lower parts of the sausages are connected by broad band in dilute paint that extends around the vessel. Area above handles painted. Area below handle arches and exterior face of rim reserved. Interior painted, but much worn especially toward center of the floor, probably the result of use/cleaning; enough traces of paint preserved at or near the center of floor to indicate the entire interior was originally painted solid.

Although large, the vessel is here classified as skyphos (not krater) on account of its rim form. Shape as **T28-1** and **T37-1**, but larger.

TOMB 31 (**FIG. 24A**; **PL. 136**; CONTENTS: **FIG. 87**)

TR 12 S.F.13

URN CREMATION; SINGLE ADULT

Circular pit 0.35 in diameter (max.), cut 0.10 m deep into bedrock; tomb encountered at a depth of 0.05 m below surface. Within the pit the small handmade pitharion **T31-1**, which served as ash-urn, was placed on its side; the entire upper part of the vessel, which lay above the level of the tomb pit, was not preserved, although the lower parts encountered in situ were firmly set in place by compacted bedrock chips. As the rim of the ash-urn was not preserved, it was difficult to determine the exact orientation of the vessel in situ, which was probably rim toward the east. The ash-urn, as preserved, contained enough cremated bone (423 g) to establish that the deceased was an adult (appendix A).

T31-1 (81.602) **Fig. 87**

TR 12 S.F.13

FRAGMENTARY HM PITHARION

PH 0.207; D (base) approx. 0.080

Seven joining frr. preserving about one-half of vessel lengthways, but nothing of rim; worn.

Coarse local clay with many small to large white and light-colored inclusions and much mica, almost exclusively golden. Clay and surfaces evenly fired close to strong brown 7.5YR 5/6–4/6.

Base only very slightly flattened; tall, slender and ovoid body, thick walled. Thinner-walled, inward sloping neck, offset from body as shown. Enough of the vessel is preserved to indicate insufficient space for handles.

Exterior and upper part of neck on interior burnished, with broad and shallow tooling marks running horizontally, producing a good finish with a slight sheen; burnishing as **T38-1**.

Shape as **T70-1** (a small version of **T38-1**) but without handles: cf. **T49-1** and **T126-1**.

TOMB 32 (**FIG. 24A**; CONTENTS: **FIG. 88**)

TR 12 S.F.14

URN CREMATION; POORLY PRESERVED, NO CREMATED BONE ENCOUNTERED

So little remained of this presumed tomb that its original details are difficult to reconstruct accurately. As preserved, it consisted of a shallow circular pit, 0.26 m in diameter, cut into bedrock a few centimeters deep and encountered at a depth of only 0.05 m below surface; bedrock in the immediate vicinity was particularly eroded. Within the pit, and firmly attached to the natural rock, was the fragmentary base of a wheelmade vessel **T32-1**, almost certainly a krater and probably the ash-urn, found standing upright, right-way up, in an extremely poor state of preservation; it crumbled into a mass of chips on removal. Even given the poor state of preservation, it was clear nothing remained of the resting surface of the original vessel, and thus the pot may have been used in a broken state (cf., for instance, **T79-1**). No cremated bone was encountered in the tomb, and the few fragments of cremated bone recovered from topsoil in the immediate vicinity may have come from the nearby Tomb 31.

T32-1 (81.831) **Fig. 88**

TR 12 S.F.14

BASE FRR.; WM KRATER, cf. Type 1

Frr. as preserved beyond restoration; mostly tiny chips

Dimensions of main fr. (illustrated): PH 0.053; D (base) approx. 0.15; PL 0.177

Local clay with small to medium white and light-colored inclusions and much mica, both silver and golden. Clay core, at base, fired mostly light gray, light reddish yellow toward the surfaces. Fabric particularly soft textured and perhaps poorly fired.

Frr. clearly from large vessel, thick walled where preserved. Body open and evidently rather shallow; base broken with nothing of the resting surface or underside preserved. Almost certainly krater of Type 1: cf. **T102-1**, **T116-1**, and also **T48-1** (Transitional type).

Vessel presumably slipped and painted, but with no decoration preserved.

Details of shape and state of preservation close to **T79-1**.

TOMB 33 (**FIG. 25**; **PL. 137**; CONTENTS: **FIG. 89**)

TR 12 East Baulk S.F.4

URN CREMATION; POORLY PRESERVED

Circular pit 0.42 in diameter, cut 0.12–0.21 m deep into bedrock; tomb encountered at a depth of 0.10–0.15 m below surface. Within the center of the pit the base of a wheelmade krater **T33-1**, undoubtedly the ash-urn, was found upright, firmly set in place by a number of small chocking stones and compacted bedrock chips. The entire upper part of the vessel was not preserved, nor was any cremated bone recovered from the tomb pit itself, although some 0.20 m to the north, lying on unworked bedrock, were a few joining fragments of **T33-1** as well as five pieces of cremated human bone intermingled with a few Classical sherds and some sea- and land-shell material (appendix C).[15] Topsoil in the immediate vicinity of this tomb and of Tombs 34, 35, and 36 yielded a small number of Early Iron Age sherds and a few more seashell fragments.[16]

T33-1 (81.836) **Fig. 89**

TR 12 East Baulk S.F.4

BASE FRR.; WM KRATER, Type 2

PH 0.092; D (base) 0.130

Seven joining frr. preserving entire base but only small portion of lower wall; much worn.

Local clay with small to medium white and light-colored inclusions as well as many medium brick-red inclusions, perhaps schist or crushed pot sherds (grog) used as temper. Much fine mica, predominantly golden. Clay evenly fired close to reddish yellow 7.5YR 7/6–6/6; slip slightly lighter.

Tall flaring foot, with narrow, flat resting surface and chamfered lower outside edge. Shallow sloping lower wall offset from base by pronounced groove.

Slipped and painted, but worn: paint dull, rather thinly applied, fired light brown to red. Foot exterior, from chamfered lower edge up to groove at junction with wall, painted solid. Lower wall evidently reserved; no preserved paint on interior.

For shape cf. **T35-1** and **T58-1**.

TOMB 34 (**FIG. 25**; CONTENTS: **FIGS. 90A–B**)

TR 12 and TR 12 East Baulk S.F.5

URN CREMATION; POORLY PRESERVED

This poorly preserved tomb was encountered in an area where outcrops of bedrock were visible above modern ground level. As preserved, it consisted of a pit ca. 0.40 m long, cut 0.08–0.17 m deep into bedrock;[17] the deepest part of the pit lay 0.25 m below surface. Within it were found the displaced base fragments of a skyphos **T34-1**, two joining fragments of a pithos, **T34-2**, as well as scattered cremated human bone and bedrock chips. Only eight minute scraps of cremated human bone (2.0 g) were recovered, insufficient to determine age or sex. Though displaced, it appears likely **T34-1** was the ash-urn, while the fragments of **T34-2** may have been used for chocking or perhaps even as a lid/cover for the tomb or ash-urn.

T34-1 (81.1130A + B) **Fig. 90a**

TR 12 East Baulk S.F.5

BASE FRR.; WM SKYPHOS, Type 2 or 3

PH 0.028; max. PD (base) at break 0.044

Four joining and one nonjoining frr. preserving much of base but nothing of the resting surface and only a small portion of the lower wall; chipped and much worn, especially on underside.

Local clay with fewer than normal small white and light-colored inclusions and some fine mica, silver and golden; fabric soft textured. Clay evenly fired close to pale brown 10YR 6/3.
Tall-footed skyphos with conical or flaring foot; curved lower wall.
Slipped and painted: paint dull, thickly applied with a tendency to flake; fired black to dark brown. Preserved interior and exterior painted solid; underside reserved.
Judging by the absence of a groove at junction of base and body, the vessel may be a Type 3 skyphos (cf. **T28-1**, **T30-1**, **T37-1**) rather than Type 2 (cf. especially **T94-1**).

T34-2 (81.1131) **Fig. 90b**
TR 12 East Baulk S.F.5 bis
BODY FRR.; HM PITHOS
PH 0.194; max. PL × PW 0.195 × 0. 091
Two joining frr., broken on all sides, preserving small portion of body; worn.
Coarse local clay with many small to large white and light-colored inclusions and much mica, tending fine, silver and golden. Clay and surfaces evenly fired close to brown 7.5YR 5/4.
Preserved frr. steep walled, probably from lower body of vessel.
Exterior wet-smoothed, producing a dull surface; interior less well finished.
Cf., among others, **T28-3**.

TOMB 35 (**FIG. 25**; **PL. 138**; CONTENTS: **FIG. 91**)

TR 12 East Baulk S.F.6
URN CREMATION; SINGLE ADULT
Large circular pit 0.75 m in diameter, cut 0.24 m deep into bedrock; tomb encountered at a depth of 0.02 m below surface, next to Tomb 34.[18] Within the center of the pit the wheelmade krater **T35-1**, which served as ash-urn, was placed upright, firmly set by at least two chocking stones and compacted bedrock chips. No tomb covering was preserved; as the tomb lay so close to the surface, only that part of the ash-urn that was below the level of the top of the pit was preserved. A single seashell was encountered in the tomb pit (appendix C).

T35-1 (81.741) **Fig. 91**
TR 12 East Baulk S.F.6
WM KRATER, Type 2
PH 0.228; D (base) 0.112
Many joining frr. preserving entire base, most of lower body, parts of the upper body, including one handle, but nothing of the rim. Reconstructed from frr. and partially restored. Condition very poor; much worn.
Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden. Clay evenly fired close to reddish yellow 7.5YR 6/6; slip closer to pink 7.5YR 7/4.
Flaring/conical foot of medium height, with narrow resting surface and rounded lower outside edge. Junction of base and body thickened and marked by two broad and shallow grooves. Lower wall rising at an angle of about 45°, upper wall vertical, with the junction of the two marked by a slight carination. Portion of one horizontal handle preserved, round in section, attached to upper wall.
Slipped and painted, but mostly worn, tentatively reconstructed as shown (**fig. 91**): traces of preserved paint fired red. Upper part of foot (if not the entire exterior of foot) painted. Two horizontal bands on lower wall (possibly more). Broad band at junction of lower and upper wall. Traces of paint on outer face of handle and on interior. Paint on interior extremely worn and only slight traces are actually preserved.
For shape cf. especially **T58-1**.

TOMB 36 (**FIG. 25**; CONTENTS: **FIG. 92**)

TR 12 East Baulk S.F.2
URN CREMATION; SINGLE CHILD/ ADOLESCENT, POORLY PRESERVED
As preserved, a small circular pit 0.25 m in diameter, cut into bedrock only a few centimeters deep; tomb encountered at a depth of 0.10 m below surface. In the pit were fragments preserving the base of the skyphos **T36-1**, which had been placed upright and firmly set by bedrock chips. Although poorly preserved and with nothing of

the upper part of the vessel recovered, enough cremated bone was recovered to establish the approximate age at death of the deceased as a child, or else an adolescent aged between 12 and 17 years at death (appendix A). A small quantity of seashell material was encountered in the immediate vicinity of the tomb (appendix C).

T36-1 (81.605) **Fig. 92**

TR 12 East Baulk S.F.2
BASE FRR.; WM SKYPHOS, Type 2
PH 0.066; D (base) 0.098
Five joining frr. preserving entire base and small portion of lower body; chipped and worn.
Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden; occasional blowouts. Clay core fired light gray in parts only, elsewhere fired close to reddish yellow 5YR 6/6; slip slightly lighter.
Conical foot with narrow resting surface; shallow curving lower wall; wheelmarks prominent on interior.
Slipped and painted, but much worn: as preserved, paint dull, rather thickly applied with a tendency to flake; fired red. Traces of paint on lower portion of foot on exterior. Portion of horizontal band on lower wall at break. Interior extremely worn, with only minuscule traces of paint actually preserved.
Cf. especially **T94-1**, and Kübler 1943: pl. 22, inv. 1072; pl. 23, inv. 2102.

TOMB 37 (**FIG. 21A**; **PL. 139**; CONTENTS: **FIG. 93**; **PLS. 318A–B**, **484**)

TR 6 S.F.14
URN CREMATION; SINGLE ADULT
Circular pit 0.38 m in diameter, cut 0.15 m deep into bedrock; tomb encountered at a depth of 0.25–0.30 m below surface. Within the center of the pit the skyphos **T37-1**, which served as ash-urn, was placed upright and firmly set by a number of small chocking stones, especially around its base, and compacted bedrock chips. The tomb was sealed by a single flat, almost square, piece of crudely worked light silver/gray to gray/green schist (0.230 m × 0.195 m × 0.015–0.032 m) placed over the ash-urn, but which did not entirely cover the tomb pit.

T37-1 (81.310) **Fig. 93**; **pls. 318a–b**

TR 6 S.F.14
WM SKYPHOS, Type 3
H 0.152; D (base) 0.096; D (rim) 0.165–0.171
Complete except for very minor chipping; cracked in situ and reconstructed from frr.
Local clay with many small white and light-colored inclusions and much mica, predominantly golden; occasional blowouts. Clay evenly fired close to reddish yellow 7.5YR 6/6; slip closer to very pale brown 10YR 7/3–7/4.
Flaring foot with lower outside edge rounded; very small central nipple on underside. Lower wall curved, upper wall vertical; gently flaring/outcurved rim, tapering slightly to rounded lip. Two horizontal handles, round in section, attached to upper wall and rising to level of rim. Wheelmarks prominent on interior.
Slipped and painted: paint dull, unevenly applied, in parts thick, in others dilute and streaking, with brushmarks visible on exterior; fired light brown where dilute, dark brown approaching black where thicker. Three thin horizontal bands on lower wall, above which is a broad band, with paint thicker toward the top. Rim painted, as are the outer faces of the handles with the paint extending onto body. The handle zone thus defined is decorated on either side of the vessel with two tremulous lines executed from right to left according to the thickness of paint. Interior painted, but with no preserved paint on lower part of interior and at center of floor, probably from use/cleaning.
Clear traces of potter's fingerprints on exterior.
Cf. **T28-1**.

TOMB 38 (**FIG. 21A**; **PL. 140**; CONTENTS: **FIGS. 94A–B**, **191C**; **PLS. 358**, **383**, **470**)

TR 6 S.F.1 + 2
URN CREMATION; SINGLE ADULT MALE

Roughly circular pit 0.63 m in diameter, cut 0.14 m deep into bedrock; tomb encountered at a depth of 0.15 m below surface. In the center, and slightly toward the south part of the pit, the large handmade pitharion **T38-1**, which served as ash-urn, was placed on its side, rim toward the SW. Beside it, immediately to the north of the rim, the handmade jug **T38-2** was placed in an upright position. Although the upper parts of both vessels, especially the ash-urn, were not preserved, both were found firmly set in place by two large chocking stones in the north side of the tomb pit, as well as by compacted bedrock chips. A few missing fragments of the ash-urn were recovered in topsoil in the immediate vicinity.[19] A worked bone handle **T38-3** was found inside the ash-urn with the cremated human bone.

T38-1 (81.09) **Fig. 94a**; **pl. 383**

TR 6 S.F.1

HM PITHARION

H 0.363; D (base) 0.100–0.110; D (rim) 0.175

Several large and many small joining frr., reconstructed, preserving about one-half of the vessel lengthways; complete profile preserved.

Coarse local clay with many small to large white and light-colored inclusions and much mica, mostly larger flakes, exclusively golden. Clay fired evenly close to reddish brown 5YR 5/4.

Flattened base; tall ovoid body; tall concave neck, offset from body by small ridge; flaring rim with chamfered lip. One horizontal handle preserved, thick and round in section, attached to upper body.

Exterior and interior at neck burnished, with broad and shallow tooling marks running mainly horizontally and producing a good surface with a slight sheen.

Cf. fragmentary examples as **T95-2**, **T113-1**, **T118-4**; also **T70-1** but larger.

T38-2 (81.08) **Figs. 94b**, **191c**; **pl. 358**

TR 6 S.F.2

HM JUG WITH CUTAWAY NECK

POTTER'S MARK fig. 191c (= Papadopoulos 1994:448–449, fig. 8, pl. 114f, no. B6)

PH 0.122; D (base) approx. 0.055

Reconstructed from many joining frr. and partially restored, almost complete except for upper neck and parts of rim; worn.

Local clay with many small white and light-colored inclusions and much silver and golden mica. Clay mostly fired close to reddish yellow 7.5YR 6/6, in parts brown, in others discolored gray/black.

Flat base; small rounded body, tending almost biconical; vertical to inward sloping neck, offset from shoulder by groove on exterior corresponding to angle formed on interior. Vertical handle, round in section, attached to upper body by piercing, with clear projection of clay on interior; upper handle attachment directly to cutaway part of rim. Neck cut away; chamfered rim. Vessel thin walled.

Exterior burnished but worn, with faintly preserved tooling marks running horizontally on upper body, diagonally opposed on lower body.

Potter's mark, incised prior to firing, at lower handle attachment. Three strokes, the first two vertical, the third diagonal. Between the second and third strokes is a scratch that was incised later (postfiring). Cf. the mark on **T10-3**.

For shape cf. **T41-3** and **T82-3**.

T38-3 (81.1219) **Pl. 470**

TR 6 S.F.1 bis

FRAGMENTARY WORKED BONE HANDLE

Max. PL of 2 joining frr. 0.055; W 0.014 tapering to 0.011

Five frr., at least two of which join, preserving portion of bone handle of small iron blade. Broken and chipped but not affected by burning. Remains of vitreous substance at core of handle, not unlike iron slag. Traces of iron corrosion staining the surface and core; no trace of the actual blade or rivets preserved.

Bone handle made from sheep/goat tibia.

Single piece of bone worked to form handle (without rivets), roughly square in section, tapering slightly toward side of tang. At other end possible preserved edge (not certain). Surface polished.

Cf. the handle of **T52-4**.

TOMB 39 (**FIG. 21A**; CONTENTS: **FIG. 95**)

TR 6 S.F.3

URN CREMATION; POORLY PRESERVED[20]

Circular pit 0.45–0.50 m in diameter, cut 0.12 m deep into bedrock; tomb encountered at a depth of 0.14 m below surface. Toward the SE quarter of the tomb pit the poorly preserved wheelmade vessel **T39-1**, which served as ash-urn, was placed upright and set firmly in place by compacted bedrock chips. The upper part of the vessel was not preserved and the base was found in an extremely poor state of preservation, beyond restoration. A solitary seashell fragment found in the tomb pit may be intrusive (appendix C). No sherd material was encountered in the tomb pit, but approximately 0.35 m to the SE were the fragments of the handmade jug **3**, which may represent the remains of a displaced *kterisma* originally associated with this tomb. It is worth noting that the tomb pit of Tomb 39 was much larger than the ash-urn and could easily have accommodated another vessel, which was not the case with most of the other tombs in the vicinity (see **fig. 21a**).

T39-1 (81.11) **Fig. 95**

TR 6 S.F.3

WM VESSEL EITHER SKYPHOS Type 1 or AMPHORISKOS

Dimensions of illustrated fr.: PH 0.018; D (base) 0.070

Vessel beyond reconstruction and restoration. As preserved, a great many tiny frr. and chips preserving what appears to be most of base and portion of lower body. Much worn and particularly fragile.

Local clay with many small to medium white and light-colored inclusions and much silver and golden mica, the latter predominating. Clay fired close to light reddish brown 5YR 6/4 and light brown 7.5YR 6/4.

Low ring base with flat resting surface; underside becoming flat.

Vessel presumably slipped and painted, but no trace of paint preserved.

Form of base consistent with Type 1 skyphoi: cf., among others, **T23-1**, **T103-1**, **T105-1**, **T106-1**, **T108-1**, **T110-1**, but also a number of small amphorai/iskoi: cf. **T53-1**, **T65-1**, **T96-1**, **T109-1**.

TOMB 40 (**FIG. 21A**; **PLS. 24**, **141**; CONTENTS: **FIG. 96**)

TR 6 S.F.7

URN CREMATION; SINGLE ADULT (MALE?)

Circular to oval-shaped pit 0.60 m long (max.), cut 0.15 m deep into bedrock; tomb encountered at a depth of 0.12 m below surface. Within the center of the pit the wheelmade krater **T40-1**, which served as ash-urn, was placed upright and firmly set by compacted bedrock chips. Significantly, the vessel had no preserved base and as such was clearly placed into the pit in a broken or damaged state (cf. **T79-1**). The upper part of the vessel, which lay above the level of the top of the tomb pit, was not preserved. The missing frr. of **T40-1** were not recovered and it is possible that the upper body of the vessel, like the base, was broken when placed into the tomb.

T40-1 (81.380) **Fig. 96**

TR 6 S.F.7

FRAGMENTARY WM KRATER

PH 0.183; PD (base as preserved) 0.110; max. PD (body) 0.330

Reconstructed from many joining frr. preserving much of lower wall, nearly all the underside, but nothing of the actual base and resting surface. Upper body, handles, and rim not preserved. Chipped and very worn; rather fragile.

Local clay with many small to large white, light-colored, and occasional darker inclusions; much mica, tending fine, predominantly golden; occasional blowouts. Clay core fired light gray, elsewhere close to reddish yellow 7.5YR 6/6; slip slightly lighter.

Underside flat; curved lower wall, tending to rise steeply; wheelmarks prominent on interior; exact form of original base uncertain.

Slipped and painted but much worn; paint, as preserved, fairly dull, thickly applied; fired red. Two broad horizontal bands on upper part of preserved body. Clear traces of paint on upper part of preserved interior, but none toward the center. Paint on interior mostly not preserved as a result of general weathering, perhaps also use/cleaning.

The general proportions of the vessel are closer to those of Type 2 kraters: cf. **T35-1**,

T58-1 (cf. also **T48-1** [Transitional]). For state of preservation cf. **T79-1**.

TOMB 41 (**FIG. 21A**; **PL. 142**; CONTENTS: **FIGS. 97A–C**, **191G**; **PLS. 261A–B**, **322**, **354A–C**)

TR 6 S.F.4 + 5 + 6
URN CREMATION; SINGLE ADULT

Elliptical-shaped pit 0.68 m long (max.), cut 0.20 m deep into bedrock; tomb encountered at a depth of 0.16 m below surface. In the eastern half of the tomb pit the wheelmade neck-handled amphora **T41-1**, which served as ash-urn, was placed on its side, rim toward the W/SW; also on its side and placed directly over the rim of the ash-urn as a lid was the wheelmade lekanis **T41-2**, a few fragments of which were also found scattered toward the NW. In the western half of the tomb pit the handmade jug **T41-3** was placed upright as *kterisma*. All three vessels were firmly set in their respective positions by a number of chocking stones and compacted bedrock chips; two larger chocking stones were placed to the north of **T41-1**, and **T41-3** was surrounded by a number of similar stones that tended to separate it from the ash-urn and its lid. The upper parts of all three vessels were not preserved.

T41-1 (81.730A + B) **Fig. 97a**; **pls. 261a–b**

TR 6 S.F.5
FRAGMENTARY WM NECK-HANDLED AMPHORA
PH (not including handle) 0.256; PD (neck) 0.114; max. D (body) 0.302
Reconstructed from many frr. preserving small portion of lower wall, about one-half of upper body, including most of one handle and portion of neck; worn.
Local clay with many small white and light-colored inclusions and much mica, predominantly golden. Clay core fired light gray in parts, elsewhere clay close to reddish yellow 7.5YR 6/6; slip closer to light yellowish brown 10YR 6/4.
Preserved lower body rising steeply to point of max. D, which is evidently set rather high; shoulder curved. Vertical neck offset from body by ridge. Vertical handle with double concavity on upper face, attached above point of max. D to neck (actual neck attachment not preserved).
Slipped and painted, worn in parts: paint dull, thickly applied in parts, in others more dilute; variously fired; mostly red, lighter red where dilute, dark brown approaching black where thickest, especially on handle arch. Portion of horizontal band preserved on lower wall at break; broad horizontal band at point of max. D below which are two thinner bands. Two thin bands on lower neck immediately at and above the ridge. Shoulder decorated on preserved side with three sets of mechanically drawn concentric circles (the right set more worn than the other two), each set comprising six circles with small dot at center. Between the left and central sets is a triangular or arrow-shaped motif or splash of paint (probably accidental). Handle decorated as shown, with two parallel vertical stripes following the double concavity on upper face; these meet at the top of the handle arch and continue for a short distance onto neck, with portion of one termination preserved near the break; at the lower attachment they cross over and extend well onto the body of the vessel; a further band encircles the lower attachment that also extends onto body, as shown.
Cf. **T124-1**, **T77-1**, **T73-1**, **T74-1** (the latter two decorated with semicircles). Cf. also Desborough 1952: pl. 22, nos. 77–79 (Marmariani); Verdelis 1958:6, figs. 1–2; Doumas and Marangou 1978:183, pl. 34; Hänsel 1979a:198, fig. 18, no. 3 (Kastanas).

T41-2 (81.360A–D) **Fig. 97b; pl. 322**

TR 6 S.F.6
FRAGMENTARY WM LEKANIS
PH 0.067; D (rim) est. 0.180
Nine joining and nonjoining frr., reconstructed, preserving portion of body, rim, and one complete handle; very worn.
Local clay with many small white and light-colored inclusions and much mica, silver tending to predominate; occasional blowouts. Clay core fired light gray, elsewhere close to reddish yellow 7.5YR 7/6.

Shallow lower wall; vertical upper wall, with slight thickening at junction of the two. Short horizontal rim, flat on top and tapering slightly toward rounded outside edge. Horizontal ribbon handle, with concave outer face, attached immediately below rim.

Slipped and painted, but extremely worn: paint, as preserved, dull and evidently evenly applied; fired red. Exterior painted except for reserved band round body below handles, decorated with single tremulous line approaching zigzag, executed from right to left according to the thickness of paint. Interior painted; rim top barred but too poorly preserved to illustrate.

For general shape and size cf. especially **T124-3**.

T41-3 (81.07) **Figs. 97c**, **191g**; **pls. 354a–c**

TR 6 S.F.4

HM JUG WITH CUTAWAY NECK

POTTER'S MARK pl. 191g (= Papadopoulos 1994:450–451, fig. 10, pl. 115, no. B10)

PH 0.14; D (base) 0.05

Recovered almost complete but in many frr., with small portion of upper neck, rim, and top of handle not preserved; reconstructed and partially restored.

Local clay with many small white and light-colored inclusions and much mica, tending fine, predominantly golden. Clay evenly fired close to red 2.5YR 5/6.

Small thin-walled jug with flattened base and rounded body. Inward sloping neck, offset from shoulder by groove on exterior corresponding with angle formed on interior. Neck cut away; rim, where preserved, chamfered. Small vertical handle, plano-convex in section, attached to upper body by piercing, with slight projection of clay on interior.

Exterior burnished, with pronounced tooling marks running vertically on neck, horizontally on upper wall, diagonally opposed on lower body and producing a good surface with a slight sheen.

Potter's mark, incised prior to firing, on body immediately below lower handle attachment. Six impressed dots arranged in two parallel rows of three, above an incised arrow-shaped motif comprising two converging diagonals bisected by a vertical line. The horizontal line indicated on fig. 191g is clearly incised after firing. For similar impressed dots cf. **T66-1** and **T75-2**. Cf. also the incised marks on **T10-1** and **T82-3**.

For shape cf. **T38-2** and **T82-3**.

TOMB 42 (**FIG. 21A**; **PLS. 23**, **143**; CONTENTS: **FIG. 98A–C**; **PL. 290**)

TR 6 S.F.19

URN CREMATION; SINGLE ADULT

Circular pit 0.35 m in diameter, cut 0.20 m deep into bedrock; tomb encountered at a depth of 0.18 m below surface. Within the center of the pit the wheelmade amphora **T42-1**, which served as ash-urn, was placed upright; beside it, to the north and also upright, was the fragmentary base of the handmade jug **T42-2**. Both vessels were firmly set in place by compacted bedrock chips; their upper parts were not preserved. At a slightly higher level, beside the ash-urn to the SE and within the tomb pit, were fragments of another handmade jug, **T42-3**; these appeared to be displaced, and the exact position of this vessel in relation to **T42-1** and **T42-2** could not be determined with certainty. A seashell fragment was found in the area between Tombs 42 and 43 (appendix C).

T42-1 (81.474) **Fig. 98a**; **pl. 290**

TR 6 S.F.19

FRAGMENTARY WM AMPHORA

PH 0.120; D (base) 0.095

Several frr., reconstructed, preserving entire base and much of lower wall but nothing of the upper part of the vessel; worn.

Local clay with many small to medium white and light-colored inclusions and much mica, golden tending to predominate; rather soft textured. Clay core fired light gray, elsewhere close to reddish yellow 7.5YR 6/6; slip slightly lighter.

Low ring base with narrow, flat resting surface; groove at junction of base and body on exterior. Lower wall curving up to point of max. D, which appears to be set rather low; preserved portion of upper wall curved; wheelmarks prominent on interior.

Slipped and painted: paint dull, rather unevenly applied, fired dark reddish brown on one side, red on the other. Exterior of base painted, extending onto lower wall as shown. Lower body decorated with many horizontal bands of varying thickness, many of which merge at points. Thicker horizontal band at point of max. D extending to upper break. On either side of the vessel is preserved a small portion of the painted decoration extending onto body from the outer faces of the handles, neither of which is preserved; these appear over the broad band at midpoint (see **pl. 290**). Two small splashes of paint on interior.

Handle type undetermined.

For form of base cf. **T65-1**; for decoration, especially **T88-1**.

T42-2 (81.1132) **Fig. 98b**

TR 6 S.F.19 bis

BASE FRR.; HM JUG

PH 0.058; D (base) approx. 0.070

Six joining frr. preserving most of base and portion of lower wall; surface worn.

Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden. Clay core fired light gray in parts only, elsewhere clay and surfaces close to reddish yellow 5YR 6/6.

Flattened base; thin-walled, curved lower body tending to rise steeply.

Exterior burnished but much worn; preserved tooling marks running both horizontally and diagonally opposed.

Cf., among others, **T56-2**.

T42-3 (81.1133) **Fig. 98c**

TR 6 S.F.19 ter

BODY FRR.; HM JUG

PH 0.055; PL 0.100

Three joining frr. preserving small portion of lower body near base; worn.

Local clay with many small to medium white and light-colored inclusions and much mica, predominantly silver; rather hard fired. Clay and surfaces unevenly fired mostly light gray with patches of reddish brown.

Shape as **T42-2**.

Exterior burnished, with preserved tooling marks running mainly horizontally, producing a dull surface.

Cf. **T42-2**.

TOMB 43 (**FIG. 21A**; **PLS. 23**, **144–145**; CONTENTS: **FIGS. 99A–B**; **PLS. 375**, **485**)

TR 6 S.F.16

URN CREMATION; SINGLE INFANT

Circular pit 0.40 m in diameter, cut 0.12 m deep into bedrock; tomb encountered at a depth of ca. 0.16 m below surface. In the SE quarter of the tomb pit the handmade cup/kyathos **T43-1**, which served as ash-urn, was placed upright, its handle to the NW. The vessel, which had cracked in situ, had been mended in antiquity and was recovered almost complete except for the very top of the handle arch. It contained cremated bone described as being that of a "very young child or baby" (appendix A). The vessel was firmly set in place by compacted bedrock chips and from this fill were recovered small fragments of a handmade jug **T43-2**, which could not have been placed into the tomb pit intact. The tomb was sealed by a rectangular slab of friable, light gray schist (inv. S81.01, 0.270 m × 0.200 m) that was placed over the ash-urn but did not entirely cover the tomb pit. The missing handle fragment of **T43-1** was not recovered among the sherds encountered in topsoil in the vicinity of the tomb, nor were any fragments of the jug **T43-2**. The fact that the tomb was sealed might indicate the ash-urn may have been placed into the tomb without the handle arch preserved.

T43-1 (81.473) **Fig. 99a**; **pl. 375**

TR 6 S.F.16

HM CUP/KYATHOS; VESSEL MENDED IN ANTIQUITY

H (base to rim) 0.090; D (base) approx. 0.070; D (rim) 0.155–0.168

Vessel recovered almost complete except for upper part of handle, reconstructed from frr.; worn.

Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden. Clay and surfaces evenly fired close to light red 2.5YR 6/6–6/8 and reddish yellow 5YR 6/6.

Base slightly flattened; lower wall curving up to vertical upper wall; tall everted rim, offset from body, lip chamfered but at points appears more rounded. Vertical high-swung strap handle, thin in section, attached from body directly to rim.

Exterior burnished but worn, with faintly preserved tooling marks running mainly horizontally; interior burnished smooth; surfaces dull.

Vessel mended in antiquity with two lead clamps at junction of rim and body 0.045 apart; both clamps intact (L: 0.026 and 0.021 m, respectively).

Cup/kyathos Type 1: cf. **T57-1**.

T43-2 (81.1156) **Fig. 99b**

TR 6 S.F.16 bis

FRAGMENTARY HM JUG WITH CUT-AWAY NECK

PH (body as reconstructed) 0.110; PH (rim fr.) 0.040; D (base) approx. 0.068

Two joining frr. preserving small portion of neck and rim, plus eight nonjoining frr. preserving small portion of base, body and handle; much worn.

Local clay with a great many small to medium white and light-colored inclusions and much mica, predominantly golden; occasional blowouts. Clay evenly fired something like yellowish brown 10YR 5/4.

Flattened base; rounded body, with steeper lower wall and point of max. D set rather high; vertical to inward sloping neck, cut away, offset from shoulder by small ridge on exterior corresponding to angle formed on interior. Rim, as preserved, rounded on top. Lower portion of vertical handle preserved, oval in section, attached to upper body by piercing, with projection of clay on interior partially worked away.

Exterior burnished, with tooling marks running vertically at neck, horizontally on upper wall, diagonally opposed on lower body and crisscrossing on underside.

Cf., among others, **T26-3**.

TOMB 44 (**FIGS. 14, 21A**; **PLS. 24, 146–147**; CONTENTS: **FIG. 100A–B**; **PLS. 298, 404, 486**)

TR 6 S.F.11 + 13

URN CREMATION; SINGLE CHILD AGED 8–10 YEARS AT DEATH

Circular pit 0.40 m in diameter, cut 0.17 m deep into bedrock; tomb encountered at a depth of 0.16 m below surface. In the south part of the pit the wheelmade vertical-handled amphoriskos **T44-1**, which served as ash-urn, was placed upright, firmly set by a large number of chocking stones (**fig. 14**), especially to the north and east, and compacted bedrock chips. Over the top of the ash-urn the large body fragment of the amphora **T44-2**, cracked in situ, was placed as a lid/cover, on top of which was placed in turn a roughly square slab of schist (0.20 m × 0.20 m; average thickness 0.020 m) that sealed the tomb but did not entirely cover the tomb pit.

T44-1 (81.049) **Fig. 100a**; **pl. 298**

TR 6 S.F.13

WM VERTICAL-HANDLED AMPHORISKOS

H 0.132; D (base) 0.050; D (rim) 0.100

Complete except for minor chipping at rim and body, reconstructed from frr. and restored.

Local clay with many small to medium white and light-colored inclusions and much mica, golden tending to predominate; occasional blowouts. Clay mostly fired close to reddish yellow 5YR 7/6–6/6; slip slightly lighter.

Low ring base with narrow, rounded, resting surface; lower wall rising rather steeply to point of max. D, which is set high, shoulder curved. Tall vertical to concave neck, offset from body by very slight ridge much worn. Flaring rim tapering slightly to rounded lip. Two vertical handles, with concave upper faces, attached from point of max. D to neck. Wheelmarks prominent on interior; vessel wide mouthed.

Slipped and painted: paint dull, evenly applied but variously fired from dark brown

approaching black to orangey/red. Broad band at point of max. D, below which is a thinner band. Horizontal band on lower neck, above which, on either side of the vessel, are three parallel tremulous lines. Rim painted on exterior and interior as shown. Upper and outer faces of handles painted.

Cf. **T99-1**.

T44-2 (81.366) **Fig. 100b**; **pl. 404**

TR 6 S.F.11

BODY FRR.; WM AMPHORA

PH 0.180; PL 0.165

Seven joining frr., broken on all sides, preserving portion of body and shoulder; slightly worn.

Local clay with some, but fewer than normal, small to medium white and light-colored inclusions and fine mica, predominantly golden. Clay fired evenly close to light reddish brown 2.5YR 6/4, interior surface closer to reddish yellow 5YR 6/6; slip lighter, close to pale brown 10YR 7/4.

Steep lower wall; curved shoulder.

Slipped and painted: paint dull, rather dilute, fired pale brown on one side of frr., pale red on the other. Traces of horizontal band on lower body preserved at lower break. Broad horizontal band at point of max. D, above which are three thinner bands. On shoulder, near upper break, portions of two preserved sets of mechanically drawn concentric circles, each set comprising five circles with small dot at center.

Handle type uncertain, perhaps neck-handled amphora as, for instance, **T124-1**, **T41-1**; but cf. also the belly-handled amphorai **T114-1** and **T104-1**.

TOMB 45 (**FIG. 21A**; **PLS. 24**, **147**; CONTENTS: **FIGS. 101A–B**; **PL. 334**)

TR 6 S.F.8

URN CREMATION; SINGLE ADULT

Shallow circular pit 0.35 m in diameter, cut 0.06 m deep into bedrock; tomb encountered at a depth of 0.11 m below surface. Within the center of the pit the wheelmade "amphora/pyxis" **T45-1**, which served as ash-urn, was placed upright and firmly set by compacted bedrock chips. The upper part of the vessel was not encountered in situ, although fragments of its rim and upper body were found scattered in the immediate vicinity. Resting above the ash-urn, as preserved, was a thin roughly rectangular piece of gray-green schist (0.127 m × 0.070 m × 0.018 m), probably displaced (**pl. 147**). It is highly unlikely this stone was ever part of a tomb covering.

T45-1 (81.829) **Fig. 101a–b**; **pl. 334**

TR 6 S.F.8

WM "AMPHORA/PYXIS"

Restored H 0.207; D (base) 0.085; D (rim) est. 0.175

Many frr. preserving almost entire base, about one-half of body including one handle, but only small portion of neck and rim. Reconstructed and partially restored; much worn.

Local clay with many small white, light-colored, and occasional darker inclusions and much mica, predominantly golden; occasional blowouts. Clay evenly fired close to light red 2.5YR 6/6 and reddish yellow 5YR 6/6; thick slip, much worn, but where preserved approaching off-white.

Flat base; globular body with point of max. D set toward upper part of vessel; short vertical to concave neck, terminating in knobbed rim, flat on top and tapering to rounded outside edge. Slight ridge, much worn, at junction of shoulder and neck. Horizontal handles (one preserved), round in section, attached to upper body and rising almost vertically to level just below rim.

Slipped and painted, but much worn: paint dull, evidently evenly applied, fired red. Base and lower wall painted solid, above which are two thin horizontal bands. Outer faces of handles painted with decoration extending onto body and defining a belly zone. This zone is decorated, on the preserved side of the vessel, with three sets of mechanically drawn concentric circles, each set separated by a thin vertical band (defining a metope) and each comprising six circles with small dot at center (one set completely preserved, the other two only partially). Neck above small ridge painted.

Rim top appears to be barred but too poorly preserved to illustrate. Interior of neck painted, but much worn.

The shape is unique at Torone; the closest parallels in both shape and manner of decoration are a number of Cretan "necked pithoi": cf. Brock 1957:147, type A and esp. 16, pl. 8, no. 117; 24, pl. 14, no. 206 (= Desborough 1952: pl. 35, Q.1 and IV.1); cf. also the amphorai from Thera: Dragendorff 1903:57, fig. 193; 61, fig. 212.

TOMB 46 (**FIG. 21A**; **PLS. 23**, **148**; CONTENTS: **FIGS. 102A–C**; **PLS. 343**, **450B**, **H**)

TR 6 S.F.18 + 21
URN CREMATION; SINGLE ADULT

Circular to elliptical-shaped pit 0.50 m in diameter, cut 0.21 m deep into bedrock; tomb encountered at a depth of 0.10–0.15 m below surface. Within the center of the pit the handmade two-handled jar **T46-1**, which served as ash-urn, was placed upright and firmly set by a number of chocking stones and compacted bedrock chips. On the top of the ash-urn the pithos body fragment **T46-2**, found cracked in situ, was placed flat as a lid/cover, and over the top of it in turn a small irregularly shaped piece of granodiorite (inv. S81.04, 0.210 m × 0.160 m × 0.035 m) sealed the tomb but did not entirely cover the tomb pit. To the east of the ash-urn, and well down in the tomb pit, was the terracotta spindlewhorl, bead, or button **T46-3**.

T46-1 (81.162) **Fig. 102a**; **pl. 343**

TR 6 S.F.18
HM TWO-HANDLED JAR (NECK-HANDLED)
H 0.170; D (base) approx. 0.085; D (rim) 0.105–0.120
Complete except for very minor chipping, reconstructed from frr.
Local clay with many small white and light-colored inclusions and much silver and golden mica. Clay and surfaces evenly fired close to red 2.5YR 5/8 and reddish yellow 5YR 6/6.
Flattened base; globular, rounded body; vertical to concave neck offset from shoulder by slight groove on exterior. Flaring rim with chamfered lip. Two vertical handles, plano-convex in section, attached from body to neck.
Exterior burnished, with faintly preserved tooling marks running mainly horizontally and producing surface with a dull finish.
Cf. **T19-1**.

T46-2 (81.1155) **Fig. 102b**

TR 6 S.F.18 bis
BODY FRR.; HM PITHOS
PH 0.205; PL 0.169
Two joining frr., broken on all sides, preserving small portion of body; slightly chipped and worn.
Coarse local clay with many small to large white and light-colored inclusions and much mica, almost exclusively golden. Clay mostly fired close to yellowish red 5YR 4/6, in parts closer to red 2.5YR 5/6.
Thick walled and clearly from large vessel, probably from upper body. Applied band of clay, 0.035 wide, toward upper part of preserved frr.
Exterior wet-smoothed, producing a good but dull surface; interior less well finished.
Cf., among others **T24-2**, **T89-1** (without the applied band).

T46-3 (81.43) **Fig. 102c**; **pls. 450b**, **h**

TR 6 S.F.21
TERRACOTTA SPINDLEWHORL, BEAD, OR BUTTON
H 0.040; D 0.037
Intact.
Local clay with small white and light-colored inclusions and golden mica; fired brown to reddish brown, and blackened on one side.
Biconical; consisting of two equal symmetrical parts.
Surface burnished smooth; dull.
Cf. **55** and **T51-5**.

TOMB 47 (**FIG. 48A**; **PLS. 149–150**; CONTENTS: **FIGS. 103A–D**; **PLS. 304A–B**, **320A–B**, **392**, **398**, **487**)

TR 56 Pots 6 + 7 + 8
URN CREMATION; SINGLE ADULT (FEMALE?)

Elliptical-shaped pit 0.58 m long (max.), cut 0.24–0.30 m deep into bedrock; tomb encountered at a depth of 0.13 m below surface. In the SE quarter of the tomb pit the wheelmade vertical-handled amphoriskos **T47-1**, which served as ash-urn, was placed upright, very firmly set in place by a number of small chocking stones (mainly schist) and compacted bedrock chips; serving as its lid was the reused base of a pedestal krater **T47-2** placed upside-down. The ash-urn was then completely covered by the lekanis **T47-3** placed over it upside-down. **T47-3**, like the ash-urn below, was firmly set in place by a number of small chocking stones, compacted bedrock chips, and the fragments of a handmade tripod cauldron, **T47-4**, which had been wedged vertically between **T47-3** and the side of the tomb pit. The remainder of the tomb pit, especially to the west and north, was filled at this higher level by more compacted bedrock chips and by a number of larger schist and limestone pieces that helped preserve the tomb. Found among the cremated human remains inside the ash-urn were two fragments of sheep/goat bone, heavily burned (appendix B).

T47-1 (84.146) **Fig. 103a**; **pls. 304a–b**

TR 56 Pot 8

WM VERTICAL-HANDLED AMPHORISKOS; IMPORTED, PROBABLY THESSALO-EUBOIAN

Papadopoulos, Vedder, and Schreiber 1998:520, fig. 11

H 0.217; D (base) 0.080; D (rim) 0.120

Recovered intact except for minor chipping at rim, which was reconstructed. Condition good.

Clay finer than local with only the occasional white impurity and a sprinkling of fine golden mica. Clay evenly fired close to reddish yellow 5YR 6/6; slip slightly lighter.

Low ring base with obliquely cut resting surface; underside flat. Slender, ovoid body; short vertical neck; flaring rim with rounded lip. Two vertical handles, thin and strap in section, attached from upper body to lower neck.

Slipped and painted: good, semilustrous paint, evenly applied with a tendency to flake; mostly fired red. Thin band at base; two thin horizontal bands at midpoint, above which is a broad band, and above which in turn is another thin band. From this upper band spring two sets of mechanically drawn upright concentric semicircles on either side of the vessel. Each set comprises eleven arcs with small dot at center and with most of the individual terminations of the arcs extending over the thin band below. Thin horizontal band at junction of shoulder and neck, which extends onto the outer faces of the handles as well as slightly under the handle arches, above which is a horizontal zigzag in dilute paint, executed from right to left. Upper neck and rim painted, continuing over rim onto interior as shown. Handle laddered; one handle has seven horizontal strokes, the other eight.

The general form is closely related to a number of Thessalian amphoriskoi: cf. Wace and Thompson 1912:211, fig. 146; Heurtley and Skeat 1930–31: pl. VI, no. 8; Desborough 1952: pl. 21a; Verdelis 1958:11–12; pl. 3, nos. 9–10; not unlike some examples from Euboia: cf. Popham, Sackett, and Themelis 1979–80:309, fig. 12D, pl. 183, T26, 15, 16, and 17; Popham, Touloupa, and Sackett 1982a: pl. 22, nos. 5, 9. The fabric, however, especially the mica content, is closer in feel to Thessalian (and some Cycladic: cf. the fabric of **T72-1** [which is chemically different]). A Thessalian or Euboian provenance is suggested by chemical analysis (appendix E).

T47-2 (84.146A) **Fig. 103b**; **pl. 398**

TR 56 Pot 8 bis

BASE FR.; WM BLACK-SLIP KRATER: REUSED AS LID FOR **T47-1**

PH 0.064; D (base) 0.120

Single fr. preserving complete base, chipped and worked around the edges to serve as lid.

Clay more dense than normal local pottery with only the occasional small to medium light-colored and red inclusion and a sprinkling of fine silvery mica. Clay at reserved underside fired light gray, close to gray 5YR 6/1–5/1.

Tall pedestal foot with splaying lower member; resting surface obliquely set, lower outside

edge chamfered. Exterior face decorated with horizontal ribbing.

Exterior face of foot and preserved interior slipped/painted, underside reserved. Thick semilustrous slip/paint, fired black to very dark gray.

Cf. **T104-2**.

T47-3 (84.150) **Fig. 103c**; **pls. 320a–b**

TR 56 Pot 6

WM LEKANIS, Type 1

H 0.130; D (base) 0.092; D (rim) 0.195–0.210

Reconstructed from frr., complete except for one small body fr.

Local clay with small white and light-colored inclusions and much mica, golden tending to predominate; occasional blowouts. Clay core toward lower half of vessel fired light gray, elsewhere more evenly fired close to reddish yellow 5YR 6/6; slip closer to very pale brown 10YR 7/4. Vessel partially warped at base and rim.

Tall flaring/conical base, much misformed, with chamfered lower outside edge. Shallow curved lower wall; vertical upper wall. Horizontal rim, flat on top, with rounded outside edge. Two horizontal ribbon handles, with concave outer faces, attached to upper wall immediately below rim.

Slipped and painted: paint dull, evenly and rather thickly applied. Variously fired, black on one side of exterior and rim top, red on the other, dark reddish brown on interior. Three thin horizontal bands on lower wall, above which is a broad band. Horizontal band on upper wall immediately below rim, which extends onto the outer faces of both handles. On either side of the vessel the handle zone thus defined is decorated with two tremulous lines, executed from right to left according to the thickness of paint. Area below handles and outer face of rim reserved. Rim top barred as shown, with strokes arranged in three groups around the vessel. Interior painted solid.

Smear of paint preserving potter's fingerprint on exterior of base.

Cf. **T51-3**, **T124-3**.

T47-4 (84.149) **Fig. 103d**; **pl. 392**

TR 56 Pot 7

FRAGMENTARY HM TRIPOD CAULDRON

PH 0.180; PL 0.182; D (rim) est. in the vicinity of 0.300

Seven joining and two nonjoining frr. preserving small portion of body, rim, upper part of one leg, and one handle; chipped and slightly worn.

Coarse local clay with a great many small to large white and light-colored inclusions and much mica, almost exclusively golden. Clay and interior surface fired close to brown 7.5YR 5/4; preserved exterior much blackened.

Rounded cauldron body; concave neck; flaring rim with rounded lip. Upper attachment of preserved leg thick and rectangular in section. Thick horizontal handle, round in section, attached to upper body and partly over the upper leg attachment.

Interior and exterior burnished, mainly smooth, but with faintly preserved tooling marks, broad and shallow, especially at rim, producing a good surface with a slight sheen, similar to **T38-1**.

Cf. **T123-4** and **T123-5**.

TOMB 48 (**FIGS. 14**, **21A**; **PLS. 151–152**; CONTENTS: **FIGS. 104A–B**; **PLS. 327A–C**, **488**)

TR 6 S.F.22

URN CREMATION; SINGLE ADULT

Circular pit 0.44 m in diameter, cut 0.38 m deep into bedrock; tomb encountered at a depth of 0.12 m below surface. In the center of the pit the wheel-made krater **T48-1**, which served as ash-urn, was placed in an upright position; as the ash-urn was almost the same size as the tomb pit, it had been set in place very firmly with only a small quantity of bedrock chips around its base (see **fig. 14**). In the course of excavation it was necessary to enlarge the tomb pit itself in order to extract the ash-urn. The tomb was sealed by a large worked granodiorite slab **T48-2**, perhaps originally a household implement (cf. **T28-2**), which almost covered the

tomb pit. The small quantity of cremated human bone recovered from the ash-urn (124 g) indicates that only a partial collection of cremated human remains was deemed necessary in some cases (appendix A). A few small seashell fragments were found in the immediate vicinity of the tomb.

T48-1 (81.244) **Fig. 104a**; **pls. 327a–c**

TR 6 S.F.22

WM KRATER, Transitional type

Papadopoulos 1998a:364, fig. 42.1; 366, fig. 42.6

H 0.299; D (base) 0.150; D (rim) 0.355

Intact except for minor chipping.

Local clay with many small to large white and light-colored inclusions and much mica, golden tending to predominate; occasional blowouts. Clay fired close to reddish yellow 5YR 6/6; slip slightly lighter.

Comparatively tall and heavy ring base with broad, flat resting surface; underside flat. Curved lower wall; vertical upper wall. Horizontal rim, flat on top, with beveled outside edge. Small ridge on upper wall set 0.020 below rim. Two horizontal handles, round in section, attached to upper wall and rising to level below rim. Wheelmarks prominent on interior; fingermarks and other smears visible below handles on exterior.

Slipped and painted: paint dull, rather thickly applied on interior, more dilute on exterior with a tendency to streak; evenly fired red. Broad horizontal band on upper part of lower wall enclosed by thinner horizontal bands (five below, two above). Horizontal band on upper wall below rim (and above small ridge). Outer faces of handles painted, with decoration extending onto body as shown. Exterior face of rim and rim top reserved except for small splashes of paint at points only. A total of twenty sets of mechanically drawn concentric semicircles, ten on each side of vessel, each set comprising six arcs with small dot at center. On either side four sets hang pendent from the small ridge below rim, four are upright, springing from the uppermost of the thin bands, and two are set sideways from the painted handle decoration. Partial flooding on one set of mechanically drawn semicircles where two of the arcs merge at one point. Interior painted solid.

Cf. **T102-1** (Type 1 with flat disk base); cf. Graef, Hartwig, Wolters, and Zahn 1909: pl. 9, no. 273.

T48-2 (S81.05) **Fig. 104b**

TR 6 S.F.22 bis

WORKED GRANODIORITE DISK

L 0.430; TH (max.) 0.045

Intact.

Coarse-grained, gray-colored granodiorite.

Edges chipped and smoothed to form disk; thin and flat in section, but rather heavy; one side more carefully smoothed than the other.

Cf. **T28-2**.

TOMB 49 (**FIG. 22**; **PL. 153**; CONTENTS: **FIG. 105**)

TR 6 East Baulk S.F.5

URN CREMATION; SINGLE ADULT (FEMALE?)

Circular pit 0.45 m in diameter, cut 0.12 m deep into bedrock; tomb encountered at a depth of 0.15 m below surface. In the center of the pit the handmade pitharion **T49-1**, which served as ash-urn, was placed upright and set by at least one chocking stone and compacted bedrock chips. No stone or other type of tomb covering was encountered and the upper part of the ash-urn, which lay originally above the level of the top of the tomb pit, was not preserved. Inside the ash-urn several fragments of seashell were noted among the cremated remains of the deceased and a vertebra of a tuna fish (*Thunnus thynnus*) was found in the immediate vicinity of the tomb (appendix C). A small quantity of seashell was also noted on bedrock in the area between this tomb and Tomb 51.

T49-1 (81.833) **Fig. 105**

TR 6 East Baulk S.F.5

FRAGMENTARY HM PITHARION

PH 0.145; D (base) approx. 0.075

Several frr. preserving entire base and much of body, plus many nonjoining frr. preserving small portion of neck; worn.

Coarse local clay with many small to large white and light-colored inclusions and much silver and golden mica. Clay core fired close to reddish yellow 5YR 6/6 and reddish brown 2.5YR 5/4; interior and exterior surfaces closer to brown 7.5YR 5/4.

Base slightly flattened; rounded, thick-walled body, with no trace of handles preserved. Neck (not illustrated) concave.

Exterior burnished smooth, dull; less well finished than other pitharia.

Cf. **T31-1**, **T126-1**; for general form but without handles cf. **T70-1** and **T118-3**.

TOMB 50 (**FIG. 21A**; **PL. 154**; CONTENTS: **FIG. 106**; **PL. 399**)

TR 6 S.F.24

URN CREMATION; SINGLE ADULT

Circular to oval-shaped pit 0.40 m long (max.), cut 0.18 m deep into bedrock; tomb encountered at a depth of 0.20 m below surface. In the center and slightly toward the south part of the pit the wheelmade amphoriskos **T50-1**, which served as ash-urn, was placed upright; as preserved, the base and lower body of the vessel were firmly set by a number of chocking stones and compacted bedrock chips, whereas its upper part was found in a fragmentary state scattered at the top of the tomb pit. A single seashell was encountered at this upper level. The ash-urn contained only a very small quantity of cremated human bone (29 g; see appendix A).

T50-1 (81.365) **Fig. 106**; **pl. 399**

TR 6 S.F.24

WM BLACK-SLIP BELLY-HANDLED AMPHORISKOS

PH 0.167; D (base) 0.063; D (neck at break) 0.092

Reconstructed from many joining frr. preserving entire base, most of body including parts of both handles and about one-third of neck; rim not preserved. Chipped and much worn.

Fine, dense clay, better levigated than normal local pottery, with only the occasional impurity and a fine dusting of surface mica; soft textured. Clay evenly fired close to gray/light gray 10YR 6/1.

Low ring base with narrow resting surface; underside flat. Slender ovoid body, with point of max. D set toward upper part of vessel; vertical neck offset from shoulder by small ridge. Pronounced wheelmarks on lower neck developing into horizontal ribbing toward top. Two small horizontal handles, round in section, attached to upper body and tending to rise vertically.

Exterior and upper neck on interior slipped/painted; underside reserved. Thick black slip/paint, much worn, but semilustrous, with a distinct "soapy" feel.

Cf. especially **T24-3**. Fabric as **T47-2** and **T104-2**.

TOMB 51 (**FIGS. 14**, **22**; **PLS. 155–157**; CONTENTS: **FIGS. 107A–E**; **PLS. 269**, **323A–D**, **450D**, **J**, **489**)

TR 6 East Baulk S.F.1 + 2 + 3

URN CREMATION; SINGLE ADULT FEMALE

Circular pit 0.56 m in diameter, cut 0.50 m deep into bedrock; tomb encountered at a depth of 0.25 m below surface. In the center of the pit the wheelmade belly-handled amphora **T51-1**, which served as ash-urn, was placed upright and firmly set by many chocking stones and bedrock chips (**fig. 14**). Serving as its lid was the reused base of an amphora **T51-2** placed right way up; beside the ash-urn, to the west and level with its handles, was the terracotta spindlewhorl, bead, or button **T51-5**. Over the top of the ash-urn the wheelmade lekanis **T51-3** was placed upside-down as cover, while over it in turn was the body fragment of an amphora **T51-4** (**pl. 155**) that had cracked in situ. Both **T51-3** and **T51-4** were firmly set at this higher level by more small chocking stones and compacted bedrock chips. No stone covering was encountered over **T51-4**, but 0.20 m SW (see **pl. 155**) a flat, thin piece of dark gray schist (inv. S81.06, 0.23 m long × 0.07 m thick), cracked in situ, may have been the displaced cover stone of the tomb. One minuscule seashell fragment was found in the ash-urn with the cremated human remains (not studied); several seashell fragments were noted in the immediate vicinity of the tomb, distinct from the fragments found in the area between this tomb and Tomb 49 (appendix C).

T51-1 (81.376A) **Fig. 107a; pl. 269**
TR 6 East Baulk S.F.3
WM BELLY-HANDLED AMPHORA
H 0.354; D (base) 0.120; D (rim) 0.160
Intact except for one fr. at rim and minor chips on one handle; surface worn.
Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden; occasional blowouts. Clay core at chipped rim fired light gray; elsewhere clay fired close to reddish yellow 5YR 6/6 and pink 7.5YR 7/4; self-slip slightly lighter.
Flat disk base; body tending ovoid with point of max. D set toward upper part of vessel. Vertical neck, offset from shoulder by slight ridge; flaring rim with rounded lip. Two horizontal handles, round in section, attached at point of max. D. Tooling marks and smears visible near handle attachments.
Slipped and painted: paint dull, evenly applied but much worn, with a tendency to flake; fired red. Thin horizontal band on lower wall; two bands on upper wall defining handle zone (the lower being broader). Outer faces of handles painted, with the decoration extending onto body as shown. Shoulder decorated with seven sets of mechanically drawn concentric circles, each set comprising seven circles with small dot at center. The outer circle in three of the seven sets extends over the small ridge at neck. Neck, above ridge, painted solid and extending over rim for a short distance onto interior.
Cf. **T20-1** and for the type generally: Desborough 1952: pl. 4; 1972:35, fig. 2;. Decoration similar to an amphora from Mycenae: Desborough 1954: pl. 43c (inv. 53–615) (= Snodgrass 1971:56, fig. 22).

T51-2 (81.376B) **Fig. 107b**
TR 6 East Baulk S.F.3 bis
BASE FR.; WM AMPHORA; REUSED AS LID FOR **T51-1**
PH 0.023; D (base) 0.116
Single fr. preserving entire base and small portion of lower wall; chipped and worked around the edges to serve as lid.
Local clay as **T51-1**; clay core fired light gray.
Flat disk base.
No preserved decoration.
Shape as **T51-1**.

T51-3 (81.564A) **Fig. 107c; pls. 323a–d**
TR 6 East Baulk S.F.1
WM LEKANIS, Type 1, EQUIPPED WITH SPOUT
H 0.134; D (base) 0.090; D (rim) 0.209
Reconstructed from many frr., complete except for minor chipping (restored); surface much worn.
Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden; occasional blowouts. Clay evenly fired close to reddish yellow 7.5YR 7/6–6/6; slip slightly lighter.
Tall flaring foot with narrow resting surface and chamfered lower outside edge. Shallow, curved lower wall; vertical upper wall. Horizontal rim, flat on top, with rounded outside edge. Two horizontal ribbon handles, with concave outer faces, attached to upper body and rising very slightly above level of rim. Bridged spout, comparatively large, attached at rim, with edges chamfered.
Slipped and painted but much worn: paint, as preserved, dull, unevenly applied—thickly in parts, more dilute in others, with a tendency to flake where thickest. Variously fired from black to red, with shades of light and dark brown. Foot exterior painted solid except for chamfered lower edge. Five thin horizontal bands on lower wall below broad band at midpoint, above which is a reserved band. Horizontal band on upper wall below rim extending around handles and spout as shown. Outside edge and underside of rim reserved. Rim top barred, with strokes set in four evenly spaced groups round vessel, each group comprising nineteen to twenty-four strokes. Interior painted except for reserved disk at center of floor (D: 0.016 m).
For shape, but without the spout, cf. **T47-3**, **T124-3**. Cf. Popham, Sackett, and Themelis 1979–80: pl. 181, T24.1.

T51-4 (81.564B) **Fig. 107d**
TR 6 East Baulk S.F.1 bis
BODY FRR.; WM AMPHORA
PH 0.124; PL 0.155
Four joining frr., broken on all sides, preserving small portion of body at shoulder; much worn.
Local clay as **T51-3**, fired evenly close to light brown 7.5YR 6/4; slip closer to very pale brown 10YR 7/4.
As preserved, steep lower wall, curved shoulder.
Slipped and painted but much worn: paint, as preserved, dull, rather thinly applied; mostly fired red, but in parts dark brown approaching black. Broad horizontal band on shoulder enclosed by thinner bands (one below, three above).
Handle type undetermined: cf. **T44-2**.

T51-5 (81.461) **Fig. 107e**; **pls. 450d**, **j**
TR 6 East Baulk S.F.2
TERRACOTTA SPINDLEWHORL, BEAD, OR BUTTON
H 0.032; D (max.) 0.030
Intact; surface worn with slight splitting evident.
Local clay with small white and light-colored inclusions and a little golden mica. Clay fired brown to reddish brown, and in parts gray.
Roughly biconical in shape, but somewhat more rounded than **T46-3**.
Surface burnished smooth; dull.
Cf. especially **T46-3**.

TOMB 52 (**FIGS. 14**, **21A**; **PLS. 158–159**; CONTENTS: **FIGS. 108A–E**; **PLS. 259A–C**, **350A–B**, **468A–B**, **472**, **490**, **513A–B**)

TR 6 S.F.28 + 30
URN CREMATION; SINGLE ADULT
Cambitoglou 1981:38, pl. 52γ
Circular pit 0.50 m in diameter, cut 0.37 m deep into bedrock; tomb encountered at a depth of 0.20 m below surface. In the south half of the pit the wheelmade neck-handled amphora **T52-1**, which served as ash-urn, was placed upright but tilted with the rim toward the NW. Beside it, to the east, the small handmade jug with cutaway neck **T52-2** was placed upright, with a body fragment of a handmade pitharion **T52-3** placed over the top as a cover. Both vessels were firmly set in place by compacted bedrock chips used as fill; at a slightly higher level, especially in the north and east of the pit, and over the jug **T52-2** the tomb was partially filled by a number of small stones. There was only minor damage to the rim of the ash-urn and most of the missing fragments were recovered in topsoil in the immediate vicinity.[21] Inside the ash-urn the iron blade **T52-4** and the whetstone **T52-5**, both of which appeared to be wrapped together in leather, were among the cremated remains of the deceased, as was a fragment of bone of domestic pig burned to decalcination (appendix B). A variety of seashell fragments was found scattered in the tomb pit (appendix C).

T52-1 (81.247) **Fig. 108a**; **pls. 259a–c**
TR 6 S.F.28
WM NECK-HANDLED AMPHORA
Cambitoglou 1981: pl. 53α
H 0.388; D (base) 0.112; D (rim) 0.143
Recovered almost complete, with frr. of rim and handle reconstructed; minor chipping at rim restored.
Local clay but with fewer than normal small to medium white and light-colored inclusions and quite a bit of mica, predominantly golden; occasional blowouts. Clay fired close to light brown 7.5YR 6/4; slip slightly lighter.
Flat disk base, with slight groove at junction with body on exterior. Body tending ovoid, with lower wall rising rather steeply to point of max. D, which is set toward upper part of vessel, shoulder curved. Vertical neck offset from body by slight ridge. Flaring or everted rim with rounded lip. Two vertical handles with double concavity on upper faces attached from shoulder to neck below rim.
Slipped and painted: paint dull, evenly and rather thinly applied; fired brown. Two horizontal bands on lower wall. Broad band at point of max. D, below which are two thinner bands that merge to form single band, and above which are four more thin bands

that also merge at various points. From the uppermost of the thin bands spring, on either side of the vessel, four sets of mechanically drawn upright concentric semicircles, each set comprising six arcs with the central arc in each the thickest. The arcs are executed in a clockwise direction according to the thickness of paint; in most of the eight sets only the outer arc extends below the level of the thin band below (on the left side only). Thin horizontal band on lower neck immediately above small ridge. Tremulous line on upper neck, which connects with the painted decoration of the handle, above which neck and rim are painted with the paint extending over rim onto interior as shown. Upper faces of both handles decorated with two vertical stripes that mostly follow the double concavity, but cross over on top of handle arch and at lower handle attachment and extend onto body for some distance, as shown.

Cf. **T124-1** (decorated with full circles); also Kraiker and Kübler 1939: pls. 40, 57; Kübler 1943: pl. 5, inv. 1069, 2008, 906; pl. 6, inv. 1093, 2152; Brouskari 1980: pl. 3a.

T52-2 (81.531) **Fig. 108b**; **pls. 350a–b**

TR 6 S.F.30

HM JUG WITH CUTAWAY NECK

H 0.160; D (base) 0.058; D (rim) max. 0.053

Reconstructed from frr., almost complete except for minor chipping at rim, restored.

Local clay with many small to medium white and light-colored inclusions and much mica, golden tending to predominate; occasional blowouts, some quite large. Clay evenly fired close to reddish yellow 5YR 6/6.

Flattened base; low squat body, tending almost to biconical; tall vertical neck offset from body by deep groove on exterior corresponding to sharp angle formed on interior. Plain, chamfered rim; neck cut away. Vertical handle, plano-convex in section, attached to shoulder by piercing, with sharp projection of clay on interior; upper attachment directly to cutaway part of rim.

Exterior burnished, with pronounced tooling marks running vertically on neck, horizontally on upper body, diagonally opposed on lower wall, and crisscrossing on underside, producing a good, mostly dull surface, with a slight sheen at points only.

Cf., among others, **T73-2**, **T114-3**, **T124-2**.

T52-3 (81.531B) **Fig. 108c**

TR 6 S.F. 30 bis

BODY AND NECK FR.; HM PITHARION

PH 0.073; PL 0.103

Single fr., broken on all sides, preserving small portion of body and neck; slightly cracked.

Coarse local clay with many small to large white and light-colored inclusions and much mica, exclusively golden. Clay evenly fired close to reddish brown 5YR 4/4, interior surface slightly lighter.

Upper body, as preserved, steep; vertical to concave neck, offset from body by slight ridge.

Preserved interior and exterior burnished in the same manner as **T38-1**.

Shape as **T38-1**.

T52-4 (81.728) **Fig. 108d**; **pls. 468a–b**

TR 6 S.F.28 bis

IRON KNIFE WITH UNRIVETED BONE HANDLE WRAPPED IN LEATHER SHEATH OR SCABBARD

PL 0.104; W (max.) 0.020; PL (haft) 0.022; WT 13.52 g

Preserved in one piece, but badly corroded.

Bone handle made probably from rib (species unidentified).

Haft termination unclear. One-edged iron knife with slightly curved blade tapering toward a point; cutting edge on concave side. Unriveted bone handle offset by clear but much corroded flange that continues around the top of the haft. Blade core very thin in section with cutting edge perhaps originally much whetted.

Blade wrapped in what appears to have been a soft leather sheath/scabbard, preserved hard due to oxidation, but in the form of a positive matrix as opposed to a negative impres-

sion, with the original folds of the material clearly visible on one side.

Cf. **T38-3**, **T56-4**, and especially Wace and Droop 1906–07:323, fig. 12i (= Wace and Thompson 1912:212, fig. 147i); cf. Andronikos 1969:266–269, figs. 104–105, esp. KIb. For similar iron blades in Athens with unriveted handles cf. Thompson 1947:196, fig. 1, pl. XLI, no. 2; Young 1949a:297, pl. 72, no. 31; Blegen 1952:281, fig. 3, pl. 75c, no. 4 (cf. Kraiker and Kübler 1939:220, pl. 76 [Grab 17]).

T52-5 (81.727) **Fig. 108e**; **pl. 472**

TR 6 S.F.28 ter
WHETSTONE
L 0.075; W 0.049; TH 0.017
Intact. One side preserves corroded remains from contact with iron knife **T52-4**.
Light gray, fine-grained limestone.
Oval shaped, with main faces flat and edges slightly rounded; all surfaces well smoothed.
Cf. Holmberg 1944:126, fig. 118, no. 8; Iakovides 1969–70, vol. 1:429, no. l237; vol. 3: pl. 128.

TOMB 53 (**FIG. 21A**; **PL. 160**; CONTENTS: **FIGS. 109A–B**)

TR 6 S.F.29
URN CREMATION; VERY POORLY PRESERVED
Tomb much damaged by the foundation of TR 6 wall *a*. As preserved the tomb consisted of the fragmentary base of the wheelmade amphora/iskos **T53-1**, which clearly served as ash-urn, standing upright in a small pit ca. 0.07 m deep; the base of the vessel had the appearance of being in situ, even though the entire upper part of the tomb had been destroyed. The small quantity of cremated human bone associated with **T53-1** was nondiagnostic for age and sex determination (appendix A). The sherd material recovered from the immediate vicinity of the tomb, in the area defined by TR 6 walls *a* and *b*, was all Classical, except for the rim fragments of a handmade pitharion catalogued here as **T53-2**, found approximately 0.05 m east of the ash-urn. Although the relationship of these fragments to **T53-1** could not be determined, they may represent either the remains of a possible *kterisma* or, more likely, a possible lid/cover (cf. **T52-3**) or chocking sherds for the ash-urn (cf. **T95-2**). The preserved remains of **T53-1** were encountered at a depth of 0.20–0.25 m below surface.

T53-1 (81.377) **Fig. 109a**

TR 6 S.F.29
BASE FRR.; WM SMALL AMPHORA/ISKOS
PH 0.055; D (base) 0.075
Five main joining frr. plus many tiny chips preserving entire base and small portion of lower body; condition poor with much of the original surface not preserved.
Local clay with many small to medium white and light-colored inclusions and much silver and golden mica; occasional blowouts. Clay evenly fired close to reddish yellow 7.5YR 7/6–6/6; slip, where preserved, closer to very pale brown 10YR 7/4.
Low ring base with narrow resting surface; underside flat; groove at junction of base and body on exterior; lower wall tending to rise steeply. Wheelmarks prominent on interior.
Slipped and painted but much worn: paint evidently dull, fired reddish brown. Traces of two horizontal bands preserved on lower wall near break.
For form of base cf., among others, **T65-1**.

T53-2 (81.378) **Fig. 109b**

TR 6 S.F.27
RIM FRR.; HM PITHARION
PH 0.090; PL 0.135
Two joining and one nonjoining frr. preserving small portion of neck and rim; slightly chipped.
Coarse local clay with many small to large white and light-colored inclusions and much mica, almost exclusively golden. Clay core and preserved surfaces of frr. blackened, perhaps the result of kiln firing/misfiring rather than later burning.
Vertical to concave neck; flaring rim with chamfered lip.

Preserved interior and exterior burnished, with only faintly preserved tooling marks, producing good surface with a slight sheen.
Cf. **T52-3**, **T95-2**; for shape cf. **T38-1**.

TOMB 54 (**FIG. 21A**; **PL. 161**; CONTENTS: **FIGS. 110A–B**; **PLS. 393**, **452**)

TR 6 S.F.31 + TR 6 East Baulk S.F.4
URN CREMATION; SINGLE ADULT
Large circular to elliptical-shaped pit 0.60 m long (max.), cut 0.20 m deep into bedrock; tomb encountered at a depth of 0.27 m below surface. Within the center of the pit the handmade jar **T54-1**, which served as ash-urn, was placed upright and firmly set by many small chocking stones and compacted bedrock chips. In the east part of the tomb pit the small terracotta **T54-2** was found 0.10 m below the top of the pit. No stone or other type of tomb covering was preserved and much of the upper part of the ash-urn was not preserved, although joining fragments were encountered as far away as 2.0 m from the tomb.[22] Several small seashell fragments were encountered inside the ash-urn with the cremated remains of the deceased (appendix C).

T54-1 (81.615) **Fig. 110a**; **pl. 393**
TR 6 S.F.31
HM JAR; IMPORTED, MACEDONIAN/CHALKIDIC
H 0.246; D (base) 0.085–0.090; D (rim) est. 0.129
Many joining and some nonjoining frr., reconstructed and partially restored, preserving entire base, most of lower body, about three-quarters of upper body, and about one-half of neck and rim. One nonjoining fr., uncertain whether from the same vessel, preserves small portion of handle.
Coarse imported fabric, visually quite different to standard local, with many small to large variously colored inclusions and a sprinkling only of fine silvery mica. Clay and surfaces mostly fired close to dark brown 7.5YR 4/2, in parts gray, in others approaching black.
Thick-walled and rather heavy vessel. Flat base, more clearly defined than on canonical local HM wares; lower wall rising rather steeply, shoulder more curved; vessel somewhat warped or misformed. Tall vertical neck; slightly flaring rim with rounded lip. Faint ridges on neck exterior indicating that vessel was probably built up of coils. Possible existence of one handle suggested by nonjoining fr. preserving portion of vertical strap handle that may not belong. There is insufficient space on the vessel as preserved for two handles.
Exterior burnished smooth, producing a slight sheen. On upper body, near junction with neck, there are three preserved moldings of slightly raised clay (welts); these are vertical, long and narrow and probably originally three or four such moldings around vessel.
Fabric and feel related to **T97-1**; for shape cf. Hochstetter 1984:43, fig. 9, types 1b, 3e1; 45, fig. 10, types 1c, 2b, 3a, c.

T54-2 (81.505) **Fig. 110b**; **pl. 452**
TR 6 East Baulk S.F.4
PIERCED TERRACOTTA OBJECT (ARCHER'S WRISTGUARD?)
L 0.074; W 0.055; TH 0.004
Intact.
Local clay with only the occasional small white and light-colored inclusion and much silver and golden mica; surfaces evenly fired close to light brown 7.5YR 6/4 and light yellowish brown 10YR 6/4.
Thin, flat piece of clay, almond shaped with flat surfaces burnished smooth and edges rounded. Pierced hole at each end along the long axis.
Original function of object not certain: perhaps archer's wristguard: cf. especially Casson 1923–25:10, fig. 3f; Buchholz 1962:5, fig. 3a; possibly lid: cf. Hochstetter 1984: pl. 196, no. 7; and especially Bouzek 1969:53, fig. 7, C4 (from Donja Dolina, Bosnia); alternatively object may possibly have been worn as a pendant or amulet.

TOMB 55 (**FIG. 38B**; **PL. 162**; CONTENTS: **FIG. 111**; **PL. 300**)

TR 43 S.F.10

URN CREMATION; CREMATED REMAINS NONDIAGNOSTIC

Small circular pit ca. 0.35 m in diameter, cut 0.10 m deep into bedrock; tomb encountered at a depth of 0.30 m below surface. Within the center of the pit the small wheelmade vertical-handled amphoriskos **T55-1**, which served as ash-urn and containing only a few scraps of cremated human bone, was placed on its side, rim toward the south, and set in place by compacted bedrock chips. About one-half of the vessel lengthways was preserved, the entire upper part of the tomb having been destroyed. Only 6 g of cremated human bone, nondiagnostic for age and sex determination, was recovered from the ash-urn and from subtopsoil in the area immediately above Tomb 55 (appendix A). A few missing fragments of the ash-urn were encountered in topsoil in the immediate vicinity of the tomb,[23] as were a few seashell fragments (appendix C).

T55-1 (82.486) **Fig. 111**; **pl. 300**

TR 43 S.F.10

WM VERTICAL-HANDLED AMPHORISKOS

H 0.145; D (base) 0.058; D (rim) est. 0.112

Many joining and some nonjoining frr., reconstructed and partially restored, preserving entire base and about one-half of body and rim lengthways, including one complete handle; condition poor; much worn.

Local clay with many small and some medium white and light-colored inclusions and much mica, predominantly golden. Clay evenly fired close to reddish yellow 7.5YR 7/6–6/6; slip, where preserved, slightly lighter.

Low ring base with narrow resting surface; underside flat; groove at junction of base and wall on exterior. Body rising steeply to point of max. D, which is set rather high; tall, inward sloping neck offset from body by slight carination; flaring rim with rounded lip. Vertical handles (one preserved), with concave upper face, attached from upper body to neck below rim; wheelmarks prominent on interior; vessel wide mouthed.

Slipped and painted but much worn (drawing of decoration tentative): paint, as preserved, dull and fairly evenly applied. Variously fired: dark brown on upper body, approaching black at rim; lighter brown approaching red on lower body. Thin band at junction of base and wall; upper body and lower neck painted solid. Thin horizontal band at midpoint on neck; rim on interior and exterior painted. Upper and outer faces of preserved handle painted.

For shape cf., among others, **T44-1** and especially **T69-1**. Cf. Andronikos 1969:179, fig. 27, especially Y6 (= pl. 54, no. 6).

TOMB 56 (**FIG. 26**; **PLS. 29**, **163**; CONTENTS: **FIGS. 112A–C**; **PLS. 282**, **469**)

TR 13 S.F.18 + 1 9 + 20

URN CREMATION; SINGLE? ADULT

Shallow circular pit 0.55 m in diameter, cut 0.05–0.12 m deep into bedrock; tomb encountered at a depth of 0.30–0.35 m below surface. In the center, and slightly toward the north, of the pit the wheelmade amphora **T56-1**, which served as ash-urn, was placed on its side, the rim (not preserved in situ) toward the NNE. Beside it, to the south, the handmade jug **T56-2** was placed in an upright position. The lower parts of both vessels were firmly set in place by compacted bedrock chips; the entire upper part of the tomb was completely destroyed. A small fragment of an iron object, perhaps an arrowhead (**T56-3**), as well as a fragment of an iron blade (**T56-4**) were found inside the ash-urn with the preserved cremated bone. A few missing fragments of the ash-urn, including portion of the rim, were recovered from topsoil in the general vicinity of the tomb, as were a number of seashells.[24]

T56-1 (81.389A + B) **Fig. 112a**; **pl. 282**

TR 13 S.F.18

FRAGMENTARY WM AMPHORA, PROBABLY WITH BELLY AND SHOULDER HANDLES

81.389A: PH 0.238; max. D (body) est. 0.410

81.389B: PH 0.013; D (rim) est. 0.200

Many joining frr. (81.389A) preserving portion of body, including one complete belly handle; and various nonjoining frr. (81.389B) preserving small portion of rim. Base, upper shoulder, and neck not preserved.

Local clay with many small to medium white and light-colored inclusions and much mica,

predominantly silver. Clay evenly fired close to light brown 7.5YR 6/4 and light yellowish brown 10YR 6/4; slip slightly lighter.

Large amphora; lower wall tending to rise steeply, shoulder more curved. One preserved horizontal belly handle, thick and round in section, attached at point of max. D. Preserved rim everted, with rounded lip.

Slipped and painted: paint dull, evenly and rather thickly applied; fired dark brown approaching black. Portion of horizontal band preserved on lower wall at break. Three thin horizontal bands immediately below point of max. D, above which is a broader band from which springs a row of crosshatched triangles (two triangles and portion of a third are preserved on one side of the handle, and a small portion of one triangle on the other). Shoulder decorated with broad band, above which are two thinner bands, from the uppermost of which springs another row of crosshatched triangles, of which only the lower parts of two are preserved. Outer face of preserved handle decorated with thin stripe that extends onto body; a second stripe, running parallel, begins at the upper part of the handle attachment. Rim exterior and rim top, as preserved, painted.

Probably amphora with belly and shoulder handles (rather than belly-handled amphora): cf. **T81-1**, **T82-1**, **T83-1**, and **39**.

T56-2 (81.392) **Fig. 112b**

TR 13 S.F.19

FRAGMENTARY BASE AND LOWER WALL HM JUG

PH 0.050; D (base) 0.058

One main fr. plus many very small frr., reconstructed, preserving entire base and portion of lower wall; much worn.

Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden. Clay evenly fired close to light red 2.5YR 6/6 and reddish yellow 5YR 6/6.

Flattened base; lower wall tending to rise steeply; vessel thin walled.

Exterior burnished, with tooling marks running horizontally and diagonally opposed on lower wall; surface worn.

Cf., among others, **T42-2**, **T43-2**.

T56-3 (81.269) **Fig. 112c**

TR 13 S.F.20

IRON FR.; POSSIBLE ARROWHEAD?

PL 0.050; WT 2.15 g

Single fr., much corroded, and clearly not complete; difficult to determine whether the actual ends are preserved.

One end comprises a shaft, round in section and tapering slightly to a blunt end as preserved. The other end, marked by a tang, is slightly thinner, also round in section, and tapers toward a point. On upper side, remains of poorly preserved tang, while the corresponding lower side appears to be broken; preserved tang tapers to a sharp edge.

Cf. Béquignon 1937:52 (Tombs 85–86); Andronikos 1969:272–273; Avila 1983a:146–147 (app. 5); Popham, Sackett, and Themelis 1979–80:256–257.

T56-4 (81.1223) **Pl. 469**

TR 13 S.F.18 bis

FR. IRON BLADE WITH POSSIBLE BONE HANDLE

PL (max.) 0.042

Single fr., much corroded, preserving small portion of blade, including both edges.

Bone not identifiable.

As preserved blade consists of two parallel straight edges, with one edge still visible. Blade thin in section. At one end are traces of what appears to be a bone handle (very poorly preserved). Along one of the flat sides are blisters resembling the leather sheath/scabbard of **T52-4**, although these may be little more than corrosion.

Cf. especially **T52-4**, also **T38-3**.

Fr. clearly not from the same object as **T56-3**.

TOMB 57 (**FIG 26**; **PLS. 29**, **164**; CONTENTS: **FIG. 113**; **PLS. 376A–B**, **491**)

TR 13 S.F.22

URN CREMATION; SINGLE INFANT AGED UNDER 1 YEAR AT DEATH

Elliptical-shaped pit 0.40 m long (max.), cut 0.26 m deep into bedrock; tomb encountered at a depth of 0.30 m below surface. Within the center of the pit the handmade cup/kyathos **T57-1**, which served as ash-urn, was placed more or less upside-down, slightly tilted to one side, with the handle to the east. This was one of only two ash-urns in the cemetery placed upside-down; the circumstances of the other, **96-1**, were quite different. The vessel, which had cracked in situ, was recovered almost complete with only minor chipping to body and rim; it was found firmly set in place by a number of small chocking stones on the west side of the pit, and compacted bedrock chips. A layer of the bedrock chips had accumulated, or was intentionally placed, over **T57-1**, effectively protecting and concealing it. This was one of the classic examples of a tomb found "under bedrock" as it were, with the compacted bedrock chips difficult to discern from the natural rock itself. A variety of seashells was found with the cremated human remains (appendix C).

T57-1 (81.646) **Fig. 113**; **pls. 376a–b**

TR 13 S.F.22

HM CUP/KYATHOS, Type 1

H (base–rim) 0.115; H (to handle) 0.156; D (rim) 0.150–0.160

Recovered almost complete, reconstructed from frr., with only minor chipping to body and rim, restored.

Local clay with many small to largish white, light-colored, and some darker inclusions; highly micaceous, with some very large flakes of golden mica. Clay evenly fired close to red 2.5YR 5/6–4/8; closer to reddish yellow 5YR 6/6 on upper part of vessel.

Base essentially rounded; deep body with vertical upper wall. Everted rim, offset from body by groove on exterior corresponding to angle formed on interior; lip chamfered. High-swung strap handle, thin in section, with edges chamfered, attached from upper body directly to rim. Handle near junction with rim on side facing interior has two oval-shaped finger impressions, one on top of the other, similar to those on kantharoi Type 1 (cf. **T10-1**, **T10-1a**, **T10-3**).

Interior burnished smooth; exterior, though worn, burnished with faintly preserved tooling marks still visible, producing a good surface with a slight sheen.

For shape cf. **T43-1**.

TOMB 58 (**FIG. 26**; **PL. 165**; CONTENTS: **FIGS. 114A–B**; **PLS. 329A–B**, **353A–B**, **466**, **492**)

TR 13 S.F.16 + 17

URN CREMATION; TWO ADULTS? (ONE MATURE)

Circular pit 0.50 m in diameter, cut 0.22 m deep into bedrock; tomb encountered at a depth of 0.25–0.30 m below surface. In the center of the pit the wheelmade krater **T58-1**, which served as ash-urn, was placed upright; beside it, to the east and also upright, was the handmade jug **T58-2**. Both vessels were firmly set in place by a number of chocking stones, especially around the north and west of the ash-urn, and compacted bedrock chips. No tomb covering was encountered, although the excavator noted a stone lying on bedrock 0.55 m to the SW (**fig. 26**), which was perhaps a displaced cover stone for either this tomb or the nearby Tomb 59. The upper parts of both vessels, especially the taller **T58-1**, were partially damaged, although some of the missing fragments were recovered in the tomb pit as well as in topsoil in the immediate vicinity of the tomb. Five minuscule fragments of bronze (**T58-3**), misformed beyond recognition by burning, were encountered inside the ash-urn with the cremated remains of the deceased, as was at least one land-shell fragment (appendix C). The total weight of the cremated human bone recovered from the ash-urn (1522 g) was among the largest recovered from any tomb. According to Dr. Musgrave (appendix A), there was possible duplication of some of the right and left petrous temporal fragments and scaphoids indicating a possible double cremation; one of the individuals is described as a mature adult, the other as an adult.

T58-1 (81.391) **Fig. 114a**; **pls. 329a–b**

TR 13 S.F.16

WM KRATER, Type 2

H (calculated from drawing as reconstructed) 0.240; D (base) 0.122

Many joining frr., reconstructed and partially restored, preserving entire base and most of body, including parts of both handles; plus several joining and nonjoining frr. preserving small portion of upper body and rim. Vessel chipped and extremely worn; condition very fragile.

Local clay with many small to medium white and light-colored inclusions and much mica, golden tending to predominate; occasional blowouts, some of which are quite large. Clay core fired light gray, elsewhere close to reddish yellow 7.5YR 6/6; slip, where preserved, slightly lighter.

Tall, slightly flaring foot, with narrow resting surface; central part of underside thickened and flat. Pronounced wheelmarks approaching ridges on foot exterior as well as on foot interior near center. Lower wall curved; upper wall vertical; vessel particularly thin walled at junction of body and base. Raised band of clay on upper wall below rim decorated with incised vertical strokes (serrated), which, judging by the preserved fr., were probably not continuous around vessel (strokes perhaps arranged in groups). Broad horizontal rim, flat on top and tapering slightly to rounded outside edge. Two horizontal handles, rather thick and round in section, attached to upper body.

Slipped and painted, but much worn: paint, as preserved, dull, quite thickly applied with a tendency to flake; fired red. Four thin horizontal bands on lower wall, above which is a broad band extending to point of max. D. Above this the decoration is extremely worn: only two preserved traces of paint on upper body (perhaps accidental splashes?). Area between raised band and rim evidently painted. Rim too worn to determine decoration. Interior evidently painted solid but also much worn, perhaps in part because of use/cleaning. Outer faces of both handles painted with decoration extending onto body. The handle zone virtually begs for decoration and it seems unlikely it was originally reserved, although no painted decoration survives.

Cf. **T35-1**. For shape and general proportions cf. Kraiker and Kübler 1939: pl. 63, inv. 532; Desborough 1952: pl. 23, nos. 147–148.

T58-2 (81.565) **Fig. 114b**; **pls. 353a–b**

TR 13 S.F.17

HM JUG WITH CUTAWAY NECK

H 0.152; D (base) approx. 0.060; D (rim) max. 0.072

Recovered almost complete, reconstructed from frr.; minor chipping at body and rim restored; condition otherwise good.

Local clay with many small to medium white and light-colored inclusions and much mica, silver tending to predominate. Clay fired evenly close to reddish yellow 5YR 6/6.

Flattened base; body tending squat, with lower wall rising steeply to point of max. D, which is set high, shoulder more curved. Tall and relatively wide vertical neck, offset from body by groove on exterior corresponding to angle formed on interior. Slightly flaring rim; chamfered lip; neck cut away. Small vertical handle with outer face diagonally grooved, attached to upper body by piercing, with large projection of clay on interior; upper attachment directly to rim where cut away.

Exterior burnished, with tooling marks running vertically on neck, horizontally on body, producing a good but dull surface.

Cf. especially **T125-2**.

T58-3 (81.1222) **Pl. 466**

TR 13 S.F.16 bis

FIRE-AFFECTED BRONZE FRR.

Max. PL of largest fr. 0.005

Five minuscule frr., very thin, burned beyond recognition; original object unidentified.

Cf. **T18-2**.

TOMB 59 (**FIG. 26**; CONTENTS: **FIG. 115**)

TR 13 S.F.2

URN CREMATION; POORLY PRESERVED, CREMATED REMAINS NONDIAGNOSTIC

Circular pit 0.38 m in diameter, cut 0.17 m deep into bedrock; tomb encountered at a depth of 0.35

m below surface. Within the center of the pit the fragmentary base of the amphora **T59-1**, which served as ash-urn, was found upright and set in place by compacted bedrock chips. The ash-urn contained only a few scraps of cremated human bone (appendix A). Nothing of the upper part of the tomb was preserved and the only sherd material recovered from the immediate vicinity was of Classical date. For a possible displaced stone cover 0.10 m to the north see Tomb 58.

T59-1 (81.1134) **Fig. 115**
TR 13 S.F.2
BASE FRR.; WM AMPHORA
PH 0.038; D (base) 0.085
Eight joining and several tiny nonjoining frr. preserving entire base but only small portion of lower wall; chipped and much worn.
Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden; occasional pinprick blowouts. Clay core fired close to reddish yellow 5YR 7/6, elsewhere clay closer to very pale brown 10YR 7/4; slip slightly lighter.
Flat disk base; groove at junction of base and body on exterior. Lower body thick walled; wheelmarks prominent on interior.
Slipped and painted: paint dull, in parts thickly applied, where there is a tendency to flake, in others more dilute. Fired red where thickest, light reddish brown where dilute. Horizontal band at junction of base and body, at groove. Three thin horizontal bands, plus portion of a fourth preserved at break, on preserved lower wall.
For shape and decoration cf. especially **T29-1**.

TOMB 60 (**FIG. 26**; **PL. 166**; CONTENTS: **FIGS. 116A–B**; **PL. 272**)

TR 13 S.F.34 + 35
URN CREMATION; SINGLE ADULT (MALE?)
Circular pit 0.55 m in diameter, cut 0.20 m deep into bedrock; tomb encountered at a depth of ca. 0.25 m below surface. In the south part of the pit the wheelmade belly-handled amphora **T60-1**, which served as ash-urn, was placed upright; beside it, to the SE and also upright, was the fragmentary handmade jug **T60-2**. Both vessels were firmly set in place by a number of larger chocking stones, especially on the north side of the tomb pit, amid an admixture of compacted bedrock chips and slightly darker colored earth. No tomb covering was preserved with the result that the upper parts of both vessels, especially **T60-2**, were damaged; the missing fragments of **T60-1** and **T60-2** were not recovered. One small seashell was encountered at an upper level of the tomb pit, while at least one more was found inside the ash-urn with the cremated remains of the deceased (appendix C). Immediately east of the tomb was the lens of loose blackened earth that contained a small quantity of cremated human bone as well as the fire-affected sherds **33–35**.

T60-1 (81.837) **Fig. 116a**; **pl. 272**
TR 13 S.F.34
WM BELLY-HANDLED AMPHORA
PH 0.283; D (base) 0.105; PD (neck) 0.092
Many frr., joining and nonjoining, preserving almost complete vessel except for upper neck and rim; reconstructed and partially restored. Condition poor, vessel fragile.
Local clay, rather soft textured and perhaps poorly fired, with many small to medium white and light-colored inclusions and much silver and golden mica. Clay core fired light gray, elsewhere close to reddish yellow 5YR 6/6; clay toward interior surface slightly darker; slip slightly lighter.
Flat disk base slightly hollowed out round edge of underside to create a false ring base with rounded resting surface. Slight groove at junction of base and body on exterior. Body tending globular. Slight ridge, much worn, at junction of shoulder and neck, neck becoming vertical; rim not preserved. Two horizontal handles, round in section, attached at midpoint.
Slipped and painted, much worn with almost all the decoration on one side not preserved; enough survives to establish decorative scheme except for belly zone. Paint, as preserved, dull, fired red. Two thin horizontal bands on lower wall; four thin bands near midpoint, below handles. At least two bands on upper shoulder as shown, above which the shoulder and the preserved neck,

including small ridge, painted solid. Outer faces of handles painted, with decoration extending onto body below. The belly zone begs for decoration but none is actually preserved.

Cf. especially **T115-1**.

T60-2 (81.517) **Fig. 116b**

TR 13 S.F.35

FRAGMENTARY BASE AND BODY; HM JUG

PH 0.066; D (base) approx. 0.062

Thirteen joining and six nonjoining frr. preserving entire base and portion of lower body; worn.

Local clay with many small white and light-colored inclusions and a great deal of mica, silver tending to predominate. Rather hard fired and brittle; occasional blowouts. Clay core fired gray; surfaces close to brown 7.5YR 5/4.

Flattened base; body tending squat.

Exterior burnished, with tooling marks running horizontally on upper body as preserved, diagonally opposed on lower body, producing a dull surface.

Interior surface very poorly finished and preserving at certain points impressions created in moist clay by small-pronged tool used in the process of manufacture (perhaps to stabilize vessel from within while burnishing exterior?).

For shape cf., among others **T26-3**, **T52-2**.

TOMB 61 (**FIG. 26**; CONTENTS: **FIG. 117**)

TR 13 S.F.26

PROBABLE URN CREMATION; VERY POORLY PRESERVED, NO CREMATED BONE ENCOUNTERED IN SITU

As preserved, a small circular pit 0.25 m in diameter, cut 0.06 m deep into bedrock; tomb encountered at a depth of 0.25 m below surface. Within the center of the pit the fragmentary base of a handmade closed vessel, **T61-1**, which had the appearance of being in situ, was found in an upright position, set in place by compacted bedrock chips. There was no cremated bone preserved, nor any sherd material clearly associated, but enough survived to warrant its identification as a cremation tomb. The lens of loose blackened earth, which yielded a small quantity of cremated human bone and the sherds **33–35**, was located only 0.25 m to the SW of the tomb, and may have derived from this tomb.[25]

T61-1 (81.383) **Fig. 117**

TR 13 S.F.26

FRAGMENTARY HM CLOSED VESSEL

PH 0.072

Fifteen joining and nonjoining frr. preserving large portion of base and parts of lower body; condition poor; fragile.

Local clay with many small to medium white and light-colored inclusions and much mica, tending fine, predominantly golden. Clay and surfaces evenly fired close to brown 7.5YR 5/4.

Base slightly flattened; body rounded; vessel small.

Exterior surface, although worn, burnished smooth, with no visible tooling marks; interior less well finished.

Probably small jar as **T21-1**; cf. also **T117-20** and **T133-1**.

TOMB 62 (**FIG. 26**; **PL. 167**; CONTENTS: **FIG. 118**; **PL. 328**)

TR 13 S.F.28

URN CREMATION; CREMATED REMAINS NONDIAGNOSTIC

Circular pit 0.35 m in diameter, cut 0.13 m deep into bedrock; tomb encountered at a depth of 0.30 m below surface. Within the center of the pit the wheelmade krater **T62-1**, which served as ash-urn and containing a few scraps of cremated human bone (52 g: appendix A), was placed upright, firmly set by compacted bedrock chips. Although nothing of the upper part of the tomb was preserved, a thin layer of bedrock chips had accumulated over the broken ash-urn, effectively concealing the tomb (cf. Tomb 57). No missing fragments of the upper body of **T62-1** were encountered. The lens of darker earth already noted with Tombs 60 and 61 was located just to the NW. At least one bone fragment of sheep/goat was found inside the ash-urn;

it displayed no clear signs of having been burned (appendix B).

T62-1 (81.385) **Fig. 118**; **pl. 328**
TR 13 S.F.28
BASE AND LOWER BODY; WM KRATER, Transitional type
PH 0.152; D (base) 0.103
Reconstructed from many joining frr. preserving entire base and most of lower wall; plus a few nonjoining frr. preserving small portion of one handle; condition poor, much worn.
Local clay with many small to medium white and light-colored inclusions and much mica, golden tending to predominate. Clay evenly fired close to reddish yellow 7.5YR 6/6; slip slightly lighter.
Heavy ring base with flat resting surface; broad, shallow groove at junction of base and body on exterior. Lower wall curving up to vertical upper wall. Nonjoining frr. attest horizontal handle, round in section (not illustrated).
Slipped and painted, rather worn: paint dull, evenly and rather thickly applied with a tendency to flake; fired red. Horizontal band at junction of base and body. Four thin bands on lower wall, above which, and extending to the break, is a broad area painted solid. Interior painted, but very worn.
Shape and decoration consistent with kraters of Transitional type: cf. **T48-1** and **T76-1**.

TOMB 63 (**FIG. 26**; **PL. 168**; CONTENTS: **FIGS. 119A–B**; **PL. 340**)

TR 13 S.F.24
URN CREMATION; SINGLE ADULT (FEMALE?)
Circular pit 0.38 m in diameter, cut 0.07 m deep into bedrock; tomb encountered at a depth of 0.15–0.20 m below surface. Within the center of the pit the handmade jar **T63-1**, which served as ash-urn, was placed upright, firmly set by compacted bedrock chips. The upper part of the vessel and much of one side were not preserved in situ, although fragments of the neck and rim were found strewn in the tomb pit. Also recovered from the tomb pit were fragments preserving an almost complete base of a wheelmade amphora that may have once served as lid for the ash-urn (cf., among others, **T51-2**, **T99-2**, **T100-2**). The diameter of the base **T63-2** makes it suitable as a lid for **T63-1**. A variety of seashell fragments were recovered from the immediate vicinity of the tomb (appendix C).

T63-1 (81.384) **Fig. 119a**; **pl. 340**
TR 13 S.F.24
FRAGMENTARY HM TWO-HANDLED JAR (BELLY-HANDLED)
PH (base to shoulder) 0.142; PH (rim frr) 0.050; restored H (on drawing) 0.220; D (base) 0.100–0.110
Many joining and several nonjoining frr., partially reconstructed, preserving entire base, about one-half of lower body, small portion of upper body, including one handle; plus three frr. preserving about one-half of rim; chipped and much worn.
Local clay with many small to medium white and light-colored inclusions and much mica, golden tending to predominate. Clay core, at most preserved points, fired dark gray, with the surface close to brown/dark brown 7.5YR 5/4–4/4; at one point clay body fired two-tone: gray toward interior, reddish yellow 5YR 6/6 toward exterior.
Flat base; lower wall rising steeply to point of max. D, which is set quite high; shoulder curved. Vertical neck; flaring rim with chamfered lip. Thick horizontal handle, round in section, attached to point of max. D.
Exterior surface and interior at neck burnished, but worn, with faintly preserved tooling marks toward lower body; as preserved, surface dull.
Cf. **T18-1**, **T100-1**, **T118-1**, **T130-1**.

T63-2 (81.1139) **Fig. 119b**
TR 13 S.F.24 bis
BASE FRR.; WM AMPHORA
PH 0.037; D (base) 0.105
Ten joining frr. preserving almost complete base and small portion of lower wall; chipped and extremely worn, with little preserved of original surface.

Local clay, rather gritty, with many small to medium, and some larger, white and light-colored inclusions and much mica, predominantly golden. Clay core fired light gray, elsewhere close to reddish yellow 7.5YR 6/6.
Flat disk base; lower wall rising steeply.
No trace of slip or paint preserved.
Cf. especially **T51-2**.

TOMB 64 (**FIG. 26**; CONTENTS: **FIG. 120**)

TR 13 S.F.39
URN CREMATION; POORLY PRESERVED, CREMATED REMAINS NONDIAGNOSTIC
As preserved, small pit at least 0.22 m long, cut 0.10 m deep into bedrock; tomb encountered at a depth of 0.30 m below surface. The tomb pit was cut across by the foundation trench in the SE quarter of TR 13 associated with Classical building activity. Encountered within the tomb pit were the displaced fragments of an amphora, **T64-1**, presumably the ash-urn, and three small fragments of cremated human bone (appendix A). Immediately to the west a few more fragments of **T64-1** were recovered, as were a small quantity of cremated bone and a piece of schist (**fig. 26**), which may have originally served as tomb cover. No other details of this tomb could be established.

T64-1 (81.367) **Fig. 120**
TR 13 S.F.39
BODY FRR.; WM AMPHORA
Dimensions of illustrated frr.: PH 0.090; PL 0.110
Many small joining and nonjoining frr. preserving portion of body. Only two joining frr. illustrated; frr. chipped and much worn.
Local clay with many small to medium white and light-colored inclusions and much mica, golden tending to predominate. Clay evenly fired close to pink 5YR 7/4 and light reddish brown 5YR 6/4; slip closer to pink 7.5YR 7/4.
Preserved lower body rising steeply toward point of max. D.
Slipped and painted but much worn: paint, as preserved, dull, with a tendency to flake where thickest; fired black. Illustrated frr. preserve portion of six horizontal bands of various thickness and part of the decoration extending onto body from the handle (itself not preserved).
Handle type not determined.
Cf. **T60-1**, **T67-1**, **T74-1**, **T84-1**.

TOMB 65 (**FIG. 26**; **PLS. 169–170**; CONTENTS: **FIG. 121**)

TR 13 S.F.36
URN CREMATION; SINGLE ADULT
Circular pit 0.55 m in diameter, cut 0.24 m deep into bedrock; tomb encountered at a depth of 0.20–0.25 m below surface. Within the center of the pit the small wheelmade amphora **T65-1**, which served as ash-urn, was placed upright, firmly set by a few small chocking stones and compacted bedrock chips. The vessel was recovered almost complete with only minor chipping to rim; although no covering was preserved, a thin layer of bedrock chips had accumulated over the ash-urn (cf. Tombs 57, 62).[26] A minute fragment of seashell was found inside the ash-urn with the cremated remains of the deceased, and several more fragments were noted in the immediate vicinity of the tomb (appendix C).

T65-1 (81.613) **Fig. 121**
TR 13 S.F.36
SMALL WM BELLY-HANDLED AMPHORA
H 0.230; D (base) 0.076; D (rim) 0.130
Recovered almost complete but in very poor state of preservation. Reconstructed from frr. with only minor chipping to rim and upper body; much worn.
Local clay with many small to medium white and light-colored inclusions and much mica, tending fine, predominantly golden. Clay core fired light gray only at handles, elsewhere evenly fired close to reddish yellow 7.5YR 6/6.
Low ring base; lower body rising steeply to point of max. D, which is set toward upper part of vessel; shoulder curved. Vertical neck offset from shoulder by slight ridge; gently flaring rim with rounded lip. Two small horizontal handles, round in section, attached immediately above point of max. D and rising almost vertically.

Original decoration cannot be determined due to weathering. Faint traces of slip are preserved and only one very small trace of paint on body.

For general shape cf., among others, **T24-1**; particularly close is a small amphora from Delphi, Desborough 1972:204, pl. 47, middle row, center.

TOMB 66 (**FIG. 26**; **PL. 171**; CONTENTS: **FIGS. 122**, **191D**)

TR 13 S.F.4

URN CREMATION; POORLY PRESERVED, CREMATED REMAINS NONDIAGNOSTIC (LIKELY INFANT CREMATION)

Shallow, roughly circular pit 0.40 m long (max.) with edges, especially to the NW, not very clearly defined, cut 0.10 m deep into bedrock; tomb encountered at a depth of 0.14 m below surface. In the center of the pit the fragmentary handmade cup/kyathos **T66-1** was found on its side. Only about one-third of the vessel survived, firmly set in place by compacted bedrock chips; nothing of the upper part of the vessel, which lay above the level of the top of the tomb pit, was recovered. At least one fragment of cremated bone (not analyzed in appendix A) was encountered with **T66-1**, and a seashell, perhaps intrusive, was noted in the tomb pit (appendix C). The details of the tomb were not unlike those of Tomb 57 (cf. also Tomb 43), and based on that analogy, coupled with the state of preserved cremated bone, it is likely Tomb 66 is also an infant cremation.

T66-1 (81.832) **Figs. 122**, **191d**

TR 13 S.F.4

FRAGMENTARY HM CUP/KYATHOS, Type 1

POTTER'S MARK fig. 191d (= Papadopoulos 1994:448–449, fig. 8, pl. 115a, no. B7)

PH (to rim) 0.072; PH (to handle) 0.090; D (rim) 0.125

Reconstructed from many small frr. preserving about one-third of body, about one-half of rim, and complete handle, but nothing of base.

Local clay with some small white and light-colored inclusions and much mica, tending fine, predominantly golden. Clay evenly fired close to red 2.5YR 5/6.

Lower wall rising to point of max. D; incurved, thickened rim, with rounded lip. Vertical high-swung handle, almost loop shaped, thin and strap in section, with edges chamfered, attached from point of max. D directly to rim. Vessel thin walled and well formed.

Interior and exterior burnished, with rather faint tooling marks tending to run horizontally and producing a good surface with a slight sheen.

Potter's mark, incised prior to firing, at point of max. D immediately left of the lower handle attachment. Fourteen preserved small impressed dots arranged in a cluster as shown. Vessel chipped at this point, with perhaps more dots originally. For dots cf. the marks on **T41-3** and **T75-2**.

For shape cf. **T43-1**, **T57-1**, **T10-4**.

TOMB 67 (**FIG. 26**; **PLS. 172–174**; CONTENTS: **FIGS. 123A–C**; **PLS. 276A–B**, **351A–B**, **378A–C**)

TR 13 S.F.7 + 9 + 12

URN CREMATION; SINGLE ADULT (MALE?)

Circular pit 0.58 m in diameter, cut 0.22 m deep into bedrock; tomb encountered at a depth of 0.12 m below surface. In the south part of the pit the wheelmade amphora **T67-1**, which served as ash-urn, was placed upright, firmly set by a number of chocking stones of various size (both schist and limestone) and compacted bedrock chips. Placed upside-down over it as a covering was the handmade bowl with square-cut handles **T67-2**; beside it, to the NW and at this higher level, the handmade jug **T67-3** was placed upright as *kterisma*. Both **T67-2** and **T67-3** were in turn surrounded and firmly set in place by more chocking stones and bedrock chips. Although no stone covering was encountered, there was only minor damage to the upper parts of both vessels with many of the broken fragments found strewn in the tomb pit. The bowl **T67-2** had been mended in antiquity with lead clamps; the ash-urn had been placed into the tomb with one of its shoulder handles and much of one belly handle broken. At least one

small seashell fragment was found in the ash-urn with the cremated human remains (appendix C).

T67-1 (81.743) **Fig. 123a**; **pls. 276a–b**
TR 13 S.F.12
WM AMPHORA WITH BELLY AND SHOULDER HANDLES
H 0.340; D (base) 0.100; D (rim) 0.160
Vessel recovered almost intact, with broken frr. of neck and rim reconstructed; one shoulder handle and portion of one belly handle not preserved, the latter restored. Surface much worn.
Local clay with many small to medium white and light-colored inclusions and much silver and golden mica. Clay evenly fired close to very pale brown 10YR 7/4; slip slightly lighter.
Flat disk base; body tending ovoid with lower wall rising steeply to point of max. D, which is set toward upper part of vessel; shoulder curved. Vertical neck, offset from body by slight ridge; everted rim with rounded lip. Two horizontal belly handles, round in section, attached just above point of max. D. Two small vertical loop-shaped shoulder handles (one preserved), thin in section, attached to upper shoulder at small ridge, in area between belly handles; preserved shoulder handle set slightly askew. Wheelmarks prominent on interior.
Slipped and painted, but much worn: paint dull, thickly applied in parts, more dilute in others, with a tendency to flake where thickest. Paint variously fired from dark brown through light reddish brown, in parts approaching red, black at handles and upper neck where thickest. Two horizontal bands on lower wall; two broader bands at midpoint, above which are two thinner bands. Upper shoulder decorated on either side of the vertical handles with four sets of mechanically drawn concentric circles (eight sets in all), each set comprising four circles. Upper portion of each set extends over small ridge onto lower neck (sets extremely worn). Upper three-quarters of neck and rim exterior painted solid; rim interior painted. Outer faces of belly handles painted with decoration extending onto body, as does the painted stripe on the upper faces of the shoulder handles, as shown.
Shape as **T81-1**, **T82-1**, **T83-1**, **T84-1**, **T125-1**, and others; general proportions and decoration closer to some belly-handled amphorai: cf. **T51-1**.

T67-2 (81.731 + 81.743A) **Fig. 123b**; **pls. 378a–c**
TR 13 S.F.9
HM BOWL WITH SQUARE-CUT HANDLES; VESSEL MENDED IN ANTIQUITY
H (to rim) 0.123; H (to handles) 0.157; D (base) 0.095; D (rim) 0.205
Recovered complete except for minor chipping, reconstructed from frr. and partially restored; surface worn on exterior.
Local clay with many small to medium, and some larger, white and light-colored inclusions and much mica, golden tending to predominate. Clay evenly fired close to red 2.5YR 5/8 and reddish yellow 5YR 6/6. Fabric and feel similar to **T43-1**.
Broad flat base; deep body with curved lower wall, vertical upper wall. Vertical rim, thickened on interior and forming a slight angle at juncture with body, which corresponds to a slight concavity on exterior; lip chamfered. Two high, square-cut handles attached directly to top of rim, each with cut hole at center; handle edges chamfered.
Interior and exterior burnished, with tooling marks running mainly horizontally, and, where better preserved, producing a good surface with a slight sheen.
Vessel mended in antiquity, with two lead clamps (one partially preserved, the other almost complete) attached at junction of rim and body, set 0.110 m apart. Clamp struts round in section, upper and lower parts flattened; better preserved clamp 0.025 m long.
This is the only complete example of the shape from the cemetery: cf. handle frr. **29**, **51**, **81**, **T113-13**, **T113-14**, **T113-15**, **T114-6**, and rim frr. **T117-16**, **T117-17**, among others.

T67-3 (81.733) **Fig. 123c**; **pls. 351a–b**
TR 13 S.F.7
HM JUG WITH CUTAWAY NECK
PH 0.168; D (base) approx. 0.080; D (rim) max. 0.063
Reconstructed from frr. and partially restored; complete except for uppermost part of neck and rim. Surface worn.
Clay probably local, but vessel perhaps imported from elsewhere in Macedonia. Clay contains many small to medium white and light-colored inclusions and much silver and golden mica. Clay evenly fired close to yellowish red 5YR 5/6.
Flattened base; globular body; tall neck offset from shoulder by groove on exterior corresponding to angle formed on interior. Neck flaring toward rim, cut away; rim, as preserved, chamfered. Vertical handle attached to upper body by piercing with sharp projection of clay on interior. Handle thick and round in section at lower attachment, tapering considerably toward top, with upper part of handle flattened.
Exterior mostly burnished smooth; faint tooling marks preserved only near base; dull finish.
Cf. **T13-2**. For jugs with similar handles elsewhere in Macedonia cf. especially Heurtley 1939:232, no. 470; Andronikos 1969:195, fig. 39; pl. 36, no. E13; p1. 30, no. A10; pl. 38, no. Z3; and Thasos: Bernard 1964:127, fig. 38; 129, fig. 40b, no. 169. Indeed, handles similar to **T67-3** are found on a variety of handmade shapes on Thasos: see Koukouli-Chrysanthaki 1992, vol. 3: passim.

TOMB 68 (**FIG. 26**; **PL. 175**; CONTENTS: **FIGS. 124A–B**; **PL. 283**)

TR 13 S.F.25 + 27
URN CREMATION; SINGLE ADULT
Shallow pit with a maximum preserved length of ca. 0.40 m, the edges of which were not very clear, cut 0.10 m deep into bedrock; tomb encountered at a depth of 0.25–0.30 m below surface. Within the pit the wheelmade amphora **T68-1**, which served as ash-urn, was placed on its side with the partially preserved base of the vessel toward the NNE; beside it, to the west and in an upright position, was the fragmentary base of the handmade jug **T68-2**. The lower, preserved, parts of both vessels were firmly set in place by compacted bedrock chips; their upper parts were not preserved, although a few missing fragments of both vessels were encountered in topsoil in the immediate vicinity. A good variety of seashells, both complete and fragmentary, were among the cremated remains of the deceased inside the ash-urn (appendix C), as was an unburned bone fragment of a sheep/goat (appendix B); a complete land-snail shell was recovered from the tomb pit (appendix C).

T68-1 (81.388) **Fig. 124a**; **pl. 283**
TR 13 S.F.25
FRAGMENTARY WM AMPHORA
PH 0.260; PL 0.250; D (base) N/R
Eighteen joining frr. preserving small portion of base and about one-third of body lengthways. Upper body, rim, and handles not preserved. Chipped and much worn.
Local clay with many small to medium, and some larger, white and light-colored inclusions and much mica, predominantly golden. Clay core fired light gray only toward base where thickest, elsewhere evenly fired close to pink 5YR 7/4; slip slightly lighter.
Base appears to have been slightly hollowed out on underside to create a false ring foot, with rounded resting surface; slight groove at junction of base and wall on exterior. Body curved, tending tall and rather ovoid.
Slipped and painted, but much worn: paint, as preserved, dull, fairly thickly applied with a tendency to flake. Mostly fired dark brown approaching black; in parts fired light brown and red. Two thin horizontal bands on lower wall. Three thin bands at midpoint, above which is a broader band. Upper shoulder at break decorated with poorly preserved crosshatching, most likely the lower portions of a row of crosshatched triangles.
Probably amphora with belly and shoulder handles: cf. **T56-1**, **T81-1**, **T82-1**, **T83-1**.

T68-2 (81.387) **Fig. 124b**
TR 13 S.F.27
BASE FRR.; HM JUG
PH 0.050; D (base) approx. 0.050
Many small joining frr. preserving entire base and small portion of lower body; much worn.
Local clay with many small white and light-colored inclusions and much mica, predominantly silver. Clay and surfaces evenly fired close to red 2.5YR 5/6 and reddish yellow 5YR 6/6.
Base flattened; thin lower wall.
Exterior burnished, with preserved tooling marks diagonally opposed; surface dull. Interior poorly finished.
Cf., among others, **T41-3**, **T52-2**.

TOMB 69 (**FIG. 26**; **PL. 176**; CONTENTS: **FIGS. 125A–C**; **PLS. 302**, **367**, **451**, **463**, **493**)

TR 13 S.F.8 + 10
URN CREMATION; CREMATED REMAINS NONDIAGNOSTIC
Circular pit 0.42 m in diameter, cut 0.10 m deep into bedrock; tomb encountered at a depth of 0.12 m below surface. In the center of the pit the wheelmade vertical-handled amphoriskos **T69-1**, which served as ash-urn, was placed in an upright position; immediately to the north the handmade double vase **T69-2** was placed upright but slightly tilted, leaning against the ash-urn. Both vessels were firmly set in place with compacted bedrock chips. No tomb covering was encountered but only minor damage was noted to the upper parts of both vessels, which were recovered almost complete. The ash-urn yielded only 30 g of cremated human bone, which was nondiagnostic for age and sex determination (appendix A). A pierced terracotta disk **T69-3**, fragments of a broken and perhaps partially fire-affected bronze spiral ornament **T69-4**, as well as two seashell fragments and a pebble were found inside the ash-urn with the small quantity of cremated human bone. More seashell fragments were recovered from the immediate vicinity of the tomb (appendix C).

T69-1 (81.685) **Fig. 125a**; **pl. 302**
TR 13 S.F.8
WM VERTICAL-HANDLED AMPHORISKOS
H 0.144; D (base) 0.065; D (rim) est. 0.100
Recovered almost complete and partially reconstructed from many frr., with only portion of rim not preserved; condition poor, surface much worn.
Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden. Rather soft textured and perhaps poorly fired. Clay core fired light gray, elsewhere close to light brown 7.5YR 6/4; slip, where preserved, slightly lighter.
Low ring base with narrow resting surface; central portion of underside level with resting surface; slight groove at junction of base and wall on exterior. Curved body rising to point of max. D, which is marked by a slight carination; upper wall curving in. Tall, inward sloping neck, offset from body by small ridge; short everted rim, offset from neck by slight ridge on exterior; rounded lip. Two vertical handles, with concave upper faces, attached from upper wall to neck below rim. Vessel wide mouthed.
Slipped and painted, but much worn: paint, as preserved, dull, fired red. No preserved decoration on lower body, which is much worn. Horizontal band at shoulder at point of max. D, extending to small ridge at neck. Lower neck reserved, with remainder of neck, as preserved, evidently painted (though there may have been a reserved band at upper neck?). Rim interior painted, as are the upper and outer faces of the handles.
Cf. especially **T55-1**.

T69-2 (81.355) **Fig. 125b**; **pl. 367**
TR 13 S.F.10
HM DOUBLE VASE
PH 0.096; L (max.) 0.150; D (rims) 0.032
Recovered almost complete but with upper part of handle not preserved. One of the jugs intact, the other reconstructed from frr.

with only minor restoration. Small hole on upper body of intact jug is probably ancient.

Local clay with many small white and light-colored inclusions and much fine mica, golden tending to predominate. Clay evenly fired close to reddish yellow 5YR 6/6.

Double vase composed of two HM round-mouth jugs, each with rounded base and almost spherical body; tall neck with short everted rim, rounded lip. Jugs joined at body, near point of max. D, from which rises a central connecting rib, rectangular in section, that divides into two parts, attached directly to the rim of each jug. The two are further connected at the top by a "basket" handle, the upper part of which is not preserved, that rises from the handle attachments at rim.

Exterior burnished smooth, surface dull, similar to that of **T21-1**.

Only example of shape at Torone: cf. Heurtley 1939:105, pl. XXIIId; Hammond 1971: pl. 35, no. 10; 1972: fig. 16k; Aliu 2004: pl. 34, no. 37.

T69-3 (81.688) **Fig. 125c**; **pl. 451**

TR 13 S.F.8 bis

PIERCED TERRACOTTA DISK

D 0.041; TH (max.) 0.008

Intact.

Clay containing the occasional small white impurity and specks of golden mica; fired close to light gray 2.5Y 7/2 and light brownish gray 2.5Y 6/2.

Circular flat disk, pierced at center; edges rounded; faces smoothed, resulting in a dull finish.

Disk formed from prepared clay, not fashioned from a sherd by chipping the edges. Cf. Heurtley and Hutchinson 1926–27:36, fig. 21, nos. 5, 10; Heurtley 1939:203, fig. 67dd; 231, fig. 104a.

T69-4 (81.1221) **Pl. 463**

TR 13 S.F.8 ter

FRR. OF BRONZE SPIRAL ORNAMENT

PL (max.) of largest fr. 0.014; TH (wire) 0.002

Five very small nonjoining frr., at least partially affected by burning, preserving small portion of spiral ornament; worn.

Original object probably hair ring, consisting of thin bronze wire, round in section, coiled to form spiral.

Cf. **T7-6**, **T10-8**, **T102-6**. Cf. also the spectacle fibula **T16-1**.

TOMB 70 (**FIG. 27**; **PLS. 177–178**; CONTENTS: **FIGS. 126A–C**; **PLS. 352A–B**, **384**, **494**)

TR 13 East Baulk Pots 1 + 2 + 3

URN CREMATION; SINGLE ADULT (MALE?)

Elliptical-shaped pit 0.74 m long (max.), cut 0.20 m deep into bedrock; tomb encountered at a depth of 0.16 m below surface. In the center and slightly toward the south part of the pit the handmade pitharion **T70-1**, which served as ash-urn, was placed upright; beside it, to the NW and also upright, was the handmade jug **T70-2**. Both vessels were firmly set in place by a number of chocking stones and compacted bedrock chips; the ash-urn was further set by a number of chocking sherds, especially fragments of the handmade tripod cauldron **T70-3** to the north and NE, as well as two (joining) pithos body fragments (not catalogued). No tomb covering was encountered, but **T70-1** and **T70-2** sustained only minor damage. Immediately to the north of the tomb pit a small quantity of dark earth yielded small missing fragments of both **T70-1** and **T70-2** as well as one seashell; at least two very small fragments of marine shell were also found inside the ash-urn (appendix C). The water-sieved contents of the jug **T70-2** yielded seven noncarbonized seeds (six *Euphorbia helioscopia* [sun spurge], one *Euphorbia* cf. *exigua* [dwarf spurge]) that represent recent intrusions (appendix D).

T70-1 (84.273) **Fig. 126a**; **pl. 384**

TR 13 East Baulk Pot 2

HM PITHARION

H 0.250; D (rim) 0.135

Recovered almost complete except for chipping at rim; reconstructed from two main

body frr. and many smaller frr. of neck and rim. Vessel, at certain points, cracked but not broken.

Coarse local clay with a great many small to large white and light-colored inclusions and much mica, exclusively golden. Clay evenly fired something like brown/strong brown 7.5YR 5/4–5/6. Small parts only of exterior surface discolored dark gray to black.

Base essentially rounded, only slightly flattened; ovoid body; vertical to concave neck, offset from body by slight ridge. Gently flaring rim with rounded lip. Two horizontal handles, thick and round in section, attached to upper body immediately below offset.

Exterior and interior at neck burnished, with broad, shallow tooling marks running horizontally on upper body and mainly vertically on lower wall, producing a good surface with a very slight sheen.

A smaller version of **T38-1**.

T70-2 (84.275) **Fig. 126b**; **pls. 352a–b**

TR 13 East Baulk Pot 1

HM JUG WITH CUTAWAY NECK

H 0.175; D (base) 0.060; D (rim) 0.050

Reconstructed from frr. and partially restored; complete except for a few missing frr. of neck and rim; surface worn.

Local clay with many small to medium white and light-colored inclusions and occasional darker and red-colored impurities; much mica, tending fine, predominantly golden. Clay evenly fired close to reddish yellow 5YR 6/8.

Flattened base; lower wall tending to rise steeply to point of max. D, which is set toward upper part of vessel; shoulder more curved. Tall vertical neck, offset from body by groove on exterior corresponding to angle formed on interior. Plain rim, rounded on top; neck cut away. Small vertical handle, round in section, attached to upper body by piercing, with sharp projection of clay on interior; upper attachment directly to rim. Lower handle near attachment pinched to form a small knob or mastos.

Exterior burnished, with pronounced tooling marks, much worn, running horizontally on body, vertically on neck, producing an evidently dull surface. Very slight molding, pinched up, on body on side opposite handle.

Cf. especially **T75-2**, **T86-2**.

T70-3 (84.274) **Fig. 126c**

TR 13 East Baulk Pot 3

FRAGMENTARY HM TRIPOD CAULDRON

Restored H (on drawing) 0.130; D (rim) est. 0.140

Seven joining frr. preserving portion of body, stump of one leg and the scar of a second; one nonjoining fr. preserves portion of rim; worn.

Coarse local clay with a great many small to largish white and light-colored inclusions and much mica, exclusively golden. Preserved frr. much blackened on exterior and central portion of body on interior; where not discolored, clay fired close to yellowish red 5YR 5/6 and reddish brown 5YR 5/4.

Rounded body, with upper wall curving in to tall neck; flaring rim, with chamfered lip. Legs (two partially preserved), oval in section, attached to body as shown. No trace of handles surviving.

Interior and exterior burnished smooth; surface dull.

Cf. **T123-2** and **T123-3**; also Benzi 1975: 225, pl. VII, no. 174 (Late Helladic III).

TOMB 71 (**FIG. 41A**; CONTENTS: **FIG. 127**)

TR 46 East Baulk Pot 2

URN CREMATION; VERY POORLY PRESERVED, NO CREMATED BONE ENCOUNTERED

As preserved, small and roughly circular pit 0.25 m long (max.), cut into bedrock a few centimeters deep; tomb encountered at a depth of 0.10 m below surface. In the center of the pit the fragmentary base of the wheelmade vertical-handled amphoriskos **T71-1**, presumably the ash-urn, was found in a poor state of preservation but in an upright position, set by compacted bedrock chips; a few frag-

ments of the vessel were found strewn in the tomb pit. No cremated bone was preserved, and the entire upper part of the tomb was destroyed.

T71-1 (84.250) **Fig. 127**
TR 46 East Baulk Pot 2
FRAGMENTARY WM VERTICAL-HANDLED AMPHORISKOS
D (base) est. 0.060
Preserved frr. beyond restoration and reconstruction; clay very fragile, with only flakes and tiny frr. recovered. Frr. preserve most of base and portion of shoulder, including parts of both handles.
Clay feels local, with small to medium white and light-colored inclusions and much golden mica still visible. Clay fired close to reddish yellow 5YR 7/6.
Low ring base with rounded resting surface; curved shoulder; neck becoming vertical. Two vertical handles, with concave upper faces, attached to upper shoulder.
Traces of paint, fired red, preserved only on top of one handle.
Amphoriskos probably not unlike **T55-1**, **T69-1**: cf. also **T44-1** and **T99-1**.

TOMB 72 (**FIG. 41A**; **PL. 179**; CONTENTS: **FIG. 128**; **PLS. 333A–B**, **495**)

TR 46 East Baulk Pot 1
URN CREMATION; SINGLE ADULT
Elliptical-shaped pit 0.40 m long (max.), cut 0.10 m deep into bedrock; tomb encountered at a depth of 0.10 m below surface. Within the center of the pit the wheelmade jug **T72-1**, which served as ash-urn, was placed in an upright position and firmly set by a number of chocking stones (both schist and limestone) on all sides except the east, and by compacted bedrock chips. Only the lower part of the vessel was preserved in situ, the upper part having been destroyed.

T72-1 (84.251) **Fig. 128**; **pls. 333a–b**
TR 46 East Baulk Pot 1
WM JUG; IMPORTED, PROBABLY CYCLADIC
PH 0.168; D (base) 0.070; PD (est.) at lower neck 0.067
Reconstructed from many joining frr. and partially restored, preserving entire base, about one-half of body, lower portion of handle, but only very small portion of lower neck.
Imported fabric, clay finer than local, with only the odd small white impurity but quite a bit of mica, both fine and small to medium flakes, evidently silver and golden. Clay evenly fired close to light reddish brown 5YR 6/4; slip closer to pink 7.5YR 7/4 and very pale brown 10YR 7/4.
Low ring base with narrow resting surface; underside flat; groove at junction of base and wall on exterior. Curved body, tending almost to biconical; narrow vertical lower neck. Vertical strap handle, oval in section, attached to upper body, just above point of max. D.
Slipped and painted: paint rather dull, but not as matte as local, tending to streak, especially on body. Fired black where thickest, in parts dark brown, in others approaching dark reddish brown. Base and lower body reserved; remainder of body and lower preserved neck painted solid except for reserved band at shoulder, decorated with groups of opposed diagonals (the one entirely preserved group comprises eight diagonals). Upper and outer faces of handle painted.
Probably Cycladic, see appendix E.
Cf. especially Desborough 1952:157, pl. 18, no. A1461 (from Rheneia). For similar decoration cf. the amphoriskoi, Dugas and Rhomaios 1934: pl. XIV, nos. 58–61.

TOMB 73 (**FIG. 40A**; **PL. 180**; CONTENTS: **FIGS. 129A–B**; **PLS. 263**, **361**)

TR 46 S.F.12 + 15
URN CREMATION; CREMATED REMAINS NONDIAGNOSTIC
Roughly circular pit ca. 0.50 m in diameter, cut 0.10 m deep into bedrock; tomb encountered at a depth of 0.15 m below surface. In the center of the pit the wheelmade neck-handled amphora **T73-1**, which presumably served as ash-urn, was placed on its side; given its state of preservation, it was not possible to determine the orientation of the vessel in situ with certainty. Beside **T73-1**, to the SE and

upright, was the handmade jug **T73-2**. The lower, preserved, parts of both vessels were firmly set in place with compacted bedrock chips; only in the west part of the tomb pit was at least one larger chocking stone encountered. The entire upper part of the tomb was destroyed, although some of the missing fragments of **T73-1** and **T73-2** were recovered from topsoil in the immediate vicinity of the tomb. There was no cremated bone encountered in situ in Tomb 73, although five postcranial fragments of cremated human bone (appendix A) were found nearby, not far from the fragments of the amphora **32** (not considered a tomb), and approximately 1.0 m to the north was Tomb 68. The few displaced fragments of bone probably belonged with Tomb 73, the closest tomb.

T73-1 (82.1160) **Fig. 129a**; **pl. 263**

TR 46 S.F.12

WM NECK-HANDLED AMPHORA

H 0.343; D (base) est. 0.100; D (rim) 0.140

Reconstructed from many joining frr. preserving about one-third of the vessel lengthways; complete profile preserved. Chipped and much worn, with most of the painted decoration not preserved.

Local clay with a great many small to medium, and some larger, white and light-colored inclusions and much silver and golden mica. Clay variously fired, mainly close to reddish yellow 7.5YR 6/6, in parts closer to pinkish gray 7.5YR 6/2, in others more red; slip, where preserved, slightly lighter.

Flat disk base very slightly hollowed out on underside to create a false ring foot with slightly rounded resting surface. Body ovoid, with lower wall rising steeply to point of max. D, which is set rather high, shoulder more curved. Vertical neck, offset from body by slight ridge; everted rim, slightly thickened toward rounded lip. Thick vertical handle with double concavity on upper face, attached from shoulder to neck. Vessel particularly thin walled toward lower body and at shoulder near neck.

Slipped and painted but extremely worn: paint, where preserved, dull and rather thickly applied with a tendency to flake; fired black to one side of handle, red toward the other. Slight traces of paint indicating probable band on lower wall and another near midpoint (not illustrated). Broad band on lower shoulder, from which springs at least one partially preserved set of mechanically drawn upright concentric semicircles; set comprises five arcs with small dot at center. Thin band at ridge offsetting body and neck, above which, on lower neck, is another thin band. Exterior face of rim painted; traces of paint on rim interior (not indicated on drawing). Upper face of preserved handle decorated with two stripes that follow the double concavity and extend onto body below. Handle decoration also extends onto neck as shown.

Cf. especially **T52-1** and **T74-1**.

T73-2 (82.1157) **Fig. 129b**; **pl. 361**

TR 46 S.F.15

HM JUG WITH CUTAWAY NECK

PH 0.150; D (base) 0.060–0.065; PD (neck) 0.050

Reconstructed from many joining frr. preserving entire base, most of lower body, but only small portion of shoulder, including lower handle attachment and two frr. only of neck and rim; worn.

Local clay with many small to medium white and light-colored inclusions and much mica, tending fine, predominantly golden. Clay fired two-tone, close to reddish yellow 5YR 6/6 on exterior half of clay body; light brown 7.5YR 6/4 and in parts dark gray toward interior half.

Flattened base; lower wall rises fairly steeply to point of max. D, which is set toward the upper part of the vessel; shoulder more curved. Neck offset from body by groove on exterior corresponding to angle formed on interior. As preserved, neck vertical, cut away, at which point rim is chamfered. Handle attached to upper body by piercing; slight projection of clay on interior; upper attachment directly to rim at cutaway; handle oval in section.

Exterior burnished, with pronounced tooling marks running horizontally on upper body,

diagonally opposed on lower wall; surface dull.

Cf., among others, **T70-2**, **T77-2**.

TOMB 74 (**FIG. 40A**; **PL. 181**; CONTENTS: **FIGS. 130A–C**; **PLS. 264**, **355**)

TR 46 S.F.13 + 14

URN CREMATION; CREMATED REMAINS NOT PRESERVED

Shallow circular pit almost 0.60 m in diameter, cut 0.07–0.12 m deep into bedrock; tomb encountered at a depth of 0.15 m below surface. In the west half of the pit the neck-handled amphora **T74-1**, which presumably served as ash-urn, was placed on its side, rim toward the SE; beside it, to the east and upright, was the handmade jug **T74-2**. Although the upper parts of both vessels were not preserved, their lower parts were firmly set in place by a number of small chocking stones, especially on the north side of the pit, and by compacted bedrock chips. There was no cremated bone preserved in situ.

T74-1 (82.1158) **Fig. 130a–b**; **pl. 264**

TR 46 S.F.13

FRAGMENTARY WM NECK-HANDLED AMPHORA

H 0.370; D (base) est. 0.126; D (rim) est. 0.150

Reconstructed from many joining frr. preserving about one-third of vessel lengthways, including one handle; complete profile preserved. Chipped and much worn.

Local clay with many small to medium white and light-colored inclusions and much silver and golden mica. Clay evenly fired close to light reddish brown 5YR 6/4; slip closer to reddish yellow 7.5YR 7/6.

Flat disk base, hollowed out on underside to create a false ring foot with rounded resting surface. Body similar to **T73-1**. Vertical neck offset from shoulder by small ridge, much worn. Everted and slightly thickened rim, with outer edge marked by slight concavity. Vertical handle, with double concavity on upper face, attached from shoulder to midpoint of neck. Vessel very thin walled in parts.

Slipped and painted: paint dull, mostly applied thickly with a tendency to flake, in parts more dilute. Paint fired black where thickest, light brown approaching red where dilute. Three thin horizontal bands on lower wall; three thin bands at point of max. D, above which is a broader band. Shoulder decorated with mechanically drawn upright concentric semicircles (portions of two sets preserved), each set comprising four arcs with solid hourglass filling ornament; outer arcs of each set overlap as shown. Ridge at junction of shoulder and neck is marked by a thin horizontal band, above which, on lower neck, is another. Upper neck and outer face of rim painted, which continues over rim onto interior. Upper face of handle decorated with two stripes that follow the double concavity, and that extend for some distance onto body below where they are joined by parallel stripes originating from the lower handle attachment. Handle decoration extends onto neck from the upper attachment as shown, although the termination itself is not preserved.

Cf. **T52-1** and especially **T73-1**.

T74-2 (82.1156) **Fig. 130c**; **pl. 355**

TR 46 S.F.14

FRAGMENTARY HM JUG

PH 0.140; D (base) approx. 0.060

Reconstructed from many very small joining frr. preserving entire base, most of lower body, parts of upper body, but only small portion of lower neck. Upper neck, rim, and handle not preserved.

Local clay with some small to medium white and light-colored inclusions and much silver and golden mica. Clay in most parts evenly fired close to brown 7.5YR 5/4; in parts slightly discolored gray.

Flattened base, very slightly pushed up on underside. Body tending biconical; preserved lower neck vertical, offset from body by groove on exterior corresponding to angle formed on interior; vessel thin walled.

Exterior burnished, with tooling marks running horizontally on upper body, diagonally

opposed on lower wall, crisscrossing on underside, producing a good but dull surface.
Cf., among others **T77-2**, also **T41-3**.

TOMB 75 (**FIG. 40A**; **PLS. 182–183**; CONTENTS: **FIGS. 131A–D**, **191E**; **PLS. 267**, **356A–C**, **371**, **475**, **496**)

TR 46 S.F.5 + 8 + 9
URN CREMATION; SINGLE ADULT (FEMALE?)
Shallow circular pit ca. 0.50 m in diameter, cut ca. 0.10 m deep into bedrock, although the edges of the pit were not very clear; tomb encountered at a depth of 0.15 m below surface. In the west part of the pit the belly-handled amphora **T75-1**, which served as ash-urn, was placed on its side, rim to the SSE (cf. orientation of Tomb 74); beside it, to the east and upright, was the handmade jug **T75-2**. Both vessels were found firmly set in place with compacted bedrock chips even though the upper part of the tomb was completely destroyed. In the south part of the pit, near **T75-2**, were found the fragments of the handmade kantharos **T75-3**; although the original position of this vessel was not clear, it would appear, from both its location and preserved state, that it was originally placed on its side over the rim of the ash-urn as a lid/cover (cf., among others, the position of **T82-2** in relation to the ash-urn **T82-1**). An amber bead, **T75-4**, was found inside the ash-urn with the cremated remains of the deceased, and a few of the missing fragments of the tomb pots were encountered in topsoil in the immediate vicinity.[27]

T75-1 (82.717) **Fig. 131a**; **pl. 267**
TR 46 S.F.5
FRAGMENTARY WM BELLY-HANDLED AMPHORA
H 0.317; D (base) est. 0.100; D (rim) est. 0.175
Reconstructed from many joining frr. preserving about one-quarter to one-third of vessel lengthways, including one handle; complete profile preserved; chipped and much worn.
Local clay with many small to medium white and light-colored inclusions and much silver and golden mica, the former tending to predominate. Clay evenly fired something like reddish brown 5YR 5/4–6/4 and light brown 7.5YR 6/4; slip closer to reddish yellow 7.5YR 7/6 and pink 7.5YR 7/4.
Low ring base with rounded resting surface; underside flat. Body globular, tending to sag, with point of max. D comparatively low. Shoulder and neck offset by pronounced ridge. Vertical neck; everted, almost outcurved, rim, tapering slightly to rounded lip. Small horizontal handle, round in section, attached at point of max. D. The body appears to have been slightly flattened as a result of attaching the handle.
Slipped and painted, but much worn: paint, as preserved, dull, thickly applied and with a tendency to flake, more dilute for tremulous lines; fired black. At least three and possibly four thin horizontal bands on upper part of lower wall, the bottom two very poorly preserved. Broad horizontal band on shoulder below three thinner bands, above which is a tremulous line approaching zigzag. Band on upper shoulder extending over ridge onto lower neck, above which is another, better preserved, tremulous line approaching zigzag. Upper neck and rim exterior painted; rim top possibly barred but uncertain (not indicated on drawing); upper neck on interior painted. Outer face of preserved handle painted, with decoration extending onto body as shown. Belly zone evidently reserved.
Amphora type as **T91-1** and **T104-1**, although decoration is different; cf. **4**.

T75-2 (82.716A) **Figs. 131b**, **191e**; **pls. 356a–c**
TR 46 S.F.8
FRAGMENTARY HM JUG (INCISED DECORATION)
POTTER'S MARK fig. 191e (= Papadopoulos 1994:448–450, fig. 9, pl. 115b,d, no. B8)
PH 0.124; PH (including handle) 0.143; D (base) 0.065–0.070
Reconstructed from many small frr. and partially restored, preserving most of base and lower body, much of the upper body including lower part of handle, but only small portion of neck; rim not preserved.
Local clay with many small to medium white and light-colored inclusions and much silver and golden mica; rather hard fired. Clay

core fired light gray; interior surface fired gray toward lower body but reddish yellow 5YR 6/6–6/8 toward upper body. Exterior surface mottled light gray and orangey red toward lower body; upper body evenly fired as core.

Flattened base with underside slightly pushed up as **T74-2**. Lower wall rising steeply to point of max. D, which is marked by two preserved sharply protruding mastoi or small lug handles (originally probably three around the vessel); shoulder more curved. Vertical lower neck, offset from body by groove on exterior corresponding to angle formed on interior. Lower, preserved, handle, round in section, attached to upper body by piercing, with slight projection of clay on interior. Lower handle attachment marked by another preserved mastos at the same level as those on body. Vessel thin walled.

Exterior burnished, with tooling marks running horizontally on lower wall, crisscrossing on underside. Shoulder burnished smooth and decorated with three incised motifs (all only partially preserved), with the two better preserved motifs arranged above mastoi. Each motif comprises a central vertical rib and two converging diagonals, which define an arrow shape, not unlike the potter's mark on **T41-3** (**fig. 191g**); each is filled with short incised strokes. On one of the motifs, short strokes are arranged on either side of one of the diagonals.

Potter's mark, impressed prior to firing, immediately below mastos at lower handle attachment. Two small impressed dots; for similar dots cf. the marks on **T41-3** and **T66-1** (**figs. 191d**, **g**).

For shape of jug cf. **T86-2** and **T70-2**. Cf. the much earlier incised decoration on a sherd from Paradeisos (Klisi Tepe) in Eastern Macedonia: Hellström and Holmberg 1978:142, fig. 2, bottom left corner.

T75-3 (82.716B) **Fig. 131c**; **pl. 371**

TR 46 S.F.8 bis

FRAGMENTARY HM KANTHAROS, Type 1

PH 0.075; D (rim) est. 0.150

Sixteen joining and nonjoining frr. preserving about one-third of upper body and rim, and small portion of lower wall; base and handles not preserved. Chipped and worn.

Local clay with many small to medium white and light-colored inclusions and much silver and golden mica. Clay core and much of interior and exterior surfaces fired close to pink gray 7.5YR 6/2; part of exterior surface mottled as **T75-2**.

Shallow lower wall rising to point of max. D, from where upper body curves in to short vertical rim, offset as shown; rounded lip.

Interior and exterior burnished but worn, with tooling marks, running mainly horizontally, preserved only at points.

Fabric and feel very close to **T75-2**. For shape cf., among others, **T10-1**, **T10-1a**, **T10-3**, **T82-4**, **T82-5**.

T75-4 (82.656) **Fig. 131d**; **pl. 475**

TR 46 S.F.9

AMBER BEAD

H 0.013; D (max.) 0.015; D (pierced hole) 0.001–0.0025; WT 3.98 g

Intact.

Small spheroid to pear-shaped bead, with one end slightly broader than the other. Bead drilled or pierced vertically. Surface slightly pitted.

For amber elsewhere in Macedonia in Early Iron Age contexts cf. Casson 1923–25:24; Vickers 1977:31, fig. V, no. 3.

TOMB 76 (**FIG. 40A**; **PL. 183**; CONTENTS: **FIG. 132**)

TR 46 S.F.4

URN CREMATION; SINGLE ADULT (MALE?)

Circular pit ca. 0.6 m in diameter, the edges of which were not well defined, cut 0.20 m deep into bedrock; tomb encountered at a depth of 0.10 m below surface. Within the center of the pit the wheelmade krater **T76-1**, which served as ash-urn, was placed upright and firmly set by compacted bedrock chips. The upper part of the tomb was not preserved and the vessel was recovered in a poor state of preservation. A small quantity of Early

Iron Age sherd material was encountered in the tomb pit.[28]

T76-1 (82.985A and B) **Fig. 132**
TR 46 S.F.4
FRAGMENTARY WM KRATER, Transitional type
Base fr. (82.985A): PH 0.055; D (base) 0.150
Body fr. (82.985B): PH 0.045; PL 0.075
Vessel recovered in extremely poor state of preservation. One fr. (82.985A) preserves entire base, plus seventy-six frr. in addition to tiny chips, preserving much of body; extremely worn; beyond repair. Only base fr. and one body fr. (82.985B) preserving incised decoration are illustrated. Rim and handles not preserved.
Local clay with small, medium, and occasional larger white and light-colored inclusions and much silver and golden mica, the latter tending to predominate; clay soft textured, powdery to touch. Clay core fired light gray only where thickest, elsewhere close to reddish yellow 5YR 6/6.
Large krater, with tall and heavy ring base; broad obliquely cut resting surface, rounded outside edge; underside flat; groove at junction of base and body on exterior. Lower body evidently curved; upper body vertical. Row of very poorly preserved incised diagonal strokes on upper body (82.985B), probably not far from rim: cf. **T58-1**.
Slipped and painted, but with decoration preserved only on base fr. (82.985A); paint, as preserved, dull, thickly applied, fired red. Broad horizontal band at junction of base and body. Virtually nothing of the original surface survives on the interior.
Krater of transitional local type: cf. especially **T48-1** and **T62-1**.

TOMB 77 (**FIG. 52A**; **PL. 184**; CONTENTS: **FIGS. 133A–C**; **PL. 265**)

TR 59 Pots 1 + 2
URN CREMATION; SINGLE ADULT
Papadopoulos 1998a:365, fig. 42.4

Irregular-shaped pit with an overall length of 1.40 m cut into bedrock; it consists of a circular part to the north (ca. 0.50 m in diameter × 0.20 m deep), and a long shallow extension to the south; tomb encountered at a depth of 0.10–0.15 m below surface. Despite a superficial similarity, the tomb does not resemble an Athenian "trench-and-hole" cremation, not least in that the ash-urn is placed on its side. Moreover, the shallow extension to the south hardly qualifies as a true "trench" in the Athenian manner (for Athenian trench-and-hole cremations see Smithson 1961:152, n. 9; Styrenius 1967:66, 73, 76, 91; Kurtz and Boardman 1971:37). In the deeper, circular part of the pit the neck-handled amphora **T77-1**, which served as ash-urn, was placed on its side, rim to the west; beside it, to the NNW and upright, was the handmade jug **T77-2**. Fragments of a wheelmade skyphos **T77-3** were encountered with the fragments of the jug **T77-2** near the rim of **T77-1**, and although the exact position of the skyphos was not noted in the field, it probably served as a lid/cover for the ash-urn, placed on its side (cf. Tombs 75, 82). The preserved remains of **T77-1** and **T77-2** were found firmly set in place by compacted bedrock chips, the entire upper part of the tomb having been destroyed; no significant fragments of any of the tomb pots were encountered in topsoil in the immediate vicinity.[29] Several fragments of sheep/goat, all unburned, were found inside the ash-urn with the cremated human remains (appendix B).

T77-1 (84.286) **Fig. 133a**; **pl. 265**
TR 59 Pot 2
FRAGMENTARY WM NECK-HANDLED AMPHORA
H 0.436; D (base) est. 0.110; D (rim) est. 0.140
Reconstructed from many joining frr. preserving about one-third of vessel lengthways, including one handle; complete profile preserved. Chipped and extremely worn, with little of the painted decoration preserved.
Local clay with many small and some medium white and light-colored inclusions and much mica, predominantly silver. Clay evenly fired close to pink/light brown 7.5YR 7/4–6/4; slip, where preserved, closer to very pale brown 10YR 7/3–8/3.

Flat disk base, slightly hollowed out on underside to create a false ring foot. Body ovoid and comparatively tall. Vertical neck offset from shoulder by small ridge. Everted, and slightly thickened, rim with rounded lip. Thick vertical handle, with double concavity on upper face, attached from upper wall to neck below rim.

Slipped and painted but very much worn: painted decoration mostly indicated by fugitive impressions remaining on slip. The drawing of the decoration is only tentative, especially the concentric circles on the lower wall. Where preserved, paint fired black/dark brown. Probable band(s) on lower wall (only one indicated on drawing). Point of max. D decorated by broad band enclosed by two thinner bands above and below. Traces of horizontal band at ridge offsetting shoulder and neck. Portion of one preserved set of mechanically drawn concentric circles on shoulder; set comprises five circles with small dot at center. On the upper part of the lower wall appears to be preserved the central dot, along with the impression made by the pivoted multiple brush point, of another set of concentric circles; parts of two inner circles and portion of an outer circle were visible prior to mending, but these are very tentative. On the basis of this evidence a second row of concentric mechanically drawn circles is possible, but not certain, on the lower wall (one set of circles is presented on the lower wall on the drawing, restored on the basis of the better preserved set on the shoulder). Traces of paint on upper face of preserved handle, probably of stripes following the double concavity; further traces of paint at upper handle attachment, indicating extension of handle decoration onto neck, otherwise not preserved (not indicated on drawing). No decoration preserved at rim or on interior.

For shape cf. **T41-1**, **T73-1**, **T74-1**, **T124-1**.

T77-2 (84.285) **Fig. 133b**

TR 59 Pot 1

FRAGMENTARY HM JUG WITH CUTAWAY NECK

PH 0.165; D (base) 0.060

Reconstructed from many joining frr. preserving entire base and lower wall, most of upper wall, parts of lower neck, and small portion of rim where cut away; handle not preserved; chipped and worn.

Local clay with a great many small to medium white and light-colored inclusions and much mica, almost exclusively golden. Clay core fired gray only at points where wall thickness is greater; elsewhere clay and interior surface fired close to light brown 7.5YR 6/4, exterior surface closer to reddish yellow 7.5YR 6/6.

Flattened base; body rounded but tending almost biconical, with wall clearly thickest at shoulder. Vertical neck, offset from body by groove on exterior corresponding to angle formed on interior. Neck cut away, at which point rim is chamfered; slight thickening at rim indicating point of upper handle attachment.

Exterior burnished but worn, with tooling marks running vertically on neck, horizontally on upper body and diagonally opposed on lower wall.

For shape cf. especially **T74-2**.

T77-3 (84.408) **Fig. 133c**

TR 59 Pot 2 bis

RIM AND BODY FRR.; WM PENDENT SEMICIRCLE SKYPHOS; IMPORTED, PROBABLY EUBOIAN

PH 0.057; D (rim) est. 0.180

Six joining frr. preserving small portion of rim and upper body; chipped and very worn with little of the painted decoration preserved.

Imported fabric, finer and better levigated than local, with only the occasional white impurity and quite of bit of surface mica, predominantly golden. Clay evenly fired close to reddish yellow 5YR 6/6; slip, where preserved, slightly lighter.

Body slightly curved; low offset rim, with rounded lip.

Slipped and painted but much worn: paint, as preserved, evenly applied with a slight luster; fired red on most of interior and exterior, approaching black at points on exterior. Rim exterior painted; rim top either reserved or paint completely worn. Faint, but clear, traces of at least five arcs (both inner and outer) of one set of mechanically drawn pendent concentric semicircles and of impression made by pivot point.

Fabric probably Euboian, see appendix E.

Shape most consistent with Kearsley's type 3: Descoeudres and Kearsley 1983:44, 47; Kearsley 1989:92–95; cf. Dugas and Rhomaios 1934: pl. XXVI.

TOMB 78 (**FIG. 52A**; **PL. 185**; CONTENTS: **FIG. 134**; **PLS. 286A–B**)

TR 59 Pot 3

URN CREMATION; SINGLE ADULT

Small circular pit 0.30–0.40 m in diameter, cut 0.20 m deep into bedrock, that formed the SE and deepest part of a larger, shallower pit with a maximum length of 0.70 m and an average depth of 0.05–0.10 m; tomb encountered at a depth of 0.20 m below surface. Within the circular, deeper, part of the pit the wheelmade amphora **T78-1**, which served as ash-urn, was placed upright and firmly set by compacted bedrock chips; the vessel was recovered almost complete except for chipping at rim. No tomb cover was encountered, although a number of small and medium-size stones, mainly schist, were noted in the immediate vicinity and may possibly represent a displaced stone covering. At least one seashell fragment was recovered from the ash-urn (appendix C).

T78-1 (84.279) **Fig. 134**; **pls. 286a–b**

TR 59 Pot 3

SMALL WM AMPHORA WITH BELLY AND SHOULDER HANDLES

H 0.195; D (base) 0.084; D (rim) 0. 090

Vessel recovered almost complete except for missing frr. at rim; reconstructed from frr. and partially restored. Chipped and much worn.

Local clay with a great many small to medium, and some larger, white and light-colored inclusions and much mica, silver tending to predominate; occasional blowouts. Clay evenly fired close to light brown 7.5YR 6/4 and pale brown 10YR 6/3; slip slightly lighter.

Low ring base; groove at junction of base and wall on exterior. Small globular body with point of max. D set near middle. Short vertical neck offset from shoulder by small ridge. Vertical rim with slight thickening on exterior; rounded lip. Two small horizontal belly handles, round in section, attached at point of max. D; two small vertical handles, with concave upper face, attached at shoulder below ridge and set midway between belly handles.

Slipped and painted, but much worn especially toward upper body: paint, as preserved, dull, with a tendency to flake where thickest; fired black. Broad band on lower wall above groove at junction with base, above which are two thinner bands. Midpoint decorated with broad band above two thinner bands. Above this point decoration is very worn. On one side of the vessel there are faint traces of what may be a wavy line in the reserved belly zone (not illustrated). Horizontal band on shoulder, above which is a partially preserved tremulous line approaching zigzag. Neck and rim above small ridge painted, which continues over rim onto interior for 0.022 m. Upper and outer faces of all four handles painted, with decoration extending onto body as shown. Splashes of paint on interior at a level well below rim.

For shape cf. the larger **T86-1**; for rim form cf. especially **T26-1**.

TOMB 79 (**FIG. 40A**; **PL. 186**; CONTENTS: **FIG. 135**; **PLS. 330A–B**)

TR 46 S.F.11

URN CREMATION; CREMATED REMAINS NONDIAGNOSTIC

Circular pit 0.45 m in diameter, cut 0.15 m deep into bedrock; tomb encountered at a depth of 0.17 m below surface. Within the center of the pit the wheelmade krater **T79-1**, which served as ash-urn,

was placed in an upright position and firmly set by compacted bedrock chips. The upper part of the tomb was not preserved; although only the lower portion of the ash-urn was encountered in situ, it was clear that the vessel, which had been mended in antiquity, was placed in the tomb pit in a broken state as nothing of the original resting surface of the pot was preserved. No missing fragments of the vessel were recovered from topsoil. Only a few scraps of cremated bone were recovered from the ash-urn (not analyzed in appendix A).

T79-1 (82.1159) **Fig. 135**; **pls. 330a–b**
TR 46 S.F.11
FRAGMENTARY WM KRATER; VESSEL MENDED IN ANTIQUITY
PH 0.140; D (base, at junction with body) 0.130
Twenty joining frr. preserving lower portion of vessel; base with resting surface not preserved; much worn.
Local clay with many small to medium, and some larger, white and light-colored inclusions and much mica, predominantly golden; clay soft textured and perhaps poorly fired. Clay core fired gray, elsewhere close to reddish yellow 5YR 6/6; slip, where preserved, slightly lighter.
Shallow, curved lower wall; form of base undetermined, but clearly from a large vessel.
Slipped and painted but almost completely worn: traces of slip but no preserved paint on exterior; faint traces of paint, fired red, on interior.
Vessel mended in antiquity (**pls. 330a–b**) with large lead clamp (max. L × W: 0.062 m × 0.055 m) preserved in two joining frr. and comprising a large flattened disk employed not only to hold together broken frr. but also to fill and seal a hole created by the breaking of the base. One small mending hole also is preserved. For similar clamps cf. the earlier Bernabò-Brea 1976:292, pl. CCXXXIVs and the later D. Robinson 1941: 334, pl. C, no. 1592.
Shape and general proportions of vessel close to kraters of Type 1: cf. **T102-1** and **T116-1**, also the Transitional **T48-1**. For state of preservation cf. **T40-1**.

TOMB 80 (**FIG. 34A**; **PL. 187**; CONTENTS: **FIGS. 136A–B**; **PL. 364**)

TR 27 S.F.1 + 2
URN CREMATION; SINGLE ADULT
Shallow circular to elliptical-shaped pit 0.75 m long (max.), cut 0.10 m deep into bedrock; tomb encountered at a depth of 0.10 m below surface. In the east half of the pit the wheelmade amphora **T80-1**, which served as ash-urn, was placed on its side; the vessel was roughly oriented east–west, but as the base was not preserved and the rim fragments were found displaced in the tomb pit, it was not clear which direction the mouth of the vessel faced in situ. Beside **T80-1**, to the west and upright, was the fragmentary base of the handmade jug **T80-2**; both vessels were found firmly set in place by compacted bedrock chips, even though the upper part of the tomb was completely destroyed. Missing fragments of the tomb pots were not encountered in topsoil.[30]

T80-1 (82.154A and B) **Fig. 136a**
TR 27 S.F.1
FRAGMENTARY WM AMPHORA
PH (as restored on paper) 0.405; D (rim) est. approx. 0.175
Many joining and nonjoining frr. preserving about one-third of body lengthways (82.154A) and about one-third of neck and rim (82.154B), but nothing of base or handles. Surface of vessel extremely worn.
Local clay with many small to medium, and some larger, white and light-colored inclusions and much silver and golden mica; occasional blowouts. Clay core fired gray, elsewhere close to reddish yellow 5YR 7/6–6/6.
Body tending ovoid; tall vertical neck, offset from shoulder by slight ridge, much worn. Everted rim, with rounded lip. Wheelmarks prominent on interior and exterior.
Vessel clearly slipped and painted but with almost nothing preserved of decoration. Faint traces of possible horizontal band on shoulder near junction with neck and of two other bands, one near point of max. D, the other on lower wall near break, but too poorly preserved to attempt illustration.

Traces of paint on neck below rim suggest that neck may have been painted solid.

Amphora type uncertain; rim form more consistent with neck-handled amphorai: cf. **T52-1**, **T74-1**, **T77-1**, **T124-1**; however, the proportions of the body, its size, and the possibility the neck was painted would rather indicate a belly-handled amphora: cf. **T104-1**. Cf. also the amphora with belly and shoulder handles, **T67-1**.

T80-2 (82.152) **Fig. 136b**; **pl. 364**

TR 27 S.F.2

FRAGMENTARY HM JUG

PH 0.080; D (base) approx. 0.045

Six joining frr. preserving entire base, about one-half of lower body, and small portion of upper body.

Local clay with many small to medium white and light-colored inclusions and much mica, predominantly silver. Clay core fired gray; interior surface fired close to red 2.5YR 5/8, exterior closer to yellowish red 5YR 5/6.

Flattened base; comparatively small rounded body.

Exterior burnished, with pronounced tooling marks running horizontally on upper body, diagonally opposed on lower wall, criss-crossing on underside, and producing a good but dull surface.

For shape cf., among others, **T41-3**, **T70-2**.

TOMB 81 (**FIG. 53A**; **PL. 188**; CONTENTS: **FIGS. 137A–D**; **PLS. 277**, **324**, **362**, **366**)

TR 60 Pots 1 + 2 + 3 + 4

URN CREMATION; SINGLE ADULT

Roughly circular pit ca. 0.70 m in diameter, cut 0.14 m deep into bedrock; tomb encountered at a depth of 0.05 m below surface. In the center of the pit the wheelmade amphora with belly and shoulder handles **T81-1**, which served as ash-urn, was placed on its side, rim toward the SE; over the mouth of the ash-urn the wheelmade lekanis **T81-2** was also placed on its side as a lid/cover. Immediately to the north, beside the ash-urn, the handmade jug with round mouth **T81-3** was placed in an upright position, as was the fragmentary handmade jug **T81-4** (probably with cutaway neck) to the south. All four vessels were firmly set in place by compacted bedrock chips; in the north part of the tomb pit a neatly laid line of stones (schist and limestone) was set around the ash-urn. The upper part of the tomb was completely destroyed, with the result that only about one-third to one-half of the ash-urn, and about the same proportion of **T81-2** and **T81-4**, were preserved; the smaller **T81-3** was recovered almost complete. A few very small fragments of the tomb pots were encountered in topsoil in the immediate vicinity of the tomb. A number of marine-shell fragments were found inside the ash-urn with the cremated human remains (appendix C).

T81-1 (84.372) **Fig. 137a**; **pl. 277**

TR 60 Pot 1

FRAGMENTARY WM AMPHORA WITH BELLY AND SHOULDER HANDLES

H 0.429; D (base) 0.100; D (rim) 0.200

Reconstructed from many joining frr. preserving between one-third and one-half of vessel lengthways, including one shoulder handle and portion of one belly handle; complete profile preserved. Vessel chipped and extremely worn, with little of the painted decoration preserved.

Local clay with a great many small to medium white and light-colored inclusions and much mica, finer tending golden, larger flakes mainly silver. Clay core fired light gray, elsewhere close to reddish yellow 5YR 6/6 and 7.5YR 6/6; slip, where preserved, slightly lighter.

Flat disk base only very slightly hollowed out on underside to create a false ring foot with rounded resting surface. Body tall, tending ovoid; comparatively short vertical neck; everted, almost knobbed rim, flat on top and with rounded outside edge. Thick horizontal belly handle, round in section, attached at point of max. D. Small vertical shoulder handle, thin in section with slight concavity on upper face, attached from upper shoulder to lower neck and set midway between belly handles. Vessel rather thin walled, especially toward base.

Slipped and painted, but much worn: paint, as preserved, dull and originally quite thickly

applied, fired red. No preserved decoration on lower body except for very faint traces of paint, barely visible. Horizontal band on lower shoulder, above which, on either side of preserved shoulder handle, are traces of crosshatching, evidently crosshatched triangles (portions of two triangles preserved, partially reconstructed on drawing). Horizontal band at junction of shoulder and neck, above which is a thin reserved band. Upper neck and rim exterior painted solid. No preserved decoration on rim or interior. Upper face of vertical handle decorated with three vertical stripes as shown.

Cf. especially **T83-1**, also **39**, **T56-1**, **T82-1**, and cf. Schachermeyr 1979:208–209, pl. 23a, Subminoan amphora with belly and shoulder handles from Liliana (near Phaistos), Crete.

T81-2 (84.376) **Fig. 137b**; **pl. 324**

TR 60 Pot 2

FRAGMENTARY WM LEKANIS, Type 2

H (to rim) 0.110; H (to handle) 0.117; D (base) 0.070; D (rim) 0.215

Eight joining frr. preserving about one-third of vessel, including portion of one handle; complete profile preserved.

Local clay but with fewer than normal small white and light-colored inclusions and much silver and golden mica. Clay core fired light gray only at points where wall thickness is greatest, elsewhere close to pink 7.5YR 7/4 and light brown 7.5YR 6/4; thickish slip, closer to very pale brown 10YR 8/4.

Low ring base with very narrow resting surface; underside flat; groove at junction of base and body on exterior. Shallow, curved lower wall, becoming vertical toward top; broad outcurved rim, offset from body by slight carination. Exterior face of rim rounded, flat on top. Portion of one horizontal ribbon handle preserved, attached to rim immediately below lip and rising slightly above level of rim.

Slipped and painted: paint dull, evenly and quite thickly applied; fired black on exterior, mostly red on interior, becoming darker toward center of floor. Base and lower body reserved; remainder of body and lower rim painted solid. Exterior face of rim and upper face of handle reserved. Rim top barred as shown, with strokes arranged in groups of five around rim. Interior painted solid.

Cf. **T83-2**; there is an almost identical vessel from Aphytis, Polygyros museum, inv. 270 (cf. Gioure 1971).

T81-3 (84.370) **Fig. 137c**; **pl. 366**

TR 60 Pot 3

SMALL HM JUG WITH ROUND MOUTH

H 0.107; D (base) 0.055; D (rim) 0.070–0.082

Vessel recovered almost complete except for small portions of neck, rim, and upper handle; reconstructed from five joining frr. plus one nonjoining fr. of rim. Vessel chipped toward upper body.

Local clay with many small to medium white and light-colored inclusions and much silver and golden mica, tending fine. Clay evenly fired close to gray 10YR 5/1 and dark gray 10YR 4/1.

Flattened base; rounded body; vertical neck, offset from shoulder by scraped groove on exterior. Gently flaring to outturned rim, with rounded lip; round mouth, which is slightly warped. Vertical handle attached at point of max. D and rising above level of rim (upper part not preserved); handle section becoming progressively thicker toward top.

Exterior and neck interior burnished, with rather faint tooling marks running horizontally on neck and upper body, diagonally opposed on lower body and producing a good but dull surface.

Shape unique among the Early Iron Age finds from the Terrace V cemetery, although cf. the individual jugs of the double vase **T69-2**. Cf. Heurtley 1939: pl. XXIIIe, g, h, t, u (from Patele); Andronikos 1969:215–218, especially P4, D21.

T81-4 (84.373) **Fig. 137d**; **pl. 362**

TR 60 Pot 4

FRAGMENTARY HM JUG, PROBABLY WITH CUTAWAY NECK

PH 0.117; D (base) approx. 0.070

Reconstructed from many joining frr. preserving entire base and most of lower wall, plus about one-half of upper body; one small fr. preserves junction of shoulder and neck. Chipped and slightly worn.

Local clay with many small to medium white and light-colored inclusions and much mica, golden tending to predominate. Clay core fired light gray, elsewhere close to reddish yellow 5YR 6/6 and 7.5YR 6/6.

Flattened base; body tending biconical; junction of shoulder and neck marked by groove on exterior.

Exterior burnished, with tooling marks running horizontally on upper body, diagonally opposed on lower wall, crisscrossing at base, producing a dull surface.

Cf., among others, **T77-2**.

TOMB 82 (**FIG. 24A**; **PL. 189**; CONTENTS: **FIGS. 138A–E**, **191F**; **PLS. 278**, **319**, **359**, **369–370**)

TR 12 S.F.24 Pots 1–5

URN CREMATION; CREMATED REMAINS NONDIAGNOSTIC

Papadopoulos 1998a:364–365, figs. 42.1, 42.5

As preserved, shallow pit ca. 0.60 m long with edges not clearly defined, cut less than 0.10 m deep into bedrock; tomb encountered at a depth of 0.05 m below surface. In the center of the pit the wheelmade amphora **T82-1**, which served as ash-urn, was placed on its side, rim to the east; the entire bottom half of the vessel, which lay to the west, as well as its upper parts, which lay above the level of the top of the pit, were not preserved. It is clear that that part of the tomb pit cut into bedrock was never deep enough to accommodate the vessel entirely. Over the mouth of the ash-urn the wheelmade pendent semicircle skyphos **T82-2** was placed on its side as a lid/cover; only that part of the vessel that lay below the neck and rim of **T82-1** was preserved. Beside it, to the south and in an upright position, was the small handmade jug **T82-3**, which was recovered almost complete. Slightly further south and west, two handmade kantharoi **T82-4** and **T82-5** were placed on their sides; the upper parts of both vessels were not preserved. Although much damaged, what was encountered of the tomb pots was clearly in situ, each vessel set in its respective position by compacted bedrock chips. A few of the missing fragments of **T82-1**, **T82-4**, and **T82-5**, as well as a few fragments of cremated human bone (not analyzed in appendix A), were recovered from topsoil in the immediate vicinity of the tomb.[31]

T82-1 (81.570) **Fig. 138a**; **pl. 278**

TR 12 S.F.24 Pot 1

FRAGMENTARY WM AMPHORA WITH BELLY AND SHOULDER HANDLES

PH 0.237; D (rim) est. 0.14; PL 0.198

Reconstructed from many joining frr. and partially restored, preserving portion of shoulder, including one vertical handle, and about one-third of neck and rim. Slightly chipped.

Local clay with many small to medium white and light-colored inclusions and much mica, silver tending to predominate. Clay and slip evenly fired close to very pale brown 10YR 7/4 and light yellowish brown 10YR 6/4.

Curved shoulder, body evidently ovoid; vertical neck; everted, almost horizontal, rim, flat on top and with rounded outside edge. Small vertical shoulder handle, thin in section with slight concavity on upper face, attached at upper shoulder directly below junction with neck. Wheelmarks prominent on interior.

Slipped and painted: paint dull, evenly applied; fired black. Portions of two horizontal bands on lower shoulder at break, above which is a broader band from which springs a row of crosshatched triangles (parts of five triangles preserved); above is another broad band, and above that a row of vertical strokes arranged in groups of five (metope pattern). Above are two thinner bands, from the uppermost of which springs another row of crosshatched triangles on either side of the handle (four triangles preserved); above these, in turn, is another thin band that extends onto part of the outer faces of the handle. Upper face of handle decorated with two vertical stripes as shown, which are connected on top of handle arch by a horizontal bar. Neck and outside edge of rim painted solid. Rim top barred, with strokes set in

groups of five as on shoulder (three groups preserved). Upper neck on interior painted.

For shape and decoration cf. **T83-1**, **T56-1**, **T81-1**.

T82-2 (81.523) **Fig. 138b**; **pl. 319**

TR 12 S.F.24 Pot 2

FRAGMENTARY WM PENDENT SEMICIRCLE SKYPHOS

PH 0.118; D (rim) 0.170

Seven joining frr. preserving about one-half of body, rim, and small portions of both handles; base not preserved. Surface worn.

Local clay with many small white and light-colored inclusions and a great deal of mica, golden tending to predominate. Clay evenly fired close to reddish yellow 7.5YR 7/6 and 5YR 6/6; slip closer to very pale brown 10YR 7/4.

Curved lower wall; almost vertical upper wall; short everted rim, offset from body; rounded lip. Two horizontal handles (partially preserved), round in section, attached to upper wall below rim.

Slipped and painted: paint dull, somewhat worn; variously applied and fired. On interior evenly and rather thickly applied, fired red. On exterior, thick in parts, more dilute in others, fired from red to pale light red, dark brown to pale brown toward left of fr. Preserved lower wall painted solid, above which are two horizontal bands; rim painted, as are the preserved outer faces of the handles, with the decoration extending onto body as shown. Upper body, thus defined, is decorated with two sets of mechanically drawn pendent concentric semicircles, each set comprising nine arcs, with their terminations extending onto painted rim; the outermost arc of each set touches the other. Interior, as preserved, painted solid.

Unfortunately the base is missing and the exact type difficult to determine. By analogy with pendent semicircle skyphoi elsewhere, rim form is more consistent with Kearsley's type 3: cf. Descoeudres and Kearsley 1983:44, fig. 40 (= Volos K1357); Kearsley 1989: pl. 6a; however, the horizontal bands on lower wall are unusual; similar bands are found on one only of seven pendent semicircle skyphoi at Vergina: cf. Andronikos 1969:168, fig. 23, no. P21 (although the rim is taller than **T82-2**). Cf. the imported **T77-3**.

T82-3 (81.822) **Figs. 138c**, **191f**; **pl. 359**

TR 12 S.F.24 Pot 3

FRAGMENTARY HM JUG

POTTER'S MARK fig. 191f (= Papadopoulos 1994:448–450, fig. 9, pl. 115c, no. B9)

PH 0.120; D (base) 0.058

Recovered in one main piece, with only small frr. reconstructed; most of neck and rim not preserved.

Local clay with many small to medium white and light-colored inclusions and much silver and golden mica. Clay and surfaces fired fairly evenly something like brown 10YR 5/3.

Flattened base; small rounded body, tending biconical, with point of max. D comparatively rather low. Neck and rim preserved only at point where handle is attached to cutaway part of rim. Junction of shoulder and neck marked by groove on exterior corresponding to angle formed on interior. Small vertical handle, oval to plano-convex in section, attached to body by piercing, with projection of clay preserved on interior.

Exterior burnished almost smooth, but with faint tooling marks visible running mainly horizontally, producing a dull surface.

Potter's mark, incised prior to firing, on body immediately below lower handle attachment. *Lambda*-shaped mark comprising two converging diagonals that cross over slightly at the top; cf. the marks on **T10-1** and **T41-3**.

For shape cf. especially **T38-2**, **T41-3**.

T82-4 (81.524) **Fig. 138d**; **pl. 370**

TR 12 S.F.24 Pot 4

FRAGMENTARY HM KANTHAROS, Type 1

H 0.080; D (base) 0.065; D (rim) 0.145

Many joining frr. preserving entire base and about one-third to one-half of body and rim; small portion only of one handle scar

preserved, with a slight thickening of wall near side opposite. Chipped and slightly worn.

Local clay with small to medium white and light-colored inclusions and much mica, predominantly golden. Clay and surface evenly fired close to reddish yellow 5YR 6/6 and 7.5YR 6/6.

Flattened base; lower wall rising at an angle of about 45°; upper wall curving in to short vertical rim, offset from body by groove on exterior corresponding to thickening on interior; lip chamfered. Vessel thin walled.

Interior and exterior burnished, with pronounced tooling marks running horizontally on upper body, diagonally opposed on lower body, horizontal on underside, and producing a good surface with a very slight sheen.

Cf. **T82-5**; also **T10-1**, **T10-1a**, **T10-3**.

T82-5 (81.726) **Fig. 138e**; **pl. 369**

TR 12 S.F.24 Pot 5

FRAGMENTARY HM KANTHAROS, Type 1

H (to rim) 0.084; H (to handle) 0.120; D (rim) 0.164

Fourteen joining frr., plus a few nonjoining chips, preserving about one-half of vessel lengthways, including one handle; complete profile preserved; surface worn.

Local clay with small white and light-colored inclusions and much mica, golden tending to predominate. Clay variously fired from brown 7.5YR 5/4 through dark gray; interior surface mostly dark gray, in parts discolored black; handle fired closer to reddish yellow 5YR 6/6, but in parts light gray.

Shape as **T82-4**, but with rim slightly more thickened on interior. Vertical high-swung handle, thin in section, with edges chamfered; handle decorated on inner face with impressed fingermark just above attachment to rim, as **T10-1**, **T10-1a**, and **T10-3**.

Interior and exterior burnished, with tooling marks running horizontally on interior, horizontally and diagonally on exterior, crisscrossing on underside, and producing an evidently dull surface, which is worn.

Cf. **T82-4**.

TOMB 83 (**FIG. 53A**; **PL. 190**; CONTENTS: **FIGS. 139A–B**; **PLS. 279**, **497A–B**)

TR 60 Pot 5

URN CREMATION; DOUBLE CREMATION, ADULT AND CHILD/INFANT

Circular pit 0.55 m in diameter, cut 0.14 m deep into bedrock; tomb encountered at a depth of 0.10 m below surface. In the center of the pit the wheelmade amphora with belly and shoulder handles **T83-1**, which served as ash-urn, was placed on its side, base to the NE; only about one-third of the body of the vessel lengthways was preserved, including small portion of the base. In the SW part of the tomb pit, in the area where the missing rim of **T83-1** originally lay, were recovered the displaced fragments of the lekanis **T83-2**, which would have probably originally served as lid/cover for the ash-urn placed on its side (cf. **T81-2**, **T82-2**). The ash-urn was firmly set in place by compacted bedrock chips; the upper part of the tomb was not preserved. The ash-urn contained 314 g of cremated human bone, mainly of an adult whose sex could not be determined, but also at least 4 g from the vault of a cranium of an infant or child (appendix A; cf. also the case of nearby Tomb 84). A fragment of a land-snail shell was recovered from the tomb (appendix C).

T83-1 (84.374) **Fig. 139a**; **pl. 279**

TR 60 Pot 5

FRAGMENTARY WM AMPHORA WITH BELLY AND SHOULDER HANDLES

PH 0.352; D (base) 0.120; PD (neck) 0.130

Several large frr. preserving about one-third of body and portion of base, plus smaller frr. of neck and base; reconstructed and partially restored. Rim, both belly handles, and one shoulder handle not preserved; vessel chipped.

Local clay but with fewer than normal white and light-colored inclusions, and much silver and golden mica, the latter tending to predominate. Clay core fired light gray, elsewhere clay and slip closer to reddish yellow 7.5YR 7/6.

Flat disk base, distinctly hollowed out on underside to create a false ring foot with rounded resting surface; underside thin and

flat. Body ovoid, with slight thickening of wall near midpoint indicating likely position of belly handles. Neck becoming vertical, offset from shoulder by slight ridge. Small vertical shoulder handle, thin in section with slight concavity on upper face, attached at small ridge and set midway between thickening at wall indicating position of belly handles. Vessel thin walled.

Slipped and painted: paint dull, evenly and rather thickly applied; fired red on one side of vertical handle, dark reddish brown on the other. Three thin horizontal bands on lower wall; three thin bands at midpoint, from the uppermost of which springs a row of six preserved crosshatched triangles. Above are two more thin bands (which run below shoulder handle), above which is another row of crosshatched triangles (four preserved, two on either side of handle). Above this are two thin bands, one below and one above the small ridge; preserved neck painted solid. Upper face of vertical handle decorated with two parallel vertical stripes, which terminate at horizontal band directly below. Two more or less parallel diagonals lines at midpoint associated with wall thickening for belly handle represent extension onto body of the decoration on the outer face of the nonpreserved handle. On one nonjoining fr. of neck there is paint on interior.

For shape and decoration cf. **T56-1**, **T81-1**, **T82-1**.

T83-2 (84.409) **Fig. 139b**

TR 60 Pot 5 bis

FRAGMENTARY WM LEKANIS, Type 2

PH 0.055; D (rim) est. 0.180

Six joining frr. preserving small portion of rim, upper wall, and much of one handle; slightly worn.

Local clay as **T81-2**, but with slightly less mica and even fewer inclusions.

Shape as **T81-2**, but with outer face of handle more concave.

Slipped and painted: paint dull, thickly applied; fired black. Preserved body and lower rim painted solid except for reserved band below handle. Outer edge of rim and rim top reserved; interior painted.

The counterpart of **T81-2**.

TOMB 84 (**FIG. 53A**; **PL. 191**; CONTENTS: **FIGS. 140A–D**; **PLS. 280**, **363**)

TR 60 Pots 9 + 10 + 11

URN CREMATION; DOUBLE CREMATION, ADULT (FEMALE?) AND CHILD/INFANT

Circular to elliptical-shaped pit 0.65 m long (max.), cut 0.11–0.24 m deep into bedrock; tomb encountered at a depth of 0.10 m below surface and only a short distance SW of Tomb 83. In the center of the pit the wheelmade amphora with belly and shoulder handles **T84-1**, which served as ash-urn, was placed on its side, base toward to the NE (cf. Tomb 83). Beside it, to the west and in an upright position, was the handmade jug **T84-2**; both vessels were found firmly set in place with compacted bedrock chips. The upper part of the tomb was completely destroyed. Fragments of three more vessels were recovered from the tomb pit, but their original position could not be determined: one was the base of a handmade jug **T84-3**, another a rim fragment of a wheelmade lekanis **T84-4**; there were, in addition, some very tiny fragments of what was probably a handmade kantharos (not catalogued), not unlike **T82-4** and **T82-5**. **T84-4** may have originally served as lid/cover for the ash-urn (cf. **T81-2**, **T82-2**, **T83-2**), but as the actual rim of **T84-1** was not preserved it is impossible to be certain. A few of the missing fragments of **T84-1** and **T84-2** were recovered from topsoil in the immediate vicinity of the tomb. The ash-urn contained 281 g of cremated bone, primarily of an adult (probably female), but also some very small cremated fragments of a child or infant (appendix A; cf. Tomb 83).

T84-1 (84.379) **Fig. 140a**; **pl. 280**

TR 60 Pot 9

FRAGMENTARY WM AMPHORA WITH BELLY AND SHOULDER HANDLES

PH 0.352; D (base) est. 0.132; PD (neck) 0.114; est. max. PD (body) 0.314

Reconstructed from many joining frr. preserving small portion of base, about one-third to one-half of body lengthways, including parts

of one belly and both shoulder handles, but only small portion of lower neck; upper neck and rim not preserved. Vessel chipped and worn.

Local clay with many small white and light-colored inclusions and much mica, almost exclusively silver. Clay evenly fired something like white 2.5Y 8/2 and light gray 2.5Y 7/2, in parts closer to light gray/pale yellow 5Y 7/2–7/3. Thickish slip closer to very pale brown l0YR 8/3–7/3.

Flat disk base hollowed out on underside to create a false ring foot with rounded resting surface. Body tending ovoid with slight thickening of wall at midpoint. Pronounced ridge at junction of shoulder and neck; neck becoming vertical. Horizontal belly handle, thick and round in section, attached at midpoint. Vertical shoulder handles, thin and oval in section, attached from upper shoulder to lower neck. Wheelmarks prominent on interior.

Slipped and painted: paint dull, thickly applied with a tendency to flake; fired black. Six thin horizontal bands on lower wall; broad band at midpoint. Shoulder divided into two registers by thin band. Lower register decorated with row of three sets of mechanically drawn concentric circles on preserved side of vessel; each set comprises six circles filled with solid "hourglass" motifs (the three sets are horizontally not connected). Upper register decorated with two sets of circles like those of the lower register, one on either side of the vertical handle. These two sets are positioned above the two outer sets of the lower register, with which their outer circles overlap, over the thin band. The upper parts of the circles of the top register extend over ridge onto lower neck; the lower parts of the circles of the bottom register extend onto broad band below. Belly handle decorated with three stripes (similar to those of **T56-1** but with an additional stripe) that extend onto lower wall as shown. Upper faces of shoulder handles decorated with three horizontal bands on top of arch and three vertical stripes that extend for a short distance onto shoulder. Thin band on lower neck, immediately above ridge; traces of paint at upper break indicating that neck probably painted solid in the area above the band.

For shape cf. **T56-1**, **T81-1**, **T82-1**, **T83-1**, also **39**, and cf. **KP-5**.

T84-2 (84.380) **Fig. 140b**; **pl. 363**

TR 60 Pot 10

FRAGMENTARY HM JUG WITH CUT-AWAY NECK

H (as restored) 0.190; D (base) approx. 0.075; D (rim) est. 0.056

Many joining and nonjoining frr. (larger toward base) preserving entire base and much of lower wall, but only small portion of upper body; nonjoining frr. preserve portion of rim and neck; handle not preserved. Chipped and worn.

Local clay with many small white and light-colored inclusions and much mica, golden tending to predominate. Clay mainly fired close to light red 2.5YR 6/6, in parts closer to reddish yellow 5YR 6/6 and 7.5YR 6/6.

Flattened base, very slightly pushed up on underside; lower wall rising steeply to point of max. D, which is set rather high; shoulder curved. Neck tall and concave, offset from body by groove on exterior corresponding to angle formed on interior. Plain rim with rounded lip, chamfered only at point where cut away.

Exterior burnished, with pronounced tooling marks running vertically on neck, horizontally on upper body, diagonally opposed on lower body, and horizontally on underside, producing a good but dull surface.

Cf. **T26-3**, **T73-2**, **T77-2**, **T114-3**.

T84-3 (84.406) **Fig. 140c**

TR 60 Pot 11

FRAGMENTARY BASE; HM JUG

PH 0.087; D (base) approx. 0.065

Reconstructed from many small frr. preserving entire base, about one-third of lower body, but nothing of the upper part of the vessel; chipped and worn.

Local clay with many small to medium white and light-colored inclusions and much silver

and golden mica. Clay variously fired: surface on interior close to brown 10YR 5/3; on one side of exterior close to red 2.5YR 5/6–5/8, on the other side closer to light gray/gray 10YR 6/1. Portion of underside and lower wall discolored black.

Base and lower body as **T84-2**; vessel thin walled.

Exterior burnished, with pronounced, but worn, tooling marks running horizontally and diagonally opposed on lower wall, horizontally on underside, producing a good surface with a slight sheen at points where surface has fired red, elsewhere more dull.

Cf. **T84-2**.

T84-4 (84.441) **Fig. 140d**

TR 60 Pot 9 bis

RIM FR.; WM LEKANIS

PH 0.035; PL 0.034

Single fr. preserving small portion of rim and upper body; chipped and worn.

Local clay with fewer than normal small white and light-colored inclusions and much silver and golden mica. Clay fired close to reddish yellow 5YR 7/6; slip closer to pink 7.5YR 7/4.

Vertical upper wall; short, outward thickened, almost knobbed rim, flat on top and tapering slightly to rounded outside edge.

Slipped and painted: paint dull, evenly and fairly thickly applied; fired black to dark brown. Preserved wall at lower break painted; upper wall and outside edge of rim reserved, with single tremulous line on upper wall. Rim top evidently barred, but very poorly preserved (not illustrated); interior painted.

Cf. especially **72**.

TOMB 85 (**FIG. 53A**; **PL. 192**; CONTENTS: **FIG. 141**)

TR 60 Pot 8

URN CREMATION; SINGLE ADULT

Small, shallow, circular pit 0.25 m in diameter as preserved, cut 0.05 m deep into bedrock; tomb encountered at a depth of 0.08 m below surface. Within the center of the pit the wheelmade skyphos **T85-1**, which served as ash-urn, was placed in an upright position; only the base and lower body of the vessel were preserved in situ, set in place by a small quantity of bedrock chips; the upper part of the tomb was completely destroyed.

T85-1 (84.375) **Fig. 141**

TR 60 Pot 8

FRAGMENTARY BASE AND LOWER BODY; WM SKYPHOS, Type 1

PH 0.115; D (base) 0.072

Twenty-five small joining frr. preserving entire base and much of lower wall; upper body, rim, and handles not preserved; vessel chipped and worn.

Local clay with some small to medium white and light-colored inclusions and much mica, tending fine, predominantly golden. Soft textured and rather poorly fired; clay core fired gray, elsewhere clay close to light reddish brown 5YR 6/4 and light brown 7.5YR 6/4; slip closer to pink 7.5YR 7/4 and very pale brown 10YR 7/4.

Tall ring foot with flat resting surface and chamfered lower outside edge; vessel thick walled at base. Lower wall rising at an angle of about 45°; preserved portion of upper wall vertical.

Slipped and painted: paint dull, unevenly applied with a tendency to flake where thickest; variously fired black and red. Three thin horizontal bands on lower wall above which is a broader band. Preserved upper wall decorated with "ugly sausage" (only lower portion of one such motif preserved as shown), probably one of two "opposed sausages." Paint on interior poorly preserved on account of weathering and perhaps also use/cleaning; enough paint survives to indicate that the entire interior was painted solid.

For shape and decoration cf., among others **T25-1**.

TOMB 86 (**FIG. 53A**; **PL. 193**; CONTENTS: **FIGS. 142A–B**; **PLS. 287A–B**, **357A–B**)

TR 60 Pots 6 + 7

URN CREMATION; SINGLE ADULT

Elliptical-shaped pit 0.75 m long (max.), cut 0.26 m into bedrock at its deepest point; tomb encountered

at a depth of 0.10 m below surface. In the SE part of the pit the wheelmade amphora with belly and shoulder handles **T86-1**, which served as ash-urn, was placed upright; beside it, to the west and also upright, was the handmade jug **T86-2**. Both vessels were firmly set in place by a few small chocking stones and compacted bedrock chips; the NW part of the tomb pit, which was slightly shallower, was completely filled with similar bedrock chips. No tomb covering was encountered and the upper parts of both vessels were slightly damaged. A number of small marine-shell fragments were found inside the ash-urn, as was a fragment of a land-snail shell (appendix C).

T86-1 (84.369) **Fig. 142a**; **pls. 287a–b**

TR 60 Pot 6

WM AMPHORA WITH BELLY AND SHOULDER HANDLES

PH 0.233; D (base) 0.095; PD (neck, at break) 0.102

Body, base, and all four handles recovered complete and reconstructed from several large frr.; most of neck and rim not preserved; surface much worn.

Local clay with many small to medium white and light-colored inclusions and much silver and golden mica, the latter tending to predominate. Clay core fired gray, elsewhere clay and slip close to reddish yellow 7.5YR 6/6 and strong brown 7.5YR 5/6.

Flat disk base hollowed out on underside to create false ring foot with rounded resting surface; groove at junction of base and wall on exterior. Globular, almost spherical body. Neck becoming vertical, offset from body by small ridge. Two horizontal belly handles, round in section, attached slightly above point of max. D. Two small vertical handles, with concave upper faces, attached to upper shoulder immediately below ridge and set midway between belly handles.

Slipped and painted but much worn with little of the decoration preserved: paint, as preserved, dull, evenly applied; fired red. One or two thin bands on lower wall near junction with base; above are three more thin bands, above which is a broad band. No decoration preserved on belly zone. Poorly preserved traces of paint on upper shoulder extending over small ridge onto lower neck (decoration on upper shoulder may represent remains of crosshatching, but uncertain). Upper and outer faces of belly handles painted with decoration extending onto broad band on body below. Slight traces of paint on upper face of one shoulder handle only.

Cf. especially **T26-1** and the smaller **T78-1**; cf. also the form of the belly-handled amphora **T24-1**.

T86-2 (84.371) **Fig. 142b**; **pls. 357a–b**

TR 60 Pot 7

HM JUG, FRAGMENTARY; VESSEL MENDED IN ANTIQUITY

PH (to neck) 0.138; PH (to handle) 0.155; D (base) approx. 0.080

Reconstructed from many joining frr. preserving entire base and lower body, most of upper body, plus portion of handle and lower neck. Upper neck and rim not preserved; surface worn.

Local clay with many small to medium white and light-colored inclusions and much mica, silver tending to predominate. Clay variously fired: core, at most points light gray; elsewhere core and interior surface fired close to pale brown and brown 10YR 6/3–5/3; exterior surface closer to grayish brown 10YR 5/2 and in parts light gray.

Flattened base; rounded body; neck becoming vertical, offset from shoulder by groove on exterior corresponding to angle formed on interior. Vertical handle, round in section, attached to body by piercing, with very prominent projection of clay on interior. Lower part of handle pinched up to form mastos as on **T75-2**, with three more mastoi on body, at a slightly lower level, one opposite handle, the other two set ca. 0.050 m from handle on either side.

Exterior burnished, with faint tooling marks running horizontally on upper body, diagonally opposed on lower wall; surface dull.

Vessel mended in antiquity with one complete lead clamp (L: 0.035 m) holding together broken handle as shown.

For shape cf. especially **T75-2**.

TOMB 87 (**FIG. 33A**; **PLS. 42**, **194**; CONTENTS: **FIG. 143**; **PL. 498**)

TR 26 S.F.7
URN CREMATION; SINGLE INFANT
Small circular pit 0.30 m in diameter as preserved, cut 0.05 m deep into bedrock; tomb encountered at a depth of 0.10 m below surface. Within the center of the pit the small wheelmade amphora **T87-1**, which served as ash-urn, was placed upright, firmly set in place by bedrock chips and a number of small worn chocking sherds, including three body fragments of a pithos (not catalogued; the largest, max. PL: 0.060 m); the entire upper part of the tomb was not preserved. Also recovered from the tomb pit was a rim and a base fragment of two wheelmade open vessels (not catalogued); both pieces were evidently Early Iron Age and may have been used as chocking sherds—but equally may have been intrusive. No missing fragments of the ash-urn were encountered in topsoil in the immediate vicinity of the tomb. The cremated remains (total WT: 21 g) are described as those of a "baby" (appendix A).

T87-1 (82.81) **Fig. 143**
TR 26 S.F.7
FRAGMENTARY BASE AND LOWER BODY; SMALL WM AMPHORA
PH 0.082; D (base) 0.080
Twelve joining frr. preserving entire base and portion of lower body only. Condition poor, vessel probably misfired; chipped and much worn.
Local clay with many small to medium white and light-colored inclusions and much silver and golden mica, the latter tending to predominate. Clay core fired close to light reddish brown 5YR 6/4 and yellowish red 5YR 5/6; surface on interior, exterior, and underside mostly blackened.
Small amphora with tallish ring foot, approaching a low conical base with narrow resting surface as **T22-1**; underside flat. Lower wall rising steeply; wheelmarks prominent on both interior and underside.
No preserved decoration.
Shape, details of fabric, and feel close to **T22-1**.

TOMB 88 (**FIG. 33A**; **PLS. 42**, **195**; CONTENTS: **FIGS. 144A–C**; **PL. 335**)

TR 26 S.F.3
URN CREMATION; SINGLE ADULT
Circular pit 0.54 m in diameter, cut 0.12 m deep into bedrock; tomb encountered at a depth of 0.10 m below surface. Within the center of the pit the wheelmade amphora **T88-1**, which served as ash-urn, was placed upright, firmly set by compacted bedrock chips; only about one-half of the base and lower body of the vessel was preserved in situ, the entire upper part of the tomb having been destroyed. A few nonjoining fragments from the shoulder of the ash-urn were encountered in the tomb. Also recovered from the tomb pit were fragments of a wheelmade lid **T88-2** and the fragmentary base of a handmade closed vessel **T88-3**, probably a jug. The original positions of **T88-2** and **T88-3**, if indeed they were ever part of the tomb and not intrusive, could not be determined. The tomb pit was clearly large enough to have accommodated at least one other vessel; the fact that the entire base of the ash-urn was not preserved would argue in favor of **T88-3** having been a *kterisma* placed upright, although the position of **T88-2** remains problematic. There were no fragments of **T88-1**, **T88-2**, or **T88-3** encountered in topsoil in the immediate vicinity of the tomb. A burned sheep/goat astragalus was found inside the ash-urn with the cremated remains of the deceased (appendix B).

T88-1 (82.41) **Fig. 144a**
TR 26 S.F.3
FRAGMENTARY WM AMPHORA
Base frr.: PH 0.124; D (base) 0.095; shoulder fr.: PH 0.059
Many joining frr. preserving about one-half of base and much of lower body, plus two frr. preserving small portion of shoulder and neck, as well as two other nonjoining frr. preserving small portion of body. Condition poor, much worn.
Local clay, somewhat finer than normal, with only a few small white and light-colored inclusions and some silver and golden mica. Clay evenly fired close to light yellowish

brown 10YR 6/4 and pale brown 10YR 6/3; slip, where preserved, slightly lighter.

Low ring base; underside flat; groove at junction of base and wall on exterior. Body rising steeply and tending ovoid; vessel thin walled, with wheelmarks prominent on interior. Shoulder, as preserved, rather steep; neck tending vertical and becoming thicker walled toward top; pronounced ridge at junction of shoulder and neck.

Slipped and painted, but worn: paint dull, rather thinly applied; fired black. Base exterior reserved. Lower wall either painted solid as shown, or decoration comprising many close set thin bands. Above are many thin horizontal bands (eight max., which merge at points). Above them, up to the break, wall painted solid. Preserved shoulder decorated with mechanically drawn pendent concentric semicircles (portions of two sets preserved), each set comprising three arcs with small dot at center; these hang pendent from a thin horizontal band immediately below ridge. Ridge reserved; preserved neck painted solid. Traces of paint on uppermost part of neck on interior (not indicated on drawing).

Cf. especially **T42-1**.

T88-2 (82.1083A and B) **Fig. 144b**; **pl. 335**

TR 26 S.F.3 bis

FRAGMENTARY WM LID

PH (as restored) 0.041; D 0.080

Two joining (82.1083A) and one nonjoining (82.1083B) frr. preserving portion only of upper part of presumed lid; chipped and slightly worn.

Local clay, with fewer than normal small, and the occasional medium, white and light-colored inclusions and much silver and golden mica, the latter tending to predominate. Clay evenly fired close to reddish yellow 5YR 7/6–6/6; slip closer to light yellowish brown 10YR 6/4.

Shape unique, consisting of a flat top with sloping sides; rim/resting surface not preserved. Two scars on top attest the existence of a handle, probably an arched band. Slight groove along outside edge near top.

Slipped and painted: paint dull, fired black. Band around outer edge on top. Body (as restored on illustration) decorated with horizontal bands defining two registers of tremulous lines; lower register consists of two tremulous lines, upper register of three. Tremulous lines executed from right to left according to thickness of paint. Interior/undersurface reserved.

For similar, but larger, handled lids cf. especially Hood and de Jong 1958–59:188, fig. 5, pl. 48b, no. 15; Brann 1962:68, pl. 19, no. 328. Vessel unlikely to have served as lid for **T88-1** on account of its size, unless it flared significantly toward resting surface.

T88-3 (82.1084A–C) **Fig. 144c**

TR 26 S.F.3 ter

FRAGMENTARY BASE; HM CLOSED VESSEL, PROBABLY JUG

PH 0.046; D (base) approx. 0.060

Six joining frr. preserving small portion of base and lower wall; surface much worn.

Local clay with many small to medium white and light-colored inclusions and much silver and golden mica. Clay evenly fired close to reddish yellow 5YR 6/6.

Flattened base; slightly curved lower wall; vessel particularly thin walled at base.

Exterior burnished, with tooling marks diagonally opposed on lower body; surface dull, but worn.

Cf., among others, **T60-2**, **T125-2**.

TOMB 89 (**FIG. 33A**; **PLS. 42**, **196**; CONTENTS: **FIG. 145**)

TR 26 S.F.6

PITHOS URN CREMATION; SINGLE ADULT

Elliptical-shaped pit 0.62 m long (max.), cut 0.15 m deep into bedrock; tomb encountered at a depth of 0.10–0.15m below surface. Within the pit the large body fragment of a pithos **T89-1** (cracked in situ), which served as ash-urn, was found on its side, set in place by compacted bedrock chips. Only portion of the body of the vessel was preserved, with nothing of the rim, base, or upper part encountered. Although poorly preserved, the remains as found indicate that only a portion of the

body but not the whole pithos was used as a container for cremated bone (cf. the Pithos Inhumation Tombs 1 and 12; also the fragment of a pithos T7-1 used in Tomb 7). No fragments of the pithos were recovered from topsoil in the immediate vicinity of the tomb.

T89-1 (82.89) **Fig. 145**

TR 26 S.F.6

FRAGMENTARY BODY; HM PITHOS

PH (illustrated frr.) 0.170

Many joining frr. preserving portion of body; chipped and worn.

Coarse local clay with many small to very large white and light-colored inclusions and much mica, predominantly golden. Clay and interior surface fired evenly close to brown 7.5YR 5/4, exterior surface closer to strong brown 7.5YR 5/6.

Body, as preserved, curved.

Surfaces wet-smoothed, producing good but dull surface; interior less well finished than exterior.

Cf., among others, **T1-1**, **T24-2**.

TOMB 90 (**FIG. 33A**; **PL. 197**; CONTENTS: **FIG. 146**)

TR 26 S.F.9

URN CREMATION; SINGLE ADULT

Shallow circular pit 0.60 m in diameter, cut 0.04–0.06 m deep into bedrock; tomb encountered at a depth of 0.10–0.15 m below surface. In the center of the pit the wheelmade skyphos **T90-1**, which served as ash-urn, was placed upright and set in place by compacted bedrock chips. The upper part of the vessel was not preserved in situ, but many fragments of it were recovered in topsoil in the immediate vicinity;[32] the base of the vessel, a small conical foot, was only partially preserved and it seems **T90-1** was placed into the tomb partly broken. At least one seashell fragment was found in the ash-urn with the cremated human remains (appendix C).

T90-1 (82.91) **Fig. 146**

TR 26 S.F.9

FRAGMENTARY WM SKYPHOS, Type 2

H (as restored on drawing) 0.188; D (base) 0.040–0.050; D (rim) est. 0.200

A great many joining and nonjoining frr. preserving small portion of base, much of the lower body, and parts of the upper body and rim, including portion of one handle. Complete profile restored on paper; vessel chipped and extremely worn, with little of the painted decoration preserved.

Local clay with rather fewer than normal small white and light-colored inclusions and quite a bit of mica, almost exclusively golden; occasional blowouts. Clay mostly fired something like pink 5YR 7/4 and light brown 7.5YR 6/4; parts of body, especially toward base, fired light gray; slip, where preserved, thick, fired close to very pale brown 10YR 7/3.

Very small, and comparatively tall, conical foot with narrow resting surface. Lower wall rising at angle of about 45° to point of max. D; upper wall vertical. Gently flaring/outcurved rim with rounded lip. Portion of one preserved horizontal handle, round in section, attached to upper wall.

Slipped and painted, but much worn: paint, as preserved, dull, with a tendency to flake only where thickest; fired red on parts of lower wall on exterior and on portion of rim on interior; elsewhere black. Foot reserved. Four thin horizontal bands on lower wall; only faint traces of preserved paint on upper wall, perhaps of "ugly sausage" motif(?). Interior painted, but much worn.

Cf. **T117-1**, also **38**.

TOMB 91 (**FIG. 33A**; CONTENTS: **FIG. 147**)

TR 26 S.F.11

URN CREMATION; SINGLE ADULT

Large circular pit 0.7–0.8 in diameter, cut 0.14–0.24 m deep into bedrock; tomb encountered at a depth of 0.10–0.15 m below surface. In the center of the pit the belly-handled amphora **T91-1**, which served as ash-urn, was placed upright and set by compacted bedrock chips; only the base and lower body of the vessel were preserved in situ, although many fragments of the upper body, including portion of the rim and one handle, were recovered in the tomb pit and in topsoil in the vicinity.

T91-1 (82.523A–D) **Fig. 147**
TR 26 S.F.11
FRAGMENTARY WM BELLY-HANDLED AMPHORA
Fr. A: PH 0.112; D (base) 0.115
Fr. B: PH 0.039; D (rim) 0.138
Fr. C: PH 0.063
Fr. A = seventeen joining frr. preserving entire base and portion of lower body; fr. B = four joining frr. preserving portion of rim and upper neck; fr. C = one fr. preserving portion of shoulder and lower neck; fr. D preserves one handle; plus many other nonjoining frr. of body. Chipped and worn, with much of the painted decoration not preserved.
Local clay with many small to medium white and light-colored inclusions and much silver and golden mica; occasional blowouts. Clay core fired light gray at several points, elsewhere more evenly fired close to reddish brown 7.5YR 7/6–6/6; slip, where preserved, slightly lighter.
Flat disk base hollowed out on underside to create false ring foot with rounded resting surface. Lower wall rising steeply; shoulder and neck offset by slight ridge, much worn. Vertical neck, flaring toward thickened rim, flat on top and with rounded outside edge. Horizontal belly handle, round in section. Vessel comparatively thin walled, with pronounced wheelmarks on interior.
Slipped and painted, but much worn: paint, as preserved, dull, evenly applied, fired red. Two horizontal bands on lower wall; horizontal band on upper shoulder below ridge; neck painted solid. Rim top barred, with strokes set in groups round rim (preserved group comprises ten strokes). Neck interior painted as shown, as is outer face of handle. Some of the nonjoining body frr. preserve traces of horizontal bands but no other decoration.
Cf. **T104-1**; also **T60-1**.

TOMB 92 (**FIG. 33A**; **PL. 198**; CONTENTS: **FIG. 148**)

TR 26 S.F.8
URN CREMATION; SINGLE ADULT
Poorly preserved tomb consisting of small circular pit 0.30 m in diameter, cut 0.05 m deep into bedrock; tomb encountered at a depth of less than 0.10 m below surface. In the center of the pit the base of the wheelmade amphora **T92-1** was placed upright and set by compacted bedrock chips. The entire upper part of the tomb was destroyed.

T92-1 (82.82) **Fig. 148**
TR 26 S.F.8
BASE FRR.; WM AMPHORA
PH 0.069; D (base) 0.084
Eight joining frr. preserving entire base but only very small portion of lower wall; chipped and much worn.
Local clay with many small to medium white and light-colored inclusions and much silver and golden mica. Clay evenly fired close to light reddish brown 2.5YR 6/4 and 5YR 6/4; slip closer to pink 7.5YR 7/4.
Flat disk base; shallow groove at junction of base and wall on exterior.
Slipped and painted, but much worn: faint traces of rather broad horizontal band on lower wall as shown.
Amphora type undetermined; for form of base cf., among others, **T20-1**, **T51-1**, **T52-1**, **T73-1**, **T95-1**, **T104-1**.

TOMB 93 (**FIG. 33A**; CONTENTS: **FIGS. 149A–B**; **PLS. 401A–B**)

TR 26 S.F.10
URN CREMATION; CREMATED REMAINS NONDIAGNOSTIC
Circular pit 0.43 m in diameter, cut 0.15–0.22 m deep into bedrock; tomb encountered at a depth of ca. 0.10 m below surface. In the center of the pit the wheelmade open vessel **T93-1**, which served as ash-urn, was placed upright and firmly set by compacted bedrock chips. Only the lower portion of the vessel was preserved in situ with the actual resting surface broken and the pot much worn at that point, indicating it was placed into the tomb in a semicomplete state (cf. nearby Tomb 90). Many fragments of the vessel, including a portion of the rim, were recovered from topsoil in the immediate vicinity, especially to the north and east.

T93-1 (82.93) **Figs. 149a–b**; **pls. 401a–b**

TR 26 S.F.10

FRAGMENTARY LARGE WM OPEN VESSEL; IMPORTED, PROBABLY ATTIC

PH (main lower body) 0.114; PH (rim frr) 0.082; PD (at broken base) 0.080; max. PD (body) 0.260; D (rim) est. in the vicinity of 0.240

Fourteen joining frr., reconstructed and partially restored, preserving much of lower body and portion of broken and worn base (original resting surface not preserved); three joining frr. preserving small portion of rim and handle scar; plus four nonjoining frr. of upper body. Vessel chipped and partially worn.

Fine imported fabric, dense and well levigated, with almost no visible inclusions and a little fine surface mica only. Clay evenly fired close to reddish yellow 5YR 6/6 and 7.5YR 6/6; slip slightly lighter.

Form of base undetermined, but with groove at junction of base and wall on exterior. Body rising in two degrees, separated on exterior by raised band of clay with incised decoration in the form of diagonal strokes that appear to be continuous round the vessel. Broad, outcurved/flaring rim with rounded lip. Handle scar preserved on upper body below rim (clearly horizontal handle). Preserved upper body appears to curve in to rim.

Slipped and painted: paint tending to streak, fairly dull, but with a slight luster; fired dark brown to black. Lower body near base reserved; upper part of lower wall (up to raised band) painted. Area above band reserved, above which, up to the break, the wall is painted. Rim exterior painted solid, below which is a band of crosshatching, partially preserved as shown. Horizontal bands appear to extend from handle scar below crosshatching. Nonjoining fr. of upper body preserves portion of crosshatched triangle, enclosed by bands. Interior painted; possible small reserved disk at center of floor, perhaps worn paint due to use/cleaning.

Imported, probably Attic, see appendix E.

Exact form of vessel uncertain; close are a number of related shapes especially from Crete and the Argolid (analyzed sample does not match with canonical Argive; the chemical composition of the clay is, however, not unlike central Cretan, although the match with Attic is more satisfactory): cf. Evans 1928:134; Desborough 1952: pls. 34 XI.9, VI.33; Brock 1957:162, pl. 3, nos. 1, 27, 14; pl. 11, no. 162; pl. 24, nos. 358, 346, 357; pl. 33, nos. 524, 418; Hood and Boardman 1961:74, nos. 19–23, fig. 9, pl. 10; Courbin 1966: pl. 36, no. C645; Wells 1983b:210–211, fig. 154; 251, fig. 190, nos. 702–703; 269, 273–274, figs. 203, 206, no. 910.

TOMB 94 (**FIG. 33A**; **PLS. 42**, **199**; CONTENTS: **FIG. 150**; **PL. 314**)

TR 26 S.F.4

URN CREMATION; CREMATED REMAINS NONDIAGNOSTIC

Circular pit 0.50 m in diameter, cut 0.10–0.16 m deep into bedrock; tomb encountered at a depth of 0.12 m below surface. Within the center of the pit the wheelmade skyphos **T94-1**, which served as ash-urn, was placed upright and firmly set by compacted bedrock chips. The rim and minor parts of the upper body of the vessel were not preserved in situ, although a few of the missing fragments were recovered from topsoil in the immediate vicinity.[33] Only a few scraps of cremated human bone was recovered from the ash-urn (not included in appendix A). The condition of the ash-urn was such as to suggest little, or only minor, displacement of cremated remains. It therefore seemed clear that only a small quantity of cremated bone was ever placed into the tomb (cf. Tomb 95).

T94-1 (82.80a and B) **Fig. 150**; **pl. 314**

TR 26 S.F.4

WM SKYPHOS, Type 2

H (as restored) 0.177; D (base) 0.081; D (rim) est. 0.176

Reconstructed from many joining frr. (plus several nonjoining) preserving entire base, much of body, including small portion of

one handle, and two nonjoining frr. preserving portion of rim. Chipped and much worn, surface powdery to touch, with little of the painted decoration preserved.

Local clay with small white and light-colored inclusions and mica, tending fine, predominantly golden. Clay evenly fired close to reddish yellow 5YR 6/6; slip slightly lighter, closer to reddish yellow 5YR 7/6.

Conical foot with narrow resting surface; groove at junction of base and body on exterior. Deep body with curved lower wall, vertical upper wall. Gently flaring/outcurved rim with rounded lip. Portion of one preserved horizontal handle, round to oval in section, attached to upper wall.

Slipped and painted, but much worn: paint, as preserved, dull, with a tendency to flake where thickest; fired black on about one-third of vessel as preserved, red elsewhere. Base and lower wall reserved; remainder of body and rim painted solid except for thin reserved band near midpoint. Outer face of handle painted; area below handle arch reserved. Paint on interior almost completely worn, preserved only as traces here and there; possible but uncertain reserved band on rim interior, and possible reserved disk at center of floor, although this is impossible to establish with certainty.

The local counterpart of the imported skyphos **T127-1**.

TOMB 95 (**FIG. 37A**; **PL. 200**; CONTENTS: **FIGS. 151A–B**; **PLS. 270A–B**)

TR 40 S.F.5

URN CREMATION; CREMATED REMAINS NONDIAGNOSTIC

Shallow, roughly elliptical-shaped pit 0.85 m long (max.), cut 0.10 m deep into bedrock; tomb encountered at a depth of 0.45 m below surface. In the center of the pit the wheelmade belly-handled amphora **T95-1**, which served as ash-urn, was placed upright and firmly set both by compacted bedrock chips and by a number of chocking sherds of a handmade pitharion, **T95-2**, set around the base of the ash-urn on the NW side. The base and much of the body of **T95-1** were preserved in situ, although many small fragments of both **T95-1** and the pitharion **T95-2**, were encountered in topsoil in the immediate vicinity.[34] Only a minor quantity of cremated human remains was recovered from the ash-urn (not included in appendix A), and it seems clear only a small quantity of cremated bone was ever placed into the tomb (cf. Tomb 94).

T95-1 (82.149) **Fig. 151a**; **pls. 270a–b**

TR 40 S.F.5

FRAGMENTARY WM BELLY-HANDLED AMPHORA

PH 0.244; D (base) 0.108

Reconstructed from many joining frr. preserving entire base and lower body, about one-third of upper body, including one handle; neck and rim not preserved; vessel chipped.

Local clay with many small to medium white and light-colored inclusions and some silver and golden mica, tending fine. Clay core fired light gray only at points where wall thickness is greatest, elsewhere evenly fired close to light brown 7.5YR 6/4; slip closer to pale brown 10YR 7/4. Fabric more hard fired than normal.

Flat disk base; rounded body; one preserved horizontal belly handle, round in section, attached at point of max. D. Wheelmarks prominent on interior.

Slipped and painted: paint dull, evenly and quite thickly applied with a tendency to flake; fired dark brown to black. Thin horizontal band on lower wall; three thin bands on upper shoulder. Outer faces of handle painted with decoration extending for short distance onto body as shown. Traces of wavy line preserved at points on belly zone (not indicated on drawing).

Cf. **T104-1**; also Kraiker and Kübler 1939: pl. 54, inv. 530, 549; pl. 32, inv. 529; Kübler 1943: pl. 11; Brock 1957: Tomb VI, 14, pl. 7, no. 70.

T95-2 (82.1087A–C) **Fig. 157b**

TR 40 S.F.5 bis

FRAGMENTARY HM PITHARION

82.1087A: PH 0.166; PL 0.175

82.1087B: PH 0.082; PL 0.075

82.1087C: 0.100 × 0.100
Two joining frr. (82.1087A) preserving portion of upper body and neck; 82.1087B preserves portion of handle; plus ten joining frr. (82.1087C) preserving portion of body. Frr. chipped and worn.
Coarse local clay with many small to large white and light-colored inclusions and much mica, mostly large flakes, exclusively golden. Clay body fairly evenly fired close to reddish brown 5YR 5/4; surface on interior and exterior mostly blackened.
Shape and original proportions similar to **T38-1**, but probably slightly larger. Body ovoid; tall concave neck, offset from shoulder by pronounced ridge on exterior corresponding to groove on interior. Portion of one horizontal handle preserved, thick and oval in section, attached to upper body.
Exterior and neck on interior burnished, but worn, with broad and shallow tooling marks preserved at points, producing a good surface with a slight sheen.
Cf. especially **T38-1**.

TOMB 96 (**FIG. 24A**; **PL. 201**; CONTENTS: **FIGS. 152**; **PLS. 293A–B**, **499**)

TR 12 S.F.1
URN CREMATION; SINGLE ADULT; TOMB STRATIGRAPHICALLY RELATED WITH INHUMATION TOMB 6

The circumstances of this tomb were unique. It consisted of a roughly circular pit 0.45 m long (max.), dug ca. 0.16 m deep into the earth of deposit type 4; tomb encountered at a depth of 0.315 m below surface, while the bottom of the pit was at a depth of 0.47 m—that is, approximately 0.20 m above the level of Inhumation Tomb 6. Within the pit the wheelmade belly-handled amphoriskos **T96-1**, which served as ash-urn, was placed more or less upside-down and in a slightly tilted position (**pl. 201**); this was only one of two tombs where the ash-urn was thus placed, the other being Tomb 57. The tomb pit fill comprised a loose-textured soil slightly darker than that of deposit type 4. **T96-1**, although cracked in situ, was recovered almost complete except for both handles, one of which was subsequently encountered at a slightly lower level, near the outstretched left hand of Inhumation Tomb 6. The tomb was located immediately above the lower right arm region of Tomb 6 but at a higher level. Tomb 96 appears to have caused no damage to Tomb 6. Two seashell fragments (not in appendix C) and a fragment of unburned animal bone of an unidentified large mammal (appendix B) were encountered inside the ash-urn with the cremated remains of the deceased. The circumstances of this tomb, particularly the broken handles of the ash-urn and that it was placed upside-down, raised the possibility, which cannot be dismissed, that **T96-1** may have been an earlier cremation that was disturbed by Tomb 6 and subsequently replaced at a level slightly higher than the inhumation (cf. the relationship of Tombs 15 and 102).

T96-1 (81.364) **Fig. 152**; **pls. 293a–b**
TR 12 S.F.1
WM BELLY-HANDLED AMPHORISKOS; PROBABLY LOCAL
Papadopoulos 1996a:154, fig. 2, no. 1
H 0.159; D (base) 0.067; D (rim) max. 0.128
Vessel recovered almost complete except for portion of one handle and part of rim; reconstructed from frr. and restored. Slightly worn.
Clay probably local, but with fewer than normal visible impurities; some small to medium, predominantly white inclusions and a little fine mica. Clay evenly fired something like light yellowish brown 10YR 6/4; slip slightly lighter. The fabric is not unlike the lighter variety of Attic clay used for some Submycenaean vessels.
Low ring base with resting surface obliquely cut, outside edge chamfered; underside flat. Globular, thick-walled body; broad, concave, and thinner-walled neck offset from shoulder by small ridge. Flaring rim, tapering slightly to rounded lip. Two horizontal belly handles, round in section, attached to midpoint.
Slipped and painted: paint rather dull, thickly applied with a pronounced tendency to flake; fired black. Four thin bands on lower wall. Possible, but unlikely traces of band at junction of base and body. Wavy line on

belly zone on either side; these originate near the upper part of the handle attachments. Three bands on shoulder on one side continue round the vessel to merge above one handle and become two bands on the other side. Outer faces of handles painted, with decoration extending onto body as shown. Neck above small ridge painted solid, which extends over rim for a short distance onto interior (the latter not indicated on the drawing).

Cf. the locally made **T101-1**, **T109-1**, **T9-1**. Details of shape, decoration, and, to a lesser degree, fabric not unlike Attic Submycenaean, although the pale color is somewhat unusual; fabric and feel particularly close to Kraiker and Kübler 1939:17–18, pl. 19, inv. 442 (grave 24). For shape and decoration generally cf. Kraiker and Kübler 1939: pls. 16–20; Smithson 1961: pl. 31; Styrenius 1962:113–114; Iakovides 1969–70: vol. 2, 198–205; Desborough 1972:33–35, 38, fig. 4; Popham, Sackett, and Themelis 1979–80: esp. pl. 101, S Tomb 32.3; Mountjoy 1986:196, fig. 260. **T96-1** was originally considered to be a possible Attic import. The composition of the clay (see appendix E) resembles Attic but the match is imperfect; it is best seen as a local product, stylistically close to Attic.

TOMB 97 (**FIGS. 24A, C**; **PLS. 77–78, 202**; CONTENTS: **FIG. 153**; **PL. 394**)

TR 12 S.F.11

URN CREMATION; SINGLE ADULT

Roughly circular pit ca. 0.40 m in diameter, dug into the earth of deposit type 4 (cf. Tomb 96); tomb encountered at a depth of 0.26 m below surface. In the center of the pit the handmade two-handled jar **T97-1**, which served as ash-urn, was placed in an upright position. Although cracked in situ, the vessel was recovered almost complete, except for the upper neck and rim for which the fragments were not recovered. The tomb pit fill was similar to that of Tomb 96, comprising a loose-textured soil slightly darker than that of deposit type 4. The tomb was located in the small area between Inhumation Tombs 6 and 7, and the ash-urn (**T97-1**) was only a few centimeters higher than the cranium of Tomb 6 (**pls. 77–78**).

T97-1 (81.379) **Fig. 153**; **pl. 394**

TR 12 S.F.11

HM TWO-HANDLED JAR; IMPORTED, PROBABLY CHALKIDIC/MACEDONIAN

PH 0.202; D (base) 0.090

Reconstructed from many joining frr. preserving entire base, most of body, including both handles but only small portion of lower neck; upper neck and rim not preserved; surface chipped and worn.

Coarse, probably imported fabric, similar to that of **T54-1**, with many small to medium, variously colored inclusions and a dusting of fine, silvery mica (more visible on surface than in breaks). Clay and surfaces variously fired: clay core, at points, evenly fired gray, but in places two-toned, gray toward interior, reddish brown 2.5YR 5/4 toward exterior. Exterior surface mostly fired close to reddish brown 5YR 5/3, in parts closer to yellowish red 5YR 5/6, elsewhere discolored gray/black. Interior surface more consistently dark gray/black.

Flat base forms a slight angle at junction with wall. Globular body; neck becoming vertical, offset from shoulder by pronounced ridge. Two vertical shoulder handles, oval in section, attached above point of max. D. Production marks in the form of crude scratches prominent on interior and visible on exterior especially below handles. Vessel thick walled and rather heavy.

Exterior burnished smooth, producing a good surface with a slight sheen, though much worn.

Cf. **T54-1** (and see appendix E). For related shoulder-handled vessel forms cf. Blegen, Boulter, Caskey, and Rawson 1958: fig. 218, C84, and esp. fig. 265, nos. 32.23, 37.1007, 37.1021, 33.126; Vokotopoulou 1973:35, pl. 7a (two examples from Vitsa Zagoriou Tomb 48); 1986, vol. 1:241–245 (with further examples); Hood 1981: esp. 403, fig. 182, no. 1236.

TOMB 98 (**FIG. 32C**; CONTENTS: **FIG. 154**)

TR 25 East Baulk Pot 8
URN CREMATION; POORLY PRESERVED; NO CREMATED REMAINS ENCOUNTERED
Although the tomb was much damaged and no cremated bone preserved in situ, there was enough to establish this as a cremation tomb consistent with those located in the area of the Early Iron Age cutting (**fig. 17**). As preserved, it consisted of a shallow circular pit ca. 0.45 m in diameter, cut 0.09–0.19 m deep into bedrock, encountered at a depth of 0.45–0.50 m below surface. In the NE quarter of the pit, and apparently in situ, the base and lower body of the wheelmade skyphos **T98-1** (presumably the ash-urn) was found in an upright position; the upper part of the vessel was not preserved, although some of the missing fragments were recovered in the immediate vicinity, as were a few scraps of cremated bone.[35] Around the base of **T98-1** a small quantity of blackened earth, clearly burned debris, was noted but yielded no cremated bone and only one fire-affected sherd, **T98-2**.

T98-1 (84.148) **Fig. 154**
TR 25 East Baulk Pot 8
FRAGMENTARY BASE AND LOWER BODY; WM SKYPHOS, Type 1
PH 0.129; D (base) 0.082
Reconstructed from many joining frr. preserving entire base and portion of lower body, but nothing of upper body, handles, or rim; chipped and worn.
Local clay with many small to medium white and light-colored inclusions and much mica, golden tending to predominate. Clay mainly fired close to reddish brown 5YR 6/4, in parts approaching light reddish brown 2.5YR 6/4 toward core; slip closer to pink 7.5YR 7/4 and very pale brown 10YR 7/4.
Ring foot, with lower outside edge slightly chamfered; underside flat; broad, shallow groove at junction of base and body on exterior. Lower wall curved, becoming vertical toward top.
Slipped and painted: paint dull, rather thickly applied with a tendency to flake; fired black. Four thin horizontal bands on lower wall, above which, up to the break, the wall is painted solid. This area is in more dilute paint than the bands below and probably represents the lower portion of an "ugly sausage" motif. Interior painted except for center of floor, which is probably worn from use/cleaning.
Cf., among others, **T25-1**, **T85-1**.

PYRE DEBRIS

T98-2 (84.440) **Not illustrated**
TR 25 East Baulk Pot 8 bis
BASE FR.; WM OPEN VESSEL (SKYPHOS OR LEKANIS)
PH 0.025; D (at junction of base and body) 0.041
Single fr., much affected by burning, preserving portion of base at junction with wall, but not the actual resting surface.
Local clay with many small to medium white and light-colored inclusions and much mica, tending fine. Clay and surfaces gray due to burning.
Form of base either a conical or flaring foot, with shallow groove at junction with wall on exterior (cf. **T98-1**).
Faint traces of paint preserved on interior at center of floor.
Vessel form either skyphos Type 2 or 3, or lekanis.

TOMB 99 (**FIGS. 29B–C**; **PLS. 203–204**, **220**; CONTENTS: **FIGS. 155A–C**; **PLS. 296A–C**, **387**)

TR 22 S.F.31 + 32 + 33
URN CREMATION; CREMATED REMAINS NOT STUDIED[36]
Tomb pit, the edges of which were not clear, approximately 0.25 m deep, dug through deposit type 4 down to the level of bedrock; tomb encountered at a depth of 0.25 m below surface. Within the pit the wheelmade vertical-handled amphoriskos **T99-1**, which served as ash-urn, was placed upright and firmly set by a number of small stones, mainly schist, around its base, with a slightly larger stone set on edge on the NE side. The ash-urn was covered by the reused base of a wheelmade amphora **T99-2**, placed upside-down, over the top of

which were fragments of the handmade tripod cauldron **T99-3** (cf. Tomb 123). The tomb pit fill, as encountered, comprised loose blackened earth representing remains of the pyre, which yielded a few scraps of fire-affected sherds (not catalogued).

T99-1 (82.24) **Fig. 155a**; **pls. 296a–c**
TR 22 S.F.33
WM VERTICAL-HANDLED AMPHORISKOS
H 0.180; D (base) 0.069; D (rim) 0.122
Intact except for minor chipping at rim (restored).
Local clay with many small to medium white and light-colored inclusions and much mica, both silver and golden; occasional blowouts. On one side of the vessel clay fired close to light brown 7.5YR 6/4, with the paint, depending on thickness of application, fired pale to dark brown, approaching black. On the other side clay fired close to reddish yellow 5YR 6/6, with the paint having fired red; slip (on both sides) slightly lighter to clay. Interior surface more evenly fired close to light brown 7.5YR 6/4.
Low ring base, with slightly rounded resting surface; underside flat. Body tending ovoid; tall neck; flaring rim tapering slightly to rounded lip. Two vertical handles, with concave upper faces, attached from upper shoulder to neck below rim; one handle set slightly askew. Wheelmarks prominent on interior.
Slipped and painted: paint dull, in parts thickly applied, in others more dilute; fired as described. Base and lower wall reserved. Midpoint painted, above which, on shoulder, are three tremulous lines, executed from right to left according to thickness of paint. Neck and rim painted solid, with paint continuing over rim onto interior, as shown. Upper and outer faces of handles painted. Small splashes of paint on interior below level of rim.
Fingermarks, including one complete fingerprint, and other smears visible on exterior.
Cf., among others, **T44-1**, **T55-1**, **41**.

T99-2 (82.26) **Fig. 155b**
TR 22 S.F.32
BASE FRR.; WM AMPHORA; REUSED AS LID/COVER FOR **T99-1**
PH 0.063; D (base) 0.115
Seven joining frr. preserving about three-quarters of base and small portion of lower wall; very worn.
Local clay with many small to medium white, light-colored, and occasional darker inclusions and much mica, predominantly golden. Clay core fired light gray where thickest, elsewhere close to reddish yellow 5YR 7/6–6/8.
Flat disk base.
Traces of slip preserved on exterior.
Cf. **T51-2**, **T63-2**, **T67-1**; fabric and feel particularly close to **8**.

T99-3 (82.27) **Fig. 155c**; **pl. 387**
TR 22 S.F.31
FRAGMENTARY HM TRIPOD CAULDRON
PH 0.168; D (rim) N/R
Seven joining and five nonjoining frr. preserving portion of body, one complete handle, and part of one leg. Slightly worn.
Coarse local clay with many small to large white and light-colored inclusions and much mica, almost exclusively golden. Clay and surfaces mostly fired close to yellowish red 5YR 5/6, in parts blackened.
Rounded cauldron; vertical neck. Slightly outturned and thickened rim, rounded on top. Upper portion of one leg preserved, forming continuous attachment with vertical handle; leg tapering slightly toward resting surface (not preserved). Handle and leg thick and oval in section; upper attachment of handle directly to rim.
Interior and exterior mostly burnished smooth, but with broad, shallow tooling marks visible particularly on neck interior and at junction of leg and body on exterior.
Cf. **T123-2**, **T123-3**.

PYRE DEBRIS

Several tiny scraps only, all nondiagnostic. Number of vessels represented not determined.

TOMB 100 (**FIGS. 32B–D**; **PLS. 205–206**; CONTENTS: **FIGS. 156A–B**; **PLS. 336**, **500A–B**)

TR 25 East Baulk Pot 4
URN CREMATION; SINGLE ADULT (MALE?)
Shallow circular pit 0.55 m in diameter, cut 0.12 m deep into bedrock; tomb encountered at a depth of 0.22 m below surface. Within the center of the pit the handmade two-handled jar **T100-1**, which served as ash-urn, was placed upright but tilted with the mouth of the vessel facing south; the vessel was recovered complete, although cracked in situ, and had as its lid the reused base of the amphora **T100-2**. The tomb pit was partially filled by a small quantity of blackened earth representing remains of the pyre, which yielded some cremated bone but no fire-affected sherds. The ash-urn was firmly set in place by many small stones around its base on all sides and was completely covered by many small to medium stones that included schist, limestone, and conglomerate (**figs. 32b–c**; **pl. 205**). Once cleared, it was shown that the east end of the tomb pit overlapped slightly with the pit for Tomb 101 (**fig. 32c**), but it could not be established with certainty which of the two tombs was earlier. According to the excavator it was more likely that Tomb 101 was later as it appeared to have cut across the pit for Tomb 100, although the actual overlap was minor. At least one burned marine shell (*Cardium edule*) was found inside the ash-urn with the cremated human remains (appendix C). A variety of fragmentary seashells, more than sixty specimens of land-snail shells (appendix C), and three unidentified carbonized seeds (appendix D) were recovered from the pyre debris around the ash-urn. In addition to the carbonized seeds, three recent specimens of common fumitory (*Fumaria officinalis*) were recovered from the pyre debris (appendix D).

T100-1 (84.67) **Fig. 156a**; **pl. 336**
TR 25 East Baulk Pot 4
HM TWO-HANDLED JAR (BELLY-HANDLED)
H 0.250; D (base) approx. 0.090; D (rim) 0.130
Vessel recovered complete, reconstructed from frr.; body slightly chipped, condition otherwise good.
Local clay with many small to medium white and light-colored inclusions and much mica, mainly fine, golden tending to predominate. Clay and interior surface fired close to red 2.5YR 6/6 and reddish yellow 5YR 6/6; exterior surface closer to light reddish brown 5YR 6/4 and light brown 7.5YR 6/4.
Flattened base; rounded body. Vertical neck offset from shoulder by groove on exterior corresponding to angle formed on interior. Rim slightly flaring; chamfered lip. Two horizontal belly handles, thick and square in section, attached at point of max. D and tending to rise vertically. Two small knobs (or mastoi), one on either side of vessel, at point of max. D, set symmetrically between handles. Vessel thin walled and particularly well formed.
Exterior and interior at neck burnished, with pronounced tooling marks running horizontally on neck and upper body, diagonally opposed on lower wall, producing a good surface, with a slight sheen in parts, especially at neck.
Cf. **T18-1**, **T63-1**, **T118-1**, **T130-1**.

T100-2 (84.67A) **Fig. 156b**
TR 25 East Baulk Pot 4 bis
BASE FR.; WM AMPHORA; REUSED AS LID FOR **T100-1**
PH 0.020; D (base) 0.104
Single fr. preserving entire base, chipped and worked around the edges to serve as lid (placed right-way up in mouth of **T100-1**); fr. worn.
Local clay with many small to medium white and light-colored inclusions and much silver and golden mica; occasional blowouts. Clay evenly fired close to light reddish brown 5YR 6/3; slip closer to pink 5YR 7/3.
Low ring base with slightly rounded resting surface.
Vessel slipped, and presumably painted, but with no preserved decoration.
Cf. **T51-2**, and for shape **T65-1**, **T88-1**.

TOMB 101 (**FIGS. 32C–D, H–I; PL. 113**; CONTENTS: **FIGS. 157A–N; PLS. 295, 420–432, 501**)

TR 25 East Baulk Pot 3 and TR 22 S.F.30[37]
URN CREMATION; SINGLE ADULT (MALE?); TOMB STRATIGRAPHICALLY RELATED WITH INHUMATION TOMB 15

The circumstances of the excavation of this tomb and its interrelationship with Tombs 15 and 102 has been detailed in chapter 2. The tomb consisted of a shallow circular to elliptical-shaped pit 0.60 m long (max.), cut 0.11 m deep into bedrock; tomb encountered at a depth of ca. 0.48 m below surface. The west part of the tomb pit overlapped slightly with the east part of the pit of Tomb 100, and the east end of the pit was located below TR 22 Classical wall *d*. In the center of the pit the wheelmade belly-handled amphoriskos **T101-1**, which served as ash-urn, was placed upright but slightly tilted with its mouth facing south, in a similar manner to the ash-urn in the nearby Tomb 100. The tomb pit was filled by a great quantity of loose-textured blackened earth representing remains of the pyre, which contained many fire-affected sherds representing at least fourteen different vessels (**T101-2–T101-15** [**pls. 420–432**]), as well as a few minuscule fragments of cremated human bone. The articulated feet of Inhumation Tomb 15 were placed over **T101-1** (**figs. 32c–d, h–i; pl. 113**), thus Tomb 101 was earlier than Tomb 15. Only minor damage to the ash-urn was caused by placing the inhumation over it so that a few fragments of the upper part of **T101-1** and some of the associated fire-affected sherds were found scattered around the lower leg region of the skeleton; the actual rim of **T101-1** was not preserved. As encountered, Tomb 101 was covered by the same stone slabs that covered Inhumation Tomb 15 (**figs. 32b, g; pls. 110–111**). Inside the ash-urn **T101-1** were two small fragments of sea urchin (*Paracentrotus lividus*) and a variety of seashell fragments (appendix C), as well as the minuscule fragments of bronze **T101-16**, heavily burned, perhaps an item of jewelry or dress fastener worn by the deceased at the time of cremation. In addition to the burned sherds and cremated bone, the pyre debris yielded some forty carbonized lentil seeds; one other, unidentified, carbonized seed (appendix D); and thirty complete and more than forty fragmentary specimens of land snail, representing two different varieties (appendix C).

T101-1 (84.123) **Fig. 157a; pl. 295**

TR 25 East Baulk Pot 3
WM BELLY-HANDLED AMPHORISKOS
Papadopoulos 1996a:154–155, fig. 4, no. 3
PH 0.160; D (base) 0.060; PD (neck) 0.084

Reconstructed from several large and many small frr. preserving almost complete vessel except for upper neck and rim; condition poor, fabric fragile, with surface much worn.

Local clay with many small to medium white and light-colored inclusions and much mica, tending fine, almost exclusively golden. Clay core fired light gray only where wall is thickest, elsewhere evenly fired closed to reddish yellow 7.5YR 6/6 and 5YR 6/6. Thickish slip (poorly preserved) closer to very pale brown 10YR 7/4–8/4.

Ring base of medium height, with comparatively broad, flat resting surface; underside flat; groove at junction of base and wall on exterior. Small rounded body; fairly wide vertical neck offset from shoulder by slight ridge, in parts barely visible; neck flaring toward rim (not preserved). Two horizontal belly handles, round in section, attached at point of max. D.

Slipped and painted, but extremely worn: paint dull, originally rather thickly applied, fired red. Horizontal band at junction of base and body; two thin bands on lower wall. Three thin bands on shoulder below slightly thicker band on lower neck near juncture with shoulder. From the lowest of the shoulder bands, on either side of the vessel, hang pendent two arcs that meet at the center as shown (cf. "tassel pattern": Furumark 1972a:411, fig. 71, Motif 72, esp. no. 7; Blegen 1937: fig. 210, no. 380; Mountjoy 1986: 195, fig. 258, no. 10). Upper and outer faces of both handles painted with decoration extending for short distance onto body. Most of neck, as preserved, evidently reserved, although much worn (the necks of the majority of published Submycenaean belly-

handled amphoriskoi are painted). No preserved paint on neck interior.

For shape cf. **T109-1**, **T96-1**. Also Kraiker and Kübler 1939: pl. 16, inv. 484 and 489; pl. 20, inv. 506; pl. 62, inv. 539; Styrenius 1962:113–114, pl. I, no. 3624; pl. VI, nos. 3625, 3626; pl. VIII, nos. 3637, 3634.

PYRE DEBRIS

In addition to the organic material noted above, the tomb pit fill yielded a greater than normal quantity of fire-affected sherds. All frr. encountered were at least partially burned, but rarely was the burning so intense as to destroy completely the painted decoration of the WM vessels. Moreover a number of vessels were preserved in many joining and nonjoining frr., which allowed for a number of complete profiles to be reconstructed, a feature that was rare among the fire-affected sherds from other tombs. The following vessels were recorded:

Five WM one-handled cups (**T101-2–T101-6**)

Two WM skyphoi (**T101-7**, **T101-8**), as well as a small fr. of a probable third skyphos (**T101-15**)

One fragmentary WM open vessel (**T101-9**), probably a lekanis

One body frr. of a large WM closed vessel (**T101-10**), almost certainly an amphora.

The nonjoining frr. of WM vessels recovered represented at least one, and perhaps as many as three pots, in addition to those catalogued. Among the many sherds of HM vessels encountered, frr. of only four pots have been selected: the leg of a tripod cauldron (**T101-11**), the rim and handle of a bowl (**T101-12**), the small handle fr. (**T101-13**), and the jug (**T101-14**). There were, in addition, frr. of at least two other HM vessels (not catalogued). The total number of vessels represented by the recovered frr. may have been as high as nineteen. Of the fourteen catalogued pieces, the fabric of **T101-2–T101-6** and **T101-8–T101-10** is unusual in comparison to normal local (see also appendix E). With the exception of **T101-8**, which is probably Attic, chemical analysis has shown that the fabric of the remainder is probably local (appendix E). Munsell designations for clay color are provided only in the case of frr. less affected by burning.

T101-2 (84.429) **Fig. 157b**; **pl. 420**

FRAGMENTARY WM ONE-HANDLED CUP; PROBABLY LOCAL

Papadopoulos 1996a:154–155, fig. 5, no. 4

H (including handle) 0.100; D (base) 0.046; D (rim) 0.106

At least fourteen frr., of which twelve join, preserving about one-third to one-half of vessel (including complete profile); only partially affected by burning.

Unusual fabric with many (but fewer than in canonical local) small white inclusions and some mica; occasional blowouts. Clay, where less affected by burning, fired something like pink 7.5YR 7/4; thickish slip, lighter in color.

Ring base, rather heavy, with narrow resting surface and flat underside; lower outside edge chamfered. Lower wall curved; upper wall vertical; gently flaring rim, tapering slightly to rounded lip. Vertical handle, with concave upper face, attached from point of max. D directly to rim and rising slightly above level of rim.

Slipped and painted: paint, as preserved, rather dull, thickly and evenly applied; fired black. Base exterior, above lower chamfered edge, painted, with paint extending onto lower body as shown. Three thin horizontal bands on lower wall, above which, at point of max. D, is a broader band. On the two nonjoining frr. of the upper wall, there is portion of at least one wavy line preserved, as shown. Thin horizontal band on upper wall immediately below lip, which terminates at upper handle attachment. Upper face of handle painted. Interior painted except for reserved band at rim.

Cf. **T101-3–T101-5**; also Kraiker and Kübler 1939: pl. 23, inv. 437; pl. 36 (Heidelberg Grabfund A, on left); Styrenius 1962: pl. VIII, no. 3643; Mountjoy 1995a: fig. 85, no. 3; cf. Popham, Sackett, and Themelis 1979–80: pl. 99, S Tomb 24.1.

T101-3 (84.430) **Fig. 157c**; **pl. 421**
FRAGMENTARY WM ONE-HANDLED CUP; PROBABLY LOCAL
H (as reconstructed) 0.105; D (base) 0.050; D (rim) 0.114
Ten frr., many of which join, preserving entire base and about one-third of body and rim; handle not preserved; partially affected by burning, some frr. more so than others.
Fabric as **T101-2**. Clay light to dark gray and in parts blackened due to burning.
Shape as **T101-2**, but with slight groove at junction of base and body on exterior.
Slipped and painted: details of paint as **T101-2**; foot painted on exterior. Two thin horizontal bands on lower wall, above which is a broader band. Portion of one preserved wavy line on upper body as shown. Horizontal band on uppermost wall and rim exterior. Interior painted except for reserved band at rim.
Cf. **T101-2**.

T101-4 (84.431) **Fig. 157d**; **pl. 422a**
FRAGMENTARY WM ONE-HANDLED CUP; PROBABLY LOCAL
PH (including handle) 0.050; D (rim) est. 0.100
Four joining frr. preserving about one-quarter of rim and upper wall, including complete handle; partially affected by burning.
Fabric as **T101-2** and **T101-3**.
Shape as **T101-2**, but with handle almost square in section.
Slipped and painted, but poorly preserved: paint dull, rather thickly applied; fired black. Horizontal band on uppermost wall and rim exterior, which continues under the upper handle attachment (unlike **T101-2**); upper face of handle painted, but worn. Interior painted except for reserved band at rim.
Cf. **T101-2**.

T101-5 (84.432) **Fig. 157e**; **pl. 422b**
RIM AND HANDLE FRR.; WM ONE-HANDLED CUP; PROBABLY LOCAL
PH (including handle) 0.048; PL 0.038
Two joining frr. preserving small portion of rim and much of handle; partially affected by burning.
Fabric as **T101-2**.
Form of rim and handle as **T101-2**.
Slipped and painted: details of paint as **T101-2**, but with a tendency to flake. Horizontal band on upper wall immediately below rim, which continues below handle as **T101-4**. Upper face of handle painted. Interior painted except for reserved band at rim.
Cf. **T101-2**.

T101-6 (84.433) **Fig. 157f**; **pl. 423**
BASE AND LOWER BODY FRR.; WM ONE-HANDLED CUP; PROBABLY LOCAL
PH 0.063; D (base) 0.060
Six joining frr. preserving about one-half of base and lower body; some of the joining frr. more intensely burned than others.
Fabric as **T101-2**, but with less mica.
Heavy ring base, similar to **T101-2**, but with outer face straighter; narrow resting surface, lower outside edge chamfered. Shallow groove at junction of base and body on exterior (cf. **T101-3**). Portion of handle scar at lower attachment preserved at break. Vessel thick walled.
Slipped and painted: details of paint as **T101-5**. Three thin bands on lower wall, above which is a slightly broader band. Interior painted.
Cf. **T101-2**; shape a little closer to Styrenius 1962: pl. VIII, no. 3644; cf. Kraiker and Kübler 1939: pl. 23, inv. 437.

T101-7 (84.435A and B + 82.28B and C) **Fig. 157g**; **pl. 424**
FRAGMENTARY WM SKYPHOS, Type 1
H (as restored) 0.155
84.435A: PH 0.111; D (rim) est. 0.190
84.435B: PH 0.041; D (base) 0.077
84.435A comprises twenty-one frr., many of which join, preserving about one-third of upper body, rim, and most of one handle. 84.435B + 82.28C comprise six joining frr. preserving about three-quarters of base; 82.28B preserves small portion of second handle. All frr. affected by burning, some more intensely than others.
Local clay (different from **T101-1–T101-6**, etc.) with many small to medium white and

light-colored inclusions and much mica, predominantly golden. Clay mostly gray and in parts blackened due to burning; yellow/brown where less fire affected.

Heavy ring base, with comparatively broad resting surface, slightly articulated from underside as shown; lower outside edge chamfered; groove at junction of base and body on exterior. Lower wall curved; upper wall vertical. Gently flaring rim with rounded lip. Horizontal handles, round in section, attached to upper wall.

Slipped and painted, but worn: paint, as preserved, dull, evenly and fairly thickly applied with a tendency to flake; fired black. Underside, but not the resting surface, painted; horizontal band at junction of base and body. Portions of two preserved thin horizontal bands on upper part of lower wall, above which is a slightly broader band. Upper wall decorated with continuous "ugly sausage," which extends from the painted decoration of the upper and outer handle faces. Lip exterior reserved; rim top barred as shown; interior painted except for thin reserved band at lip.

Cf., among others, **T23-1**, **T85-1**, **T106-1**. The fr. **T101-15 m**ay possibly be from the same vessel(?).

T101-8 (84.436 + 82.28A + 82.1088) **Fig. 157h**; **pl. 425**

FRAGMENTARY WM SKYPHOS; IMPORTED, PROBABLY ATTIC

Papadopoulos 1996a:154–155, fig. 6, no. 5

H (as restored) 0.145; D (base) est. 0.070; D (rim) est. 0.170

At least fifteen joining and nonjoining frr. preserving portion of base, body, rim, one complete handle and portion of a second; much affected by burning.

Imported fabric with only the occasional light-colored impurity and a slight dusting of fine mica. Clay dark gray and in parts blackened due to burning.

Ring base as **T101-7** but without the slight articulation on underside and the groove at junction with body. Lower wall curved, upper wall vertical, with the junction marked by a slight carination. Short everted rim with rounded lip. Horizontal handles, thin and round in section, attached to upper wall.

Slipped and painted; paint thickly applied with a slight luster; fired black. Traces of paint on preserved underside (not indicated on drawing; cf. **T101-7**). Base (except for chamfered lower edge) and lower body painted solid. Decoration of upper wall difficult to reconstruct accurately due to fragmentary state; preserved as shown. Reserved band on lower part of upper wall decorated with tremulous line, executed from right to left according to thickness of paint. Upper and outer faces of handles painted; area below handles reserved. There is what appears to be a second reserved band on upper wall, only partially preserved near both handle attachments. Rim exterior painted. Interior painted, except for reserved band at rim.

Shape and decoration particularly close to Kraiker and Kübler 1939: pl. 23, inv. 513; pl. 38, bottom left; decoration, but not the form of the base, is also close to pl. 67, inv. 546 (cf. Desborough 1952: pls. 10–11). Cf. Felsch 1980:85, fig. 8 (related to Wace 1932: pl. LXXXII, no. 59).

T101-9 (84.434) **Fig. 157i**; **pl. 426**

RIM AND BODY FRR.; WM OPEN VESSEL (LEKANIS?); PROBABLY LOCAL

PH 0.080; D (rim) est. 0.170

Four frr., of which only two join, preserving small portion of rim and wall. Two other joining frr. preserve one complete ribbon handle, which probably belongs to this vessel; all frr. partially affected by burning.

Fabric identical to **T101-2**.

Lower wall curved; upper wall vertical. Knobbed rim, almost horizontal, flat on top, with rounded outside edge.

Slipped and painted: details of paint as **T101-2**. Three thin horizontal bands on lower wall, above which is a slightly broader band. Broad band on upper wall directly below rim; outside edge and top of rim reserved. Interior painted.

System of decoration closely related to that of the one-handled cups **T101-2–T101-6**. Shape similar to local lekanides: cf., among others, **T47-3**, **T51-3**, **T124-3**. For related shape in Athens cf. especially Brouskari 1980:25–28, pl. 5a, no. 26 (EPK 555).

T101-10 (84.437) **Fig. 157j**; **pl. 427**
SHOULDER FRR.; WM AMPHORA; PROBABLY LOCAL
PH 0.036; PL 0.075
Two joining frr. preserving very small portion of shoulder; partially affected by burning.
Fabric similar to **T101-2**, with some small light-colored inclusions and some fine mica. Thickish slip.
Shoulder curved; relatively thin walled.
Slipped and painted: paint rather dull, thickly applied with a tendency to flake; fired black. Portion of one set of mechanically drawn concentric circles; set comprises four circles with small dot at center.
Cf. generally Desborough 1952:5–37. For a sherd with a set of five concentric circles in a supposedly Late or Final Mycenaean deposit see Felsch 1980:85, fig. 9, K2789 (Kalapodi).

T101-11 (84.124) **Fig. 157k**; **pl. 428**
LEG FR.; HM TRIPOD CAULDRON
PH 0.082
Single fr. preserving portion of leg, including resting surface; partially affected by burning.
Coarse local clay with many small to large white and light-colored inclusions and much mica, almost exclusively golden. As preserved, clay core fired gray; surfaces closer to light brown 7.5YR 6/4 and pinkish gray 7.5YR 6/2.
Leg tapering to rounded resting surface; thin and rectangular in section.
Surfaces burnished smooth.
Leg of a comparatively small tripod: cf. especially **T114-7**.

T101-12 (84.438A) **Fig. 157l**; **pl. 429a**
RIM FRR.; HM BOWL
PH 0.047; D (rim) est. 0.140
Four frr., of which three join, preserving about one-quarter of rim and small portion of upper body; frr. affected by intense burning.
Local clay with small to medium white and light-colored inclusions and much mica, golden tending to predominate. Frr. much blackened due to burning; dark reddish brown where less affected.
Vertical upper wall; vertical rim, offset from body by thickening on interior corresponding to slight concavity on exterior; chamfered lip.
Interior and exterior burnished, with pronounced tooling marks running horizontally; surface dull.

(84.438B) **Pl. 429b**
HANDLE FR.; SQUARE CUT
PH 0.037; PL 0.057
Almost certainly handle of **T101-12**; single fr. preserving upper part of handle. Condition, fabric, and burnishing as **T101-12**.
Square-cut handle with edges chamfered.
Cf. **T67-2**.

T101-13 (84.439) **Fig. 157m**; **pl. 430**
HANDLE FR.; HM VESSEL
PH 0.026; W 0.027
Single fr. preserving portion of handle; affected by burning.
Local clay with small to medium white and light-colored inclusions and much silver and golden mica. Clay and surface dark gray to black due to burning.
Vertical handle, thin in section, with edges chamfered.
Upper face burnished smooth and decorated with mainly vertical grooves as shown.
Cf. **18**. For similar grooved/gouged handle cf. Heurtley 1939:216, fig. 87h.

T101-14 (82.1089) **Fig. 157n**; **pl. 431**
TR 22 S.F.30 + TR 25 East Baulk Pot 3 bis
BODY FRR.; HM JUG
Dimensions of illustrated frr. (**fig. 157n**): PH 0.042; PL 0.044
At least fourteen body frr., of which only three join, preserving portion of various parts of body; much affected by burning.

Local clay with rather fewer than normal white and light-colored inclusions but a great deal of mica, silver tending to predominate. Clay light gray due to burning.
Shoulder curved; thin walled.
Exterior burnished, with preserved tooling marks running horizontally on upper body; surface dull.
Cf., among others, **T7-3**.

T101-15 (84.442) **Pl. 432**
BODY FR.; WM OPEN VESSEL, PROBABLY SKYPHOS (cf. **T101-7**); VESSEL MENDED IN ANTIQUITY
PH 0.025; PL 0.028
Single fr., broken on all sides, preserving small portion of body; much affected by burning with no preserved decoration.
Local clay as **T101-7**, and perhaps from the same vessel(?).
Vessel mended in antiquity, with preserved mending hole (D: 0.002 m) near lower break but no trace of clamp.
Cf. **T101-7**.

T101-16 **Not illustrated**
TR 25 East Baulk Pot 3 bis
FIRE-AFFECTED BRONZE FRR.
Max. PL of largest fr. 0.006; WT (of all frr.) 0.01 g
At least four minuscule nonjoining frr., very thin, burned beyond recognition; original object unidentified.
Cf. **T18-2**, **T58-3**.

TOMB 102 (**FIGS. 32B–D, G–I**; **PLS. 110, 207–208**; CONTENTS: **FIGS. 158A–F**; **PLS. 325, 464**)

TR 25 East Baulk Pot 2
URN CREMATION ORIGINALLY IN CIST; SINGLE ADULT; TOMB STRATIGRAPHICALLY RELATED WITH INHUMATION TOMB 15

Further details of the excavation of this tomb and of its relationship with Inhumation Tomb 15 are outlined in chapter 2. That this tomb was originally enclosed in a cist, similar to Tomb 104, is clear; it originally consisted of a large and rather shallow pit 0.72 m × 0.52 m, elliptical to square in shape, cut approximately 0.16 m deep into bedrock. Within the pit the wheelmade krater **T102-1**, which served as ash-urn, would almost certainly have been set upright, and the pit and pot would have been enclosed on all four sides by flat, roughly square pieces of schist or limestone set on edge. Two of these slabs preserved in situ formed a corner and defined the south and east faces of the cist, with part of the west face also preserved; of the slabs preserved in situ, the east slab was limestone, the south schist. It was against this SW corner of the original cist that the cranium of Inhumation Tomb 15 was later propped up (**pl. 112**). On the analogy of Tomb 104, Tomb 102 would have been covered by another slab, the overall size of the tomb defining a square approximately 0.70 m to the side.

As preserved, the pit was filled with blackened earth representing remains of the pyre, from which was recovered at least one fragment (unburned) of the ash-urn **T102-1**; a small quantity of intensely burned sherds, a selection of which is catalogued (**T102-2–T102-5**); and fragments of two bronze objects (**T102-6**, **T102-7**), at least one of which was much affected by burning. The tomb pit also yielded 69 g cremated human bone, while a further 400 g was recovered from the ash-urn itself. At least two small marine-shell fragments were found in the ash-urn, and a variety of complete and fragmentary shells were recovered from the tomb pit (appendix C).

With the interment of Inhumation Tomb 15, the north and most of the west side of the cist, as well as its presumed cover, were dismantled; the ash-urn **T102-1** was removed, although at least one broken fragment of the pot was inadvertently left behind. The body of the adult male of Tomb 15 was inhumed, after which **T102-1** was neatly placed upright on its base on one of the cover slabs of Tomb 15 (over the chest of the skeleton and exactly over the original tomb pit below). The bottom of the original tomb pit was reached at a depth of 0.92 m below surface.

T102-1 (84.52) **Fig. 158a**; **pl. 325**
TR 25 East Baulk Pot 2
WM KRATER, Type 1
Papadopoulos 1996a:155–156, fig. 7, no. 6; 1998a:364, 367, figs. 42.3, 42.7

H 0.265; D (base) 0.136; D (rim) 0.335–0.370

Recovered in many frr. preserving entire base, about three-quarters of body and rim, and both handles. Vessel worn, with surface heavily chipped. Reconstructed and restored.

Local clay with small to medium white and light-colored inclusions and much silver and golden mica, the latter tending to predominate. Clay rather soft textured; clay core fired light gray, elsewhere close to reddish yellow 7.5YR 6/6. Where preserved, thickish slip, noticeably lighter to body clay, something like very pale brown 10YR 7/4.

Flat disk base, slightly misformed. Shallow curved lower wall; vertical upper wall, curving in slightly to knobbed rim, flat on top and with rounded outside edge. Two horizontal handles, round in section, attached to upper wall and rising to level of rim. Wheelmarks prominent on interior.

Slipped and painted, but much chipped and worn with no preserved decoration on one side of vessel. Paint, as preserved, dull, thickly applied with a tendency to flake; fired red. Solid band on lower wall above junction with base, above which are three thinner horizontal bands. Uppermost part of wall and exterior face of rim painted, from which hangs a row of concentric mechanically drawn pendent semicircles. Portions of two sets are clearly preserved, with only slight traces of two more, plus the impression left by the pivot point of a fifth; perhaps originally as many as seven or eight sets on either side. Each of the better preserved sets comprises five arcs with small dot at center; outer arc of each set touches the other. Upper and outer faces of handles painted, with the decoration extending onto body, although the terminations are not clear. Rim top barred at one point with poorly preserved diagonal strokes; elsewhere reserved, indicating the barred decoration was probably arranged in groups around rim (too poorly preserved to attempt illustration). Interior painted, but worn, especially toward center of floor, probably by use/cleaning.

Cf. **T116-1**; also the transitional local type **T48-1**.

PYRE DEBRIS FROM TOMB PIT BELOW TOMB 15

Apart from the organic material mentioned above, all the pottery frr. recovered from the tomb pit displayed signs of intense burning (cf. the material from Tomb 104; contrast that from Tomb 101), with the result that most of the material was too fragmentary and too fire damaged to allow for a precise idea of the quantity and range of vessels represented. Only a selection of some of the better preserved sherds is presented (**T102-2–T102-5**). In addition there were some fifty-two tiny frr., mainly body sherds, of which three preserved handle scars; among these was at least one WM skyphos. Many of the remainder may have belonged to one of the four catalogued vessels. Two frr., from the body of an unidentified HM vessel, preserved mending holes. In addition to the pottery, there were frr. of two, evidently different, bronze objects: **T102-6** preserved frr. of a spiral ornament, probably a hair ring, which did not appear to be seriously fire affected. The frr. of **T102-7** were amorphous and clearly subjected to sufficient heat to have melted and misshaped the original object beyond recognition.

T102-2 (84.423A–C) **Fig. 158b**

RIM AND SHOULDER FRR.; WM AMPHORA

PH 0.087; D (rim) est. 0.160

Four frr., of which only two join, preserving small portion of shoulder, neck, and rim; much affected by intense burning with little of the original surface preserved.

Local clay with small white and light-colored inclusions and much silver and golden mica, the latter tending to predominate. Clay light gray due to burning.

Shoulder curved; vertical neck, offset from body by pronounced ridge. Everted or horizontal rim, flat on top and with rounded outside edge.

Slipped and painted, but very poorly preserved: paint evidently dull, thickly applied; fired black. Traces of paint on entire preserved exterior except for outer face of rim.

Rim top appears to be reserved; upper neck on interior painted as shown.

Form of rim, coupled with solidly painted neck, would suggest a belly-handled amphora: cf. **T104-1**, or an amphora with belly and shoulder handles: cf. **T67-1**.

T102-3 (84.426) **Fig. 158c**

BODY AND HANDLE FR.; HM CLOSED VESSEL, PROBABLY JUG

PH 0.048; PL 0.046

Single fr. illustrated (with more frr. not catalogued), broken on all sides and much affected by intense burning, preserving small portion of shoulder and lower part of handle.

Local clay with small to medium inclusions and much mica, tending fine, predominantly golden. Clay core and surfaces blackened due to burning.

Shoulder curved; vertical handle, oval to round in section, attached to body by piercing, with slight projection of clay preserved on interior, partly worked away.

Surface burnished, but very poorly preserved.

Cf. **T101-14**.

T102-4 (84.424) **Fig. 158d**

RIM FR.; HM BOWL (OF TYPE WITH SQUARE-CUT HANDLES)

PH 0.043; PL 0.046

Single fr., much affected by intense burning, preserving small portion of rim.

Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden. Interior surface gray/brown, exterior and parts of clay core blackened due to burning.

Vertical rim, thickened on interior and forming a slight angle at junction with body; lip chamfered.

Surfaces burnished, but much worn.

Cf. **T67-2**, **T101-12**.

T102-5 (84.425) **Fig. 158e**

RIM FR.; HM OPEN VESSEL; IMPORTED, PROBABLY CENTRAL MACEDONIAN

PH 0.028; PL 0.041; D (rim) N/R

Single fr., much affected by burning, preserving small portion of rim.

Imported fabric (appendix E), dense and better levigated than local, with almost no visible inclusions and only a fine dusting of mica. Fr. blackened due to burning.

Preserved upper wall vertical. Outward thickened, knobbed rim, flat on top, and chamfered outside edge.

Surfaces much worn, but clearly burnished in the manner of **53**.

Incised decoration on rim top: as preserved, two groups of opposed diagonals, each group comprising three strokes as shown.

Cf. **53**.

T102-6 (M84.146A) **Pl. 464**

FRAGMENTARY BRONZE SPIRAL ORNAMENT, PROBABLY HAIR RING

D 0.016; PL (wire uncoiled) 0.117; TH 0.0015–0.0020; WT 1.80 g

Six frr., all of which probably join but impossible to reconstruct due to condition, preserving portion of spiral ornament; terminations not clearly preserved.

Fine bronze wire, round in section, coiled to form continuous spiral.

Cf. **T7-6**.

T102-7 (M84.146) **Fig. 158f**

UNIDENTIFIED BRONZE FRR.

PL 0.026; PH 0.018

Four joining frr. misshaped beyond recognition by burning

As preserved, small and very thin sheet of bronze, evidently folded over at one end.

Cf. **T104-6**, **T104-7**, **T18-2**, **T58-3**.

TOMB 103 (**FIG. 31B**; **PL. 209**; CONTENTS: **FIGS. 159A–E**; **PLS. 311A–B**, **502A–B**, **514**)

TR 25 S.F.35

URN CREMATION; DOUBLE ADULT CREMATION (AT LEAST ONE MALE)

Circular pit 0.58 m in diameter, cut 0.15 m deep into bedrock; tomb encountered at a depth of 0.50 m below surface. Within the center of the pit the wheelmade skyphos **T103-1**, which served as ash-urn, was placed upright, the vessel firmly set in

place by a small quantity of bedrock chips around its base, while the rest of the tomb pit was filled with blackened earth representing the remains of the pyre. Recovered from this fill was a small quantity of fire-affected sherds, a selection of which is catalogued (**T103-2–T103-5**). No tomb covering was encountered and the ash-urn was partially damaged on the NW side; the missing fragments were not recovered. One burned fragment of sheep/goat; two joining fragments, evidently unburned, of a younger pig or piglet (appendix B); and a few unidentifiable shell fragments (appendix C) were found inside the ash-urn. Although smaller than other ash-urns, **T103-1** contained 1325 g of cremated human bone, representing two adults, one of which appears to be male (appendix A). The fragmentary handmade vessel **47** was found only 0.35 m north of the tomb (see **fig. 31a**). The excavator suggested that **47** may represent a displaced *kterisma* of this tomb or of one nearby. Although this is possible, the vessel is conceivably much earlier than the Early Iron Age.

T103-1 (82.267) **Fig. 159a**; **pls. 311a–b**

WM SKYPHOS, Type 1

H 0.164; D (base) 0.074; D (rim) 0.227

Reconstructed from several large frr.; about one-third of rim and upper wall, including one handle, not preserved. Condition otherwise good.

Local clay but with fewer than normal inclusions and somewhat less mica, predominantly golden; rather hard fired, with occasional blowouts. Clay fired close to light reddish brown 5YR 6/4 and reddish yellow 5YR 6/6. Thick slip, noticeably lighter to body clay, something like very pale brown 10YR 7/4. Fabric and feel not unlike **T25-1**.

Thick, low ring base, with lower outside edge chamfered. Lower wall curved; upper wall vertical; flaring or outcurved rim, with rounded lip. Horizontal handles (only one preserved), round in section, attached to upper wall. Vessel well thrown.

Slipped and painted: paint dull, evenly and thickly applied with a tendency to flake where thickest, especially on upper body near handles; mostly fired black to very dark brown, but approaching red toward rim on interior. Four thin horizontal bands on lower wall, above which, near midpoint, is a broader band. Upper wall, on both sides, decorated with opposed "ugly sausages" that extend from the painted decoration of the upper and outer handle faces; area above and below handles reserved. Interior painted except for reserved band at rim.

Cf. especially **T25-1**, **T105-1**.

PYRE DEBRIS

Recovered from the tomb pit were fire-affected sherds representing a minimum of four vessels. Of these, three were WM open vessels: a skyphos (**T103-2**), a krater (**T103-3**), and a lekanis (**T103-4**). The fourth, **T103-5**, was a HM jug with cutaway neck. In addition there were some nineteen very small, mostly nonjoining frr. of one of the four catalogued vessels, but also the following: one rim fr. of an unidentified HM vessel, one body fr. of another HM vessel, one body fr. of a WM and painted vessel evidently not related with any of **T103-2–T103-4**, and one large horizontal handle. The total may have been as many as seven or eight different vessels. All frr. were much affected by burning except for the jug **T103-5**.

T103-2 (82.1148) **Fig. 159b**

RIM AND BODY FRR.; WM SKYPHOS

PH 0.090; PL 0.060

Two joining frr., much affected by burning, preserving small portion of rim and body.

Local clay with many small white and light-colored inclusions and much mica, tending fine, predominantly golden; occasional blowouts. Clay gray/brown due to burning.

Lower wall curved; upper wall vertical. Gently flaring rim, with rounded lip.

Slipped and painted: paint, as preserved, dull, with brushmarks visible on exterior; fired black. Upper wall, to rim, painted, with lower part reserved and defined by a diagonal to slightly curved line indicating that upper wall was probably decorated with "ugly sausage(s)." Interior painted, but much worn.

Shape and decoration probably not unlike **T103-1**; cf. **T106-1**.

T103-3 (82.1149) **Fig. 159c**
BODY FR.; LARGE WM OPEN VESSEL, PROBABLY KRATER
PH 0.045; PL 0.060
Single fr., broken on all sides and much affected by burning, preserving small portion of body.
Local clay with many, mainly small, white and light-colored inclusions and much mica, tending fine, predominantly golden. Clay gray/brown due to burning.
Fr. from lower wall of vessel, slightly curved; thick walled.
Slipped and painted: paint dull, evenly applied, fired red on exterior, red and black on interior. Thin horizontal band on exterior; interior painted.
Wall thickness may suggest krater of Type 1 (or Transitional type) rather than Type 2(?): cf., among others, **T102-1**.

T103-4 (82.1150) **Fig. 159d**
HANDLE FR.; PROBABLY WM LEKANIS
PL 0.050
Single fr., much affected by burning, preserving portion of handle.
Local clay with some small white and light-colored inclusions and much silver and golden mica, tending fine. Clay light gray due to burning.
Small horizontal ribbon handle with concave outer face.
Slipped and painted, but poorly preserved: paint fired black. Outer and parts of upper faces of handle painted.
For handle type cf. **T41-2**, **T47-3**, **T51-3**.

T103-5 (82.1151A and B) **Fig. 159e**
RIM AND SHOULDER FRR.; HM JUG WITH CUTAWAY NECK
82.1151A: PH 0.024; PL 0.040
82.1151B: PH 0.037; PL 0.045
Two nonjoining frr., one preserving portion of rim (fr. A), the other portion of shoulder and neck (fr. B); chipped and worn, but with no conspicuous signs of burning, perhaps only partially fire affected.
Local clay but with fewer than normal visible inclusions; heavily micaceous, with mica content predominantly golden. Clay and surfaces evenly fired close to light red 2.5YR 6/6.
Shoulder curved; vertical neck, offset from body by thin groove on exterior corresponding to angle formed on interior; rim chamfered; vessel thin walled.
Exterior and neck on interior burnished, with preserved tooling marks running horizontally, producing a good surface with a slight sheen.
Cf., among others, **T114-3**.

TOMB 104 (**FIGS. 31A–B**; **PLS. 210–215**; CONTENTS: **FIGS. 160A–T**; **PLS. 266A–C**, **397A–D**, **433–436**, **456–457**, **473**, **503**, **515**)

TR 25 S.F.25 + 26
URN CREMATION IN CIST; SINGLE ADULT (FEMALE?)
Cambitoglou 1982:73–77, pl. 55β
One of two only urn cremations in cists (the other, Tomb 102, partially dismantled) and, with Tombs 9 and 102, one of only three cist tombs in the cemetery. The tomb consisted of a large circular pit 0.91 m in diameter, cut 0.51 m deep into bedrock; the bottom of the pit lay at 1.09 m below surface. Within the center of the pit the large wheelmade belly-handled amphora **T104-1**, which served as ash-urn, was placed upright, firmly set by a number of body fragments of the pithos **T104-3** around its base (**pls. 215a–b**). The ash-urn was then covered by the large wheelmade black-slip krater **T104-2**, which was placed upside-down directly over it (**pls. 212–214**). Thus positioned, the two vessels, both found cracked in situ, were enclosed within a cist built of four large worked rectangular slabs of schist set on edge (**pls. 210**, **212–213**). That this stone cist was built around the pots and not prior to them having been placed in the pit was clear from the way it was constructed tightly against the vessels, with the slightly tilted SE slab actually leaning on the krater. In plan, the cist defined a square approximately 0.60 m to the side, with the corners aligned to the four points of the compass (the restored dimensions of the partially dismantled cist Cremation Tomb 102 were 0.70 m × 0.70 m). The main slabs of the cist were partially

supported and reinforced, especially on the SE and NE sides, by several smaller stones (**figs. 31a–b**; **pls. 212–214**). The tomb was sealed by a fifth slab of schist, roughly square and 0.08 m thick, laid flat on top (**pl. 210**); the cover slab was encountered at a depth of 0.38 m below surface.

Within the cist two types of fill were noted: loose-textured blackened earth, representing remains of the pyre, in the tomb pit, and a lighter-colored earth in the upper part of the cist. From the tomb pit were recovered fragments of cremated bone; a large quantity of fire-affected sherds representing a minimum of eleven different vessels (**T104-9–T104-19**); two small unidentified fragments of bronze (**T104-6**, **T104-7**), both evidently misformed by burning; and two whetstones, one fragmentary (**T104-5**), the other complete but in fragments (**T104-4**)—the latter, if not both whetstones, may well have been burned in the same process. At least one of the complete land-snail shells presented in appendix C was recovered from this fill. It is worth noting here that **T104-10**, one of the fire-affected sherds recovered from the pyre debris, preserves traces of incrusted oxidized iron, suggesting that the fragment was in contact with an iron object. Apart from this oxidation, however, no trace of iron was encountered in the tomb. The upper part of the cist, around the krater **T104-2**, was filled by a lighter-colored earth little different from that of deposit type 4 that surrounded the tomb; the only object encountered in this fill was the bronze shaft of a pin (**T104-8**), found in the south corner of the cist, which displayed no visible traces of burning. As such it was not possible to determine whether **T104-8** was part of the funerary attire of the deceased, or just a stray fragment in the fill. Residual water-sieving of both types of fill and of the contents of the ash-urn yielded no definite seed specimens (appendix D).

The tomb appears to have been of a female, an adult but not of advanced years (appendix A). An interesting feature of the human remains was that one of the toe and one of the finger bones was not fully cremated. The ash-urn of the tomb also yielded a good variety of marine shells, including complete specimens and fragments that represented at least five different species (appendix C). A comparatively large array of animal bones was recovered, from both the ash-urn and the fill surrounding it (appendix B). The latter included several frog skeletons, as well as the skeletons of three rodents and an insectivore, all unburned, and all certainly recent intrusions. The only nonintrusive animal bone is an unburned tibia fragment of a sheep/goat (appendix B).

T104-1 (82.180) **Fig. 160a–b**; **pls. 266a–c**

TR 25 S.F.26

WM BELLY-HANDLED AMPHORA

Cambitoglou 1982:75, fig. 5

H 0.506; D (base) 0.138; D (rim) 0.184; max. D (body) 0.373

Vessel recovered complete, with upper body reconstructed from frr.; one handle and small portion of rim slightly chipped; surface worn.

Local clay with somewhat fewer inclusions than normal but with small, medium, and occasional larger white and light-colored inclusions visible; much mica, almost exclusively golden; occasional blowouts. Clay evenly fired close to light red 2.5YR 6/6 and reddish yellow 5YR 6/6. Thick slip, noticeably lighter to body clay, close to very pale brown l0YR 7/4–8/4.

Flat disk base, with groove at junction with wall on exterior. Lower wall rising steeply to point of max. D, shoulder more curved. Narrow, vertical neck. Thickened, everted rim, flat on top, with outer face lightly chamfered. Two horizontal belly handles attached directly above point of max. D and tending to rise vertically. Wheelmarks prominent on interior; body slightly distorted.

Slipped and painted: paint dull, evenly and quite thickly applied; fired red. Thin horizontal band on lower wall near base. Upper and outer faces of handles painted, with the decoration extending for a short distance onto body as shown. Belly zone decorated, on both sides, with wavy line that originates from the painted decoration of the handles. Three thin horizontal bands on shoulder, above which are seven irregularly spaced sets of mechanically drawn concentric circles; each set comprises seven circles with small dot at cen-

ter (**fig. 160b**). In four of the sets the outer circle runs onto the uppermost of the three bands below. Three of the sets are positioned very close to one another, above one of the handles, with the outer circles of two sets touching. The remaining four sets are more widely spaced. All seven sets appear to have been executed in an anticlockwise direction. The rather awkward positioning of some of the sets of concentric circles suggests a potter not well experienced in the use of the pivoted multiple brush. Neck and rim exterior painted solid; rim top reserved. Occasional splashes of paint and other smears on body on exterior; among the latter seven rather thin splashes, more or less in line, run diagonally across one side of the vessel. The fact that there were seven such splashes in line originally suggested the possibility that these were made by the same multiple brush device used for the circles on the shoulder. Experiments by Dr. James Vedder, however, suggested this was unlikely and probably the result of a single brush such as that used for the bands and wavy lines on **T104-1**.

Style close to Attic Early Protogeometric: cf. generally Desborough 1952:20–37, pl. 5; 1972:33, 148; 36, fig. 3. Cf. especially Kraiker and Kübler 1939: pl. 46, inv. 857; also pl. 54, inv. 549; pl. 55, inv. 589. Fabric and feel close to **T117-1**, **T45-1**.

T104-2 (82.179) **Fig. 160c**; **pls. 397a–d**

TR 25 S.F.25

WM BLACK-SLIP KRATER; PROVENANCE UNCERTAIN

Cambitoglou 1982:76, fig. 6

H 0.368; D (base) 0.158; D (rim) 0.436–0.470

Vessel recovered complete, reconstructed from frr., with minor chipping restored; surfaces slightly worn and in parts heavily chipped.

Clay with many small to larger variously colored inclusions, notably white, yellow, red, and some black impurities. Almost no mica except for the odd speck; occasional blowouts. Clay mostly fired light gray, something like light gray 10YR 6/1 and grayish brown 10YR 5/2, in parts closer to brown 10YR 5/3 and brown 7.5YR 5/4.

Cylindrical pedestal foot, with lower member splaying to rounded outside edge; resting surface obliquely cut, underside flat. Small, but only partial ridge at junction of base and body. Shallow, curved lower wall rising to point of max. D, which is set midway; upper wall vertical and slightly slanting inward, offset from lower wall by carination. Broad everted rim with chamfered lip. Two horizontal double handles, as shown, thick and round in section, attached to upper wall above carination. Handles attached after decoration was executed, as the decoration clearly continues beneath the handles. Wheelmarks prominent on interior; vessel well thrown for its size.

Upper body and rim decorated with incised decoration. Two raised bands on upper body defining three registers; each band decorated with incised diagonal strokes, with the strokes of one band set the opposite direction to those of the other. Lower register decorated with single incised zigzag; upper two registers each with smaller double zigzags. Rim top decorated with short vertical strokes as shown.

Interior and exterior slipped/painted, underside reserved. Thick slip/paint, semilustrous on exterior, rather duller on interior, fired black to various shades of gray/brown and dark reddish gray/brown.

Cf. **T47-2**. I know of no exact parallel for details of shape and decoration: cf. generally Buchholz 1973:179–187; Lamb 1931–32: pl. 22, no. 21 (Antissa); Brock 1957:128, pl. 109, no. 1481. The place of manufacture remains a problem (see appendix E).

T104-3 (82.1042) **Fig. 160d**

TR 25 S.F.26 bis

BODY FRR.; HM PITHOS

Dimensions of largest preserved fr.: PH 0.260; PL 0.220; PD (body) est. 0.500–0.600

Two larger frr. plus at least forty-six smaller sherds, only some of which join, preserving portion of body. Surface heavily chipped and much worn.

Coarse local clay with a great many small to very large white and light-colored inclusions and much mica, exclusively golden. Clay and surfaces evenly fired close to strong brown 7.5YR 5/6.
Frr. mainly from toward lower body of large thick-walled pithos.
Interior and exterior surfaces wet-smoothed, producing a good, dull surface; exterior somewhat better finished.
Cf., among others, **T12-1**.

T104-4 (82.47) **Fig. 160e**; **pl. 473**
TR 25 S.F.28
WHETSTONE
L 0.086; W 0.021
Recovered complete but in three joining frr.; slightly chipped, especially at breaks, with unusually dark-colored surface; fragmentary state perhaps the result of burning(?).
Long rectangular piece of dark gray stone, probably local schist or mudstone, roughly square in section, tapering very slightly toward one end; surfaces well smoothed.
Drilled hole (D: 0.004 m) at one end.
For general discussion on whetstones see Evely in Popham, Sackett, and Themelis 1984: 226; cf., among others, Wardle 1980: pl. 22a (Assiros). For further discussion see chapter 7.

T104-5 (82.271B) **Fig. 160f**
TR 25 S.F.32
WHETSTONE FR.
PL 0.049; W 0.038; TH 0.012
Single fr., clearly broken and chipped.
Thin, almost rectangular, piece of light gray schist (phyllite) of local variety, with edges slightly rounded and faces smoothed, tapering slightly toward preserved end. Possible scratch marks on one side.
Cf. **T52-5**.

T104-6 (82.271A) **Fig. 160g**; **pl. 457**
TR 25 S.F.27
UNIDENTIFIED FR. BRONZE
L 0.040; W 0.021; TH 0.005; WT 9.30 g
As preserved, thin bronze sheet, with the appearance of having been folded over and fused at ends opposite fold.
Fire affected.
Fr. perhaps from the same object as **T104-7**. Conceivably the catch plate of a fibula.

T104-7 (82.1163) **Fig. 160h**
TR 25 S.F.29
UNIDENTIFIED LUMP OF BRONZE
L 0.042; WT 10.00 g
Single fr., much misformed by burning.
As preserved, one end terminates in something of a point, the other is heavier and more rounded.
Cf. **T104-6**.

T104-8 (82.181) **Fig. 160i**; **pl. 456**
TR 25 S.F.30
BRONZE PIN SHAFT FR.; PERHAPS OF FIBULA RATHER THAN DRESS PIN
PL 0.063; WT 3.61 g
Bronze pin shaft broken at one end; slightly bent, perhaps by design.
Shaft round in section, tapering to point, with a small thickening at center as shown; very slight thickening at broken end.
The slight curve of the shaft as preserved and the slight thickening at the broken end may suggest the pin of a fibula.
Cf. **58**.

PYRE DEBRIS

Apart from the organic material noted above, the two unidentified bronze frr. (**T104-6**, **T104-7**) clearly derive from the pyre debris of the tomb; **T104-8** is less certain, and may represent a stray find not clearly associated with this tomb. The two whetstones (**T104-4**, **T104-5**) were found in the dark fill of the pyre debris. The splitting of **T104-4** is probably the result of burning; it is unclear whether **T104-5** was burned, although it appears to have been. Both whetstones are therefore almost certainly part of the pyre debris and not *kterismata* placed into the tomb separately. In addition to these finds, frr. of at least eleven vessels were encountered in the cist, all very much affected by intense burning, making difficult the identification of various shapes and the actual quantity of vessels represented. In addition to the frr. catalogued, there were about sixty tiny sherds, mostly body frr.

either too small or too fire damaged to be of any diagnostic value. That some of these frr. belonged to some of the eleven identified vessels is clear, but more vessels may well be represented.

T104-9 (82.1034A–F) **Fig. 160j**; **pl. 433**
BODY AND HANDLE FRR.; WM BELLY-HANDLED AMPHORA
Dimensions of largest preserved fr. (**fig. 160j**): PH 0.033; PL 0.072
Six small nonjoining frr., five of which preserve small portion of body and one handle fr.; all frr. much affected by intense burning.
Local clay with some small to medium inclusions and quite a bit of mica, tending fine, predominantly golden. Clay light to dark gray and in parts blackened due to burning.
Shoulder curved; amphora clearly belly-handled on the evidence of the preserved handle fr. (not illustrated).
Slipped and painted but poorly preserved: paint dull; fired black. Shoulder frr. preserve portion of horizontal band from which springs a row of mechanically drawn upright concentric semicircles. The one illustrated fr. (**fig. 160j**) preserves the three outer arcs of one set. Handle painted.
Cf. **T104-1**.

T104-10 (82.1035) **Fig. 160k**; **pl. 434a**
RIM FR.; WM AMPHORA
PH 0.027; PL 0.040
Single fr., partially affected by burning but not as intensely as other frr., preserving small portion of rim. On lower part clear traces of incrusted oxidized iron indicate fr. was in contact with iron object; apart from this oxidation, no trace of iron was encountered in the tomb.
Local clay, similar to that of **T104-9**.
Vertical neck, as preserved, flaring to everted rim, thickened slightly on exterior, with rounded lip.
Slipped and painted: very faint traces of paint preserved on exterior and interior (not indicated on drawing).
Perhaps the rim of **T104-9**, although this is unlikely as the form of rim is more consistent with neck-handled amphorai: cf. **T52-1**, **T73-1**, **T74-1**, **T77-1**, and especially **T124-1**.

T104-11 (82.1164) **Fig. 160l**; **pl. 434f**
RIM FR.; WM KRATER
PH 0.053; PL 0.065; D (rim) est. in the vicinity of 0.400–0.500
Single fr., much affected by intense burning, preserving small portion of rim, upper body, and portion of handle scar.
Local clay with some white and light-colored inclusions and silver and golden mica, tending fine. Clay light gray due to burning.
Vertical upper wall, slightly inward sloping; horizontal rim, flat on top, with rounded outside edge. Portion of scar of horizontal handle preserved below rim.
Slipped and painted: paint dull, thickly applied on exterior and rim top, more dilute on interior; fired black as preserved. Exterior, including outside edge of rim, painted solid except for small reserved area preserved at lower break and extending from the handle scar. Rim top barred, as shown, with strokes arranged in groups; interior painted except for reserved band at rim.
For shape cf. **T24-4**.

T104-12 (82.1036) **Fig. 160m**; **pl. 434b**
BODY FR.; WM SKYPHOS
PH 0.042; PL 0.038
Single fr., broken on all sides and much affected by burning, preserving small portion of body and part of handle scar.
Local clay with small to medium, variously colored inclusions and much mica, predominantly golden. Clay light brown to light gray due to burning.
Fr. preserves junction of lower and upper wall, offset by slight carination. Scar preserved of horizontal handle, attached to upper wall. Vessel quite large and thick walled.
Slipped and painted, but much worn, especially on exterior: faint traces of paint on exterior; interior painted, with paint dull and thickly applied; fired dark reddish brown.
Cf. **T104-13**.

T104-13 (82.1038) **Fig. 160n**; **pl. 434e**
BODY FR.; WM OPEN VESSEL, PROBABLY SKYPHOS
PH 0.035; PL 0.036
Single fr., broken on all sides and much affected by burning, preserving small portion of lower body near base.
Fabric not unlike **T104-12**, but more blackened due to burning.
Fr. preserves lower wall of large, thick-walled, open vessel.
Slipped and painted: broad horizontal band on preserved exterior; interior painted.
Perhaps from the same vessel as **T104-12**, but not certain.

T104-14 (82.1037) **Fig. 160o**; **pl. 434c**
RIM FR.; WM SKYPHOS
PH 0.015; PL 0.042
Single fr., much affected by intense burning, preserving small portion of rim; little remains of original surface.
Clay probably local but fr. too fire damaged to be certain, with some small inclusions and some fine mica. Clay light gray and in parts blackened due to burning.
Gently flaring/outcurved rim, with rounded lip.
No painted decoration preserved.
Form of rim consistent with skyphoi of Types 1–3: cf. **T23-1**, **T28-1**, **T94-1**.

T104-15 (82.1165) **Fig. 160p**; **pl. 434d**
RIM AND HANDLE FR.; WM LEKANIS, Type 1
PH 0.037; PL 0.046
Single fr., much affected by burning, preserving small portion of rim and handle stump.
Local clay with many small to medium white and light-colored inclusions and much mica, golden tending to predominate. Clay partially blackened due to burning.
Curved lower wall; almost vertical upper wall, terminating in thickened, almost knobbed rim, flat on top and with rounded outside edge. Preserved stump of horizontal ribbon handle, with outer face becoming concave, attached to upper wall directly below rim.
Slipped and painted, but poorly preserved: paint dull, fired black. Faint traces of paint preserved on outer face of handle stump extending onto body; rim exterior and upper wall at break reserved. Rim top barred, but with only one stroke actually preserved (not indicated on drawing); interior painted.
Cf. generally **T41-2**, **T47-3**, **T51-3**.

T104-16 (82.1039) **Fig. 160q**; **pl. 435b**
RIM FR.; HM JUG WITH CUTAWAY NECK
PH 0.025; PL 0.035
Single fr., somewhat less affected by burning, preserving small portion of rim at point where cut away.
Local(?) clay, somewhat atypical, although containing some small white and light-colored inclusions and much silver and golden mica, tending fine. Fr. partially blackened, elsewhere fired close to reddish brown 2.5YR 5/4 and 5YR 5/4.
Fr. clearly from large jug; thick walled. Neck cut away, with broad chamfered rim.
Preserved interior and exterior burnished, with broad and shallow tooling marks running horizontally and producing a good surface with a slight sheen, not unlike **T38-1**.
The thickness of wall at rim is unique among Torone HM jugs.

T104-17 (82.1166) **Fig. 160r**; **pl. 435c**
BASE FRR.; HM CLOSED VESSEL, PROBABLY JUG
PH 0.015; D (base) 0.090
Two joining frr., much affected by burning, preserving entire base, but only very small portion of lower wall.
Local clay with many small to medium white and light-colored inclusions and much mica, golden tending to predominate. Clay and surfaces gray/black due to burning.
Flattened base.
Exterior burnished, but poorly preserved.
Cf., among others, **T114-3**.

T104-18 (82.1040) **Fig. 160s**; **pl. 435a**
RIM FR.; HM TRIPOD CAULDRON
PH 0.034; PL 0.030

Single fr., much affected by intense burning, preserving small portion of rim.
Coarse local clay with a great many small to large white and light-colored inclusions and much mica, exclusively golden. Clay discolored gray to black due to burning.
Neck/upper wall vertical; flaring/outcurved rim, with rounded lip.
Exterior and preserved interior burnished, but very worn.
Cf., among others, **T123-2**.

T104-19 (82.1041A–C) **Fig. 160t**; **pl. 436**
NECK AND BODY FRR.; HM PITHARION
Dimensions of largest preserved fr. (**fig. 160t**): PH 0.045; PL 0.045
Three main nonjoining frr. (with at least nine more tiny body frr. not catalogued) preserving portion of shoulder and neck; all frr. much affected by intense burning.
Coarse local clay with many small to large white and light-colored inclusions and much mica, predominantly golden. Clay discolored gray/black due to burning.
Upper wall slightly curved; concave neck offset from body by slight ridge.
Exterior burnished, but very worn.
Cf., among others, **T38-1**, **T95-2**.

TOMB 105 (**FIGS. 31A–B**; **PLS. 216–217**; CONTENTS: **FIGS. 161A–G**; **PLS. 310A–B**, **437A–E**)

TR 25 S.F.36
URN CREMATION; SINGLE ADULT CREMATION
Roughly circular pit ca. 0.50 m long (max.) × ca. 0.20 m deep, dug through deposit type 4 down to the level of bedrock; tomb encountered at a depth of 0.35 m below surface. Within the center of the pit the wheelmade skyphos **T105-1**, which served as ash-urn, was placed upright on flat bedrock, set by a few small chocking stones and a small quantity of bedrock chips around its base; the vessel, although cracked in situ, was recovered complete. The tomb pit was filled with earth very similar to that of deposit type 4, from which were recovered a few sherds representing at least five different vessels (**T105-3–T105-7**); of these three were clearly fire affected, whereas two (**T105-5**, **T105-7**) did not appear to be burned. The krater body fragment **T105-3** was probably from the same vessel as the rim fragment **40**, which was encountered in deposit type 4 in the immediate vicinity of the tomb (both fragments were fire affected). There was none of the blackened earth in the tomb pit commonly met in other tombs in the area of the Early Iron Age cutting. It is therefore possible the sherds recovered do not represent pyre debris specifically associated with this tomb. The tomb was sealed by what was probably originally a large single body fragment of a pithos, **T105-2**, found cracked in many fragments. One complete seashell, a fragment of a land-snail shell (appendix C), and four very small pieces of charcoal were found inside the ash-urn with the cremated human remains; another seashell fragment was found in the immediate vicinity of the tomb.

T105-1 (82.270) **Fig. 161a**; **pls. 310a–b**
TR 25 S.F.36
WM SKYPHOS, Type 1
H 0.186; D (base) 0.080; D (rim) 0.225–0.250
Recovered complete and reconstructed from many frr.; vessel chipped and much worn, especially toward base.
Local clay with many small to medium white and light-colored, and occasional darker, inclusions; much mica, predominantly fine and golden; occasional blowouts. Clay evenly fired close to reddish yellow 7.5YR 6/6. Fabric and feel very similar to the krater **T48-1**.
Rather heavy ring base; underside flat. Lower wall curved; upper wall vertical. Gently flaring or outcurved rim with rounded lip. Two horizontal handles, round in section, attached to upper wall. Wheelmarks prominent on interior and on parts of exterior.
Slipped and painted: paint dull, rather thickly applied with a tendency to flake; fired red. Brushmarks visible, especially on exterior. Traces of thin horizontal band at junction of base and body. Decoration on lower wall not preserved. Upper wall decorated on both sides with opposed "ugly sausages" that extend from the painted decoration of the outer faces of the handles. Lower parts of

"sausages" not preserved. Area above handles painted, reserved below handle arches; traces of horizontal band below handle on one side. Interior, including rim top, painted solid.

Cf. **T25-1**, **T103-1**.

T105-2 (82.1162) **Fig. 161b**

BODY FRR.; HM PITHOS

PH (illustrated fr.) 0.217; PL (in situ) 0.410

Twelve joining frr. plus several smaller chips preserving portion of body; chipped and worn.

Coarse local clay with a great many small to very large white and light-colored inclusions and much silver and golden mica, tending fine. Clay and surfaces evenly fired close to yellowish red 5YR 5/6.

Preserved frr. from lower body of large thick-walled pithos.

Interior and exterior surfaces wet-smoothed, producing a good, dull surface; exterior somewhat better finished.

Cf. **T12-1**, **T1-1**, **T104-3**.

ASSOCIATED SHERDS

Frr. of at least five vessels were encountered in the tomb pit fill; of these only **T105-3**, **T105-4**, and **T105-6** displayed clear signs of burning. As noted, **T105-3** is probably from the same vessel as **40**. In addition to the catalogued pieces, frr. of one and possibly two HM vessels were recovered (not catalogued), as well as a few nondiagnostic frr. and chips.

T105-3 (82.1078) **Fig. 161c**; **pl. 437a**

BODY FR.; WM KRATER

PH 0.058; PL 0.060

Single fr., broken on all sides, slightly worn and partially discolored due to burning, preserving small portion of body.

Local clay with many small to medium white and light-colored inclusions and much mica, golden tending to predominate; occasional blowouts. Clay fired close to light brown 7.5YR 6/4 where not so discolored by burning.

Lower wall curved; upper wall vertical.

Slipped and painted: paint dull, evenly applied with a tendency to flake; fired dark brown to black. Horizontal band or area painted solid at upper and lower breaks on exterior, define a reserved band at upper wall decorated by two tremulous lines, executed from right to left according to the thickness of paint. Interior painted.

Fr. probably from the same vessel as **40**, although the two do not join.

T105-4 (82.1079) **Fig. 161d**; **pl. 437b**

BODY FR.; WM SKYPHOS

PH 0.058; PL 0.070

Single fr., broken on all sides and much affected by burning, preserving small portion of body and handle scar.

Local clay with many small to medium white and light-colored inclusions and much mica, golden tending to predominate. Clay dark gray due to burning.

Curved lower wall; upper wall becoming vertical. Portion of scar of horizontal handle preserved at break.

Slipped and painted: paint dull, evenly and rather thickly applied; fired black. Horizontal band below handle attachment; portion of "ugly sausage" preserved on upper body, extending from the painted outer face of the handle. Interior painted.

Cf. **T105-1**.

T105-5 (82.1080) **Fig. 161e**; **pl. 437c**

BODY FR.; WM OPEN VESSEL, PROBABLY SKYPHOS

PH 0.030; PL 0.049

Single fr., broken on all sides and worn, preserving small portion of body; no conspicuous signs of burning.

Local clay with small white and light-colored inclusions and much mica, golden tending to predominate. Clay evenly fired close to light brown 7.5YR 6/4.

Shallow, slightly curved lower wall.

Slipped and painted: paint dull, fired reddish brown. Lower part of preserved fr. reserved; upper part painted. Interior painted.

Fr. thinner walled than **T105-4** and clearly not from the same vessel.

T105-6 (82.1081) **Fig. 161f**; **pl. 437d**
BODY FR.; WM CLOSED VESSEL, PROBABLY AMPHORA
PH 0.039; PL 0.070
Single fr., broken on all sides and much affected by burning, preserving small portion of shoulder.
Local clay with many small and medium white and light-colored inclusions and much silver and golden mica, the latter tending to predominate. Clay fired close to light reddish brown 5YR 6/4 and light brown 7.5YR 6/4 where less affected by burning; elsewhere gray.
Curved shoulder.
Slipped and painted, but poorly preserved: paint dull, fired red. Traces of two horizontal bands as shown.
Cf., among others, **T95-1**.

T105-7 (82.1082) **Fig. 161g**; **pl. 437e**
SHOULDER AND NECK FR.; WM AMPHORISKOS
PH 0.023; PL 0.022
Single fr., broken on all sides and worn, but with no clear signs of burning.
Local clay with fewer inclusions than normal but much mica, golden tending to predominate. Clay fired something like pink 7.5YR 7/4 and light brown 7.5YR 6/4.
As preserved, shoulder curved; neck vertical.
Slipped and painted: paint dull, evenly applied with a tendency to flake; fired red. Either two thin horizontal bands (as shown) or single band that has partially flaked, at junction of shoulder and neck.
Cf. **T44-1**, **T55-1**, **T107-1**.

TOMB 106 (**FIG. 32B–C**; **PLS. 218–219**; CONTENTS: **FIG. 162A–C**; **PLS. 309**, **504**)

TR 25 East Baulk Pots 9 + 10
URN CREMATION; SINGLE ADULT
Tomb located along the south scarp of TR 25 East Baulk and partly beneath Classical wall *d*. It consisted of a circular pit 0.44–0.50 m in diameter, cut 0.10 m deep into bedrock; tomb encountered at a depth of 0.62 m below surface. In the east part of the pit the wheelmade skyphos **T106-1**, which served as ash-urn, was placed upright; the vessel was recovered complete, but cracked in situ. The tomb pit fill, loose-textured blackened earth representing remains of the pyre, yielded a small quantity of fire-affected sherds, including fragments of at least two vessels (**T106-2**, **T106-3**) found concentrated in the west part of the pit. The tomb was sealed by a flat, crudely worked and roughly square piece of schist placed directly over the ash-urn, but which did not entirely cover the tomb pit. Only 52 g of cremated human bone were recovered from the ash-urn (appendix A); the fact that the tomb was sealed would indicate this small quantity resulted from incomplete collection of the remains at the end of the cremation process.

T106-1 (84.166) **Fig. 162a**; **pl. 309**
TR 25 East Baulk Pot 10
WM SKYPHOS, Type 1
H 0.165; D (base) 0.076; D (rim) 0.220–0.225
Vessel recovered complete except for minor chipping at rim, reconstructed from frr. and partially restored. Surface worn.
Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden; occasional blowouts. Clay core fired light gray, elsewhere close to reddish yellow 5YR 7/6 and 7.5YR 7/6; slip slightly lighter.
Low ring base; underside flat. Lower wall curved; upper wall vertical. Gently flaring rim with rounded lip. Two horizontal handles, round in section, attached to upper wall and rising to level just below rim.
Slipped and painted: paint dull, in parts thickly applied with a tendency to flake, elsewhere more dilute; fired pale reddish brown and in parts red on exterior; bright red on interior. Horizontal band at junction of base and body. Two thin horizontal bands on lower wall, with a broader band above. Upper wall, on both sides, decorated with continuous "ugly sausage" that extends from the painted decoration of the upper and outer

faces of the handles, sweeping down onto the body to the uppermost band. Area above handles painted, reserved below handle arches. Interior painted: center of floor worn as a result of use, with no paint preserved at center of floor or lower part of interior; paint quite thick toward upper part of interior.

Cf. **T23-1**, **T101-7**, **T108-1**.

PYRE DEBRIS

Frr. representing at least two different vessels, **T106-2** and **T106-3**, were found concentrated in the west part of the tomb pit and originally designated Pot 9 in the field. In addition to these, a very small quantity of tiny frr. was recovered, all fire affected. Among these were several body frr., probably of the jug **T106-3**, and a few frr. of another WM vessel of open form but with so little preserved as to make it impossible to establish any significant details.

T106-2 (84.147A) **Fig. 162b**

TR 25 East Baulk Pot 9

RIM FR.; WM SKYPHOS

PH 0.040; PL 0.036

Single fr., much affected by burning, preserving small portion of rim and upper wall. Several more possible frr. not inventoried.

Local clay with many small white and light-colored inclusions and some silver and golden mica, tending fine. Clay discolored gray due to burning.

Vertical upper wall; gently outcurved/flaring rim, tapering slightly to rounded lip.

Slipped and painted, but very poorly preserved: paint looks dull, fired black. Traces of horizontal band below rim on exterior, with even more faint traces of paint below. Interior painted.

Cf. **T106-1**.

T106-3 (84.147C) **Fig. 162c**

TR 25 East Baulk Pot 9 bis

RIM AND BODY FRR.; HM JUG WITH CUTAWAY NECK

PH (illustrated fr.) 0.081; PL 0.068

One fr. (illustrated) preserving portion of shoulder, neck, and rim, plus a minimum of five other frr. (nonjoining) of neck and body. All frr. much affected by burning.

Local clay with many small to medium white and light-colored inclusions and a great deal of silver and golden mica. Clay discolored gray/black due to burning.

Shoulder and neck offset by broad, shallow groove on exterior corresponding to angle formed on interior. Vertical neck, cut away; rim chamfered.

Preserved exterior burnished, with pronounced tooling marks running vertically on neck, horizontally on shoulder.

Cf., among others, **T114-3**.

TOMB 107 (**FIG. 29A**; CONTENTS: **FIGS. 163A–B**)

TR 22 S.F.18

URN CREMATION; SINGLE ADULT; POORLY PRESERVED

This tomb was found in a poor state of preservation, probably the result of disturbance caused both by the foundation of Classical wall *e* and the later stone-robbing activity associated with deposit type 2. As preserved, the tomb consisted of a small roughly circular pit 0.40 m in diameter (max.), cut 0.12 m deep into bedrock; the bottom of the pit was reached at a depth of about 0.45 m below surface. Within the pit were the fragments of the wheelmade vertical-handled amphoriskos **T107-1**, evidently the ash-urn, with which was associated a quantity of cremated human bone. The vessel was probably originally placed upright, and although fragmentary was recovered almost complete, missing only fragments of the rim. Above the fragmentary **T107-1** were a few scattered body sherds of the pithos **T107-2**, which probably originally served as a lid/cover, as well as a few displaced stones. The tomb pit fill comprised a small quantity of bedrock chips and a little blackened earth; no burned sherds were found in the pit. A single seashell fragment was noted in the immediate vicinity of the tomb (appendix C).

T107-1 (81.895) **Fig. 163a**

TR 22 S.F.18

WM VERTICAL-HANDLED AMPHORISKOS

Restored H 0.190; PH (not including rim fr.) 0.177; D (base) 0.075; D (rim) est. 0.117
Condition extremely poor; a great many small frr. and chips, tending larger toward base, preserving almost complete vessel except for rim, which is represented by only one nonjoining fr. Vessel reconstructed as far as possible; much of original surface not preserved.
Local clay, probably poorly fired, with many small to medium, and occasional larger, white and light-colored inclusions and much mica, predominantly golden. Clay core fired light gray near midpoint where wall thickness is greater, elsewhere more evenly fired close to reddish yellow 5YR 6/6 and 7.5YR 6/6; slip, where preserved, slightly lighter.
Flat disk base; narrow groove at junction of base and body on exterior. Lower wall rising steeply to point of max. D; shoulder more curved. Vertical neck, offset from body by pronounced ridge. Flaring rim with rounded lip; vessel comparatively wide mouthed. Two vertical handles, with concave upper faces, attached from upper shoulder to neck below rim. Vessel particularly thin walled, especially at lower body.
Slipped and painted, but with little of the decoration preserved; although fairly certain, the drawing as presented should be seen as tentative. Paint, as preserved, dull, with a tendency to flake where thickest; fired red. Two clear horizontal bands on lower wall. Traces of paint visible from around midpoint to upper shoulder below ridge, indicating upper body painted solid. Tremulous line on lower neck (visible only at one point), above which is a horizontal band. Middle part of neck evidently reserved. Upper neck and rim exterior painted; no clear traces of paint on rim interior. Faint traces of paint preserved on the upper face of one of the handles.
Cf. **T27-1**, **T44-1**, **T55-1**, **T99-1**, **T123-1**.

T107-2 (81.1138) **Fig. 163b**
TR 22 S.F.18 bis
BODY FRR.; HM PITHOS
PH (illustrated frr.) 0.240
A total of nine joining and nonjoining frr., all from the same vessel, preserving portion of body; chipped and slightly worn.
Coarse local clay with a great many small to very large white and light-colored inclusions and much mica, almost exclusively golden. Clay and interior surface evenly fired close to reddish brown 5YR 5/3; exterior surface closer to light reddish brown 5YR 6/4, slightly discolored black on parts of two frr. only.
Frr. preserve portion of central body of pithos, which is vertical, with lower preserved wall curved.
Exterior surface wet-smoothed, producing a good, dull surface; interior less well finished.
Cf. **T12-1**, **T104-3**, **T105-2**.

TOMB 108 (**FIGS. 29B–C**; **PLS. 220–221**; CONTENTS: **FIGS. 164A–H**; **PL. 308**)

TR 22 S.F.36
URN CREMATION; SINGLE ADULT
Tomb consisted of a large irregularly shaped pit, cut 0.17 m into bedrock at its deepest; the pit was roughly circular averaging 0.75 m in diameter toward the top, whereas toward the bottom it had a maximum length of 0.92 m; tomb encountered at a depth of 0.52 m below surface. In the SE quarter of the pit, against the edge, the wheelmade skyphos **T108-1**, which served as ash-urn, was placed upright and partially covered by the body fragments of the pithos **T108-2**. The remainder of the tomb pit was filled by a much larger than usual quantity of intensely blackened, loose-textured earth representing remains of the pyre, that filled almost two whole zembilia. The tomb was sealed by a number of small to medium size stones that covered most but not all of the tomb pit. The tomb pit fill yielded a number of burned sherds, a selection of which is catalogued (**T108-3–T108-6**). A further sherd, presented here as **T108-7**, appeared to be associated but displayed no traces of burning and was stylistically later than both the ash-urn and the burned sherds. Although the tomb was sealed, the cover stones did not entirely cover the tomb pit and thus **T108-7** may have been intrusive.

The small bronze spiral bead **T108-8** was found in the process of water-sieving the blackened earth recovered from the tomb pit fill. The bead may have been worn by the deceased at the time of cremation but was not clearly affected by fire. Water-sieving the tomb pit fill also recovered several charred seeds, including specimens of broad bean and bitter vetch and two examples of *Prunus* cf. *spinosa*, a member of the plum family, perhaps collected from the wild (appendix D). It also yielded a good variety of seashell fragments, two fish vertebrae, several sea-urchin body and spine fragments, and more than one hundred specimens of land snails (appendix C). At least one sea-urchin shell fragment was encountered inside the ash-urn, in addition to a relatively small quantity of cremated human bone (85 g; appendix A). Approximately 0.15 m south of the tomb pit was a small quantity of seashell material, but this could not be clearly associated with the tomb and is not presented with it. Although comparatively well endowed with seafood, grain, and fruit, the grave yielded no animal bone remains.

T108-1 (82.38) **Fig. 164a**; **pl. 308**

TR 22 S.F.36

WM SKYPHOS, Type 1

H 0.130; D (base) 0.059; D (rim) 0.154–0.162

Vessel recovered complete except for chipping to body and rim; reconstructed from many frr. and restored. Chipped and worn.

Local clay with many small to medium white and light-colored inclusions and mica, predominantly golden; occasional blowouts. Clay fired close to reddish yellow 7.5YR 7/6–6/6; slip slightly lighter.

Low, heavy ring base; underside flat. Lower wall curved; upper wall vertical. Gently flaring/outcurved rim with rounded lip. Two horizontal handles, round in section, attached to upper wall. Vessel slightly distorted.

Slipped and painted, but rather worn: paint dull, fired red; brushmarks visible especially on exterior. Base painted on exterior. Five thin horizontal bands on lower wall, with the upper two merging at one point. Upper wall, on either side, decorated with continuous "ugly sausage" that extends onto body from the painted decoration of the upper and outer handle faces. Area above handles painted; reserved below handle arches. Paint on interior extremely worn, probably from use/cleaning; traces of paint preserved on upper part of interior as shown; no paint preserved on lower interior, including center of floor.

Cf. **T23-1**, **T106-1**.

T108-2 (82.1115) **Fig. 164b**

TR 22 S.F.36 bis

BODY FRR.; HM PITHOS

Dimensions of two joining frr.: PH 0.222; PL 0.185

A total of seven frr., of which only two join, preserving small portion of body; chipped and worn, especially at breaks.

Coarse local clay with a great many small to very large white and light-colored inclusions and much mica, predominantly golden. Clay evenly fired close to dark brown 7.5YR 4/4; surfaces, especially interior, slightly lighter, closer to brown 7.5YR 5/4.

Frr. preserve portion of body near midpoint and toward base; thick walled.

Exterior wet-smoothed, producing a good, dull surface; interior less well finished.

Cf. **T104-3**, **T105-2**, **T107-2**.

PYRE DEBRIS

Recovered from the tomb pit fill, in addition to the organic material noted above, were a number of sherds, all, with the exception of **T108-7**, displayed signs of burning. Only the more diagnostic frr. have been selected, including frr. of three skyphoi (**T108-3–T108-5**) and a fr. of an amphora, **T108-6**. There were, in addition, some twenty small frr. of WM vessels, some perhaps nonjoining frr. of pieces catalogued, but with possibly as many as four more vessels represented. There were also eleven body frr., mainly very small (some of which joined), preserving portion of body of a HM closed vessel, probably a jug. The unburned fr. **T108-7** may be intrusive. How the bronze spiral bead **T108-8** was originally associated with the deceased is difficult to determine with certainty. All that can be certain is that it was part of the pyre

debris and, as preserved, largely unaffected by fire. The deceased may have worn it at the time of cremation, but it somehow became detached, thereby avoiding the greatest intensity of the fire. Alternatively, it may have been placed on or near the cremation pyre as a *kterisma* to the deceased, not an item of personal jewelry.

T108-3 (82.1111) **Fig. 164c**
BODY AND HANDLE FR.; WM SKYPHOS
PH 0.062; PL 0.053
Single fr., broken on all sides and much affected by burning (especially on interior), preserving portion of body and one handle.
Local clay with somewhat fewer than normal small white and light-colored inclusions and quite a bit of mica, mainly fine, golden tending to predominate. Where less affected by burning, clay fired close to light reddish brown 5yr 6/4 and light brown 7.5yr 6/4; elsewhere gray and gray/brown due to burning.
Lower wall curved; upper wall vertical. Horizontal handle, round in section, attached to upper wall.
Slipped and painted: paint dull, thickly applied on exterior, with a tendency to flake; fired dark brown to black. Preserved exterior, including upper and outer faces of handles, painted except for reserved area immediately below handle arch. Interior painted.
For shape, and probably decoration, cf., among others, **T108-1**.

T108-4 (82.1112) **Fig. 164d**
RIM FR.; WM SKYPHOS
PH 0.036; D (rim) est. 0.190
Single fr., partially affected by burning, preserving small portion of rim.
Local clay with many small to medium white and light-colored inclusions and much mica, almost exclusively golden. Where less affected by burning clay core light gray, elsewhere close to reddish yellow 7.5YR 7/6. Where burned, gray/brown.
Vertical upper wall; flaring/outcurved rim, with rounded lip.
Slipped and painted: paint dull, rather thickly applied on exterior, with a tendency to flake; fired red. Preserved exterior painted; interior painted, but very worn.
Cf. **T108-1**.

T108-5 (82.1113) **Fig. 164e**
RIM FR.; WM SKYPHOS
PH 0.019; PL 0.037; D (rim) N/R
Single fr., only partially affected by burning, preserving small portion of rim.
Local clay with fewer than normal small white and light-colored inclusions and some silver and golden mica, tending fine. Clay, where less affected by burning, fired close to pink 7.5YR 7/4; slip slightly lighter.
Shape as **T108-4**, but with lip slightly more rounded.
Slipped and painted, but poorly preserved: paint evidently dull and perhaps rather dilute, fired dark brown to black. Preserved interior and exterior painted.
Cf. **T108-4**, but clearly not from the same vessel.

T108-6 (82.1114) **Fig. 164f**
RIM AND NECK FR.; WM AMPHORA
PH 0.054; D (rim) est. 0.110
Single fr., much affected by burning, preserving small portion of neck and rim.
Local clay with many small to medium white and light-colored inclusions and much silver and golden mica, the former tending to predominate. Clay gray/brown due to burning.
Vertical neck; flaring rim with rounded lip. Junction of shoulder and neck preserved at lower break.
Slipped and painted, but poorly preserved: paint dull, fired black. Neck and rim on exterior painted, as is rim on interior.
Shape and decoration consistent with belly-handled amphorai: cf. **T20-1**, **T51-1**.

T108-7 (82.1110) **Fig. 164g**
RIM AND BODY FR.; WM LEKANIS, Type 2
PH 0.073; D (rim) est. 0.230
Single fr. preserving portion of body and rim, unaffected by burning and with little visible wear.

Local clay with far fewer inclusions than usual (only the occasional small white impurity), but quite some mica, both silver and golden; rather hard fired. Clay fired close to reddish yellow 7.5YR 7/6; slip slightly lighter.
Shallow curved lower wall. Broad outcurved rim, offset from body by slight carination. Rim flat on top, with rounded outside edge.
Slipped and painted: paint rather dull, thickly applied; fired red. Body and rim on exterior painted except for thin reserved band at juncture of the two. Rim top barred, but with only two strokes actually preserved. Preserved interior painted.
Shape, decoration and details of fabric as **T81-2** and **T83-2**.

BRONZE SPIRAL BEAD RECOVERED FROM TOMB PIT

T108-8 (82.1546) **Fig. 164h**
BRONZE SPIRAL BEAD
L (max.) 0.011; W 0.005; TH of wire 0.001; WT 0.39 g
Virtually intact: central part of spiral eaten away by corrosion. Terminal at one end clear; corresponding terminal on other side less so. Bead may originally have been a little longer.
Thin bronze wire, oval to round in section, coiled over to form a spiral bead. High level of silver sulphide corrosion on surface, indicating bronze with silver content.

TOMB 109 (**FIGS. 14**, **29B–C**; **PLS. 222–223**; CONTENTS: **FIGS. 165A–E**; **PLS. 294**, **438A-C, 439A–C**, **520**)

TR 22 S.F.38
URN CREMATION; SINGLE ADULT
Large circular pit 0.94 m in diameter, cut into bedrock to a maximum depth of 0.23 m on the north side and 0.14 m on the south; tomb encountered at a depth of 0.55 m below surface. Near the center of the pit, slightly toward the north, the wheel-made belly-handled amphoriskos **T109-1**, which served as ash-urn, was placed in an upright position. Beside the vessel, to the north and actually touching it, a crudely worked piece of conglomerate (inv. S82.02) was set on edge (**fig. 14**; **pls. 222–223**). The slab was roughly square (0.270 m × 0.255 m × 0.087 m), rather heavy, with clean straight edges and a groove or channel, probably natural, running the length of one side. The top of the slab projected slightly above the level of the tomb pit; it was ca. 0.10 m higher than the ash-urn in situ and thus may have served as a grave marker. A number of smaller stones, mainly schist, were set around the ash-urn on the east and west sides. Intensely blackened, loose-textured earth representing remains of the pyre filled the tomb pit. Water-sieving this debris yielded a quantity of fire-affected sherds, a selection of which is catalogued (**T109-2–T109-5**), as well as a good variety of seashells, both complete and fragmentary specimens, burned and unburned; 135 fragments of sea-urchin and more than 200 complete land-snail shells, representing three varieties, were also recorded (appendix C). Of the marine-shell remains presented in appendix C, two small fragments were encountered inside the ash-urn with the cremated human remains. The pyre debris also yielded at least five charred seeds (appendix D), including barley (*Hordeum vulgare*) and grape (*Vitis vinifera* and *Vitis* sp.).

T109-1 (82.39) **Fig. 165a**; **pl. 294**
TR 22 S.F.38
WM BELLY-HANDLED AMPHORISKOS
Papadopoulos 1996a:154–155, fig. 3, no. 2
H 0.150; D (base) 0.061; D (rim) 0.108
Vessel recovered mostly intact, with chipping at rim reconstructed and partially restored. Surface chipped and slightly worn.
Local clay with fewer than normal small and occasional larger white inclusions; mica content slightly less than normal, predominantly fine, almost exclusively golden; occasional blowouts. Clay evenly fired something like reddish yellow 5YR 6/6 and 7.5YR 6/6. Thick slip, with a slight sheen, fired close to reddish yellow 7.5YR 7/6 and yellow 10YR 7/6. Fabric similar to that of the krater **T116-1**.
Low and heavy ring base with flat resting surface. Globular body; short concave neck; flaring rim with rounded lip. Two horizontal belly handles, round in section, attached immediately above point of max. D.

Slipped and painted: paint thickly applied and slightly lustrous; fired bright red. Body decorated with five horizontal bands: three on lower wall, two on shoulder, which tend to emphasize the reserved belly zone. Upper parts of both handles painted as shown, with the paint extending for a short distance onto body. Neck and rim painted solid, with paint continuing over rim onto interior as shown.

Details of fabric, slip, and paint particularly close to a "bowl" from Saratse: Heurtley 1939:222, pl. XIX, no. 441. For shape generally cf. Desborough 1972:33–35, 38, fig. 4. Cf. **T96-1**, **T101-1**.

PYRE DEBRIS

In addition to the organic material noted above, fragments of at least four vessels (**T109-2–T109-5**) were encountered in the tomb pit fill; all displayed signs of burning, with **T109-2–T109-4** more intensely burned than **T109-5**. In addition to the catalogued frr., there were forty-three uninventoried small body frr., all probably nonjoining frr. of **T109-2–T109-4**, except for two frr. of an unidentified HM vessel.

T109-2 (82.1139) **Fig. 165b**; **pl. 438a**

RIM AND SPOUT FR.; WM KRATER/ LARGE LEKANIS

PH 0.052; D (rim) est. approx. 0.250

Single fr. preserving portion of rim and entire spout, much affected by intense burning, with most of the painted decoration not preserved.

Local clay with some small to medium white and light-colored inclusions and much mica, golden tending to predominate. Fr. much blackened due to burning.

Vertical upper wall. Knobbed rim thickened on both interior and exterior and tapering slightly toward both edges; slight concavity on inner and outer top edges. Bridged spout attached to upper wall directly below rim; edges of spout chamfered.

Very faint traces of paint preserved only on exterior below rim.

The shape is essentially that of the spouted lekanis: cf. **T51-3**, although the large diameter at rim and vertical upper wall indicate a larger and deeper vessel, more consistent with kraters.

Cf. **T111-3**.

T109-3 (82.1140) **Fig. 165c**; **pl. 438b**

RIM FR.; WM SKYPHOS

PH 0.039; PL 0.065; D (rim) est. approx. 0.250

Single fr. preserving small portion of rim, much affected by intense burning, with no decoration preserved.

Clay probably local but difficult to determine due to size and burning, with many small white, light-colored, and some darker inclusions and a little fine mica. Fr. much blackened by burning.

Vertical upper wall; gently flaring rim.

Cf. especially **T104-14**.

T109-4 (82.1141) **Fig. 165d**; **pl. 438c**

BODY AND HANDLE FRR.; WM SKYPHOS

PH 0.087; PL 0.085

Two joining frr., broken on all sides and much affected by burning, preserving small portion of body and handle stump.

Local clay with many small and some medium white and light-colored inclusions and mica, tending fine, predominantly golden; occasional blowouts. Although frr. are discolored gray/brown due to burning, it was still evident clay core had originally fired light gray.

Frr. preserve lower part of vertical upper wall of skyphos; curving slightly at lower break. Horizontal handle, round in section, attached to upper wall.

Slipped and painted, but rather poorly preserved: paint dull, thickly applied especially on exterior; fired black. Portion of horizontal band on lower wall at break, above which is another band. Upper and outer faces of handle painted, with decoration extending onto body as shown; area below handle arch reserved. Traces of paint on interior, much worn.

Decoration on exterior consistent with "ugly sausage" skyphoi, both with continuous and opposed "sausages": cf., among others, **T103-1**, **T106-1**.

T109-5 (82.40) **Fig. 165e; pls. 439a–c**
FRAGMENTARY HM JUG WITH CUTAWAY NECK
H (as restored on paper) 0.223; D (base) 0.085; D (neck) 0.060
A total of sixteen frr.: five joining frr. preserving almost entire base and portion of lower wall; three joining frr. preserving portion of upper wall; three joining and one nonjoining frr. preserving much of shoulder, neck, lower handle attachment, and rim where cut away; plus four joining frr. preserving much of neck and highest part of rim. Complete profile preserved. Some frr. partially affected by burning, others unaffected.
Fabric probably local but atypical, with occasional small white and light-colored inclusions and much mica, mainly fine and small flaked, exclusively golden. Blowouts very common on interior but fewer on burnished exterior. Frr. partially affected by burning discolored gray/brown; others close to reddish yellow 7.5YR 6/6; exterior surface closer to reddish yellow 5YR 6/6. Clay core light gray only in parts where wall thickness is greatest. Fabric has a somewhat more brittle feel than normal.
Flattened base; rounded body. Shoulder and neck offset by deep groove on exterior corresponding to angle formed on interior. Tall neck; flaring rim, with chamfered lip; neck cut away. Vertical handle, oval in section with outer face almost flat at lower attachment, attached to body by piercing with very pronounced projection of clay on interior; upper part of handle not preserved.
Exterior burnished, with rather faint tooling marks running vertically on neck, horizontally on body, crisscrossing on underside, producing a good surface with a very slight sheen; neck interior smoothed.
Incised decoration, as shown, confined to upper part of vessel. Deeply incised groove at junction of shoulder and neck, below which, and running parallel to it, is a row of deeply impressed notches. Three deep grooves on shoulder around lower handle attachment, one below and two diagonal on either side of handle, define a triangle. Running parallel to the diagonal grooves is a row of deeply impressed notches on either side. Three similar notches preserved on chamfered rim top, but only where neck is cut away.
Incised decoration and details of shape and fabric rather atypical among local jugs, and the vessel may represent an import from elsewhere in Macedonia. For shape cf. Heurtley 1939: pl. XXIIIy; Hood 1981:391, fig. 176, no. 1161. For incised decoration cf. Heurtley 1939:236, fig. 110n, r; 222, fig. 93.

TOMB 110 (**FIG. 29C**; CONTENTS: **FIG. 166**)

TR 22 S.F.48
URN CREMATION? SINGLE ADULT CREMATION; TOMB POORLY PRESERVED
The details of this tomb were both difficult to reconstruct and unusual, with much disturbance caused by the foundation of the nearby Classical wall *e*. As preserved, the tomb consisted of an oval-shaped pit 0.65 m long (max.), cut 0.15–0.19 m deep into bedrock; tomb encountered at a depth of 0.65 m below surface. The east edge of the pit appeared to overlap partly with the pit of Tomb 111, although it was not clear which was earlier. Within the pit there were two distinct types of fill: the lowest comprised bedrock chips, a few fist-size lumps of bedrock, and a little light-colored earth. Above this, the fill was loose-textured blackened earth identical to the fill of other nearby tombs with pyre debris. In this upper fill were the broken fragments of the wheelmade skyphos **T110-1**, which was only partially preserved and clearly fire affected, a small quantity of cremated human bone of an adult, a few very small fire-affected sherds (not catalogued), and a seashell fragment (appendix C). A few fragments of **T110-1** were encountered in the lower tomb pit fill, with a few more recovered from deposit type 4 in the immediate vicinity. The tomb appeared to lack an ash-urn (i.e., a more-or-less complete vessel not affected by burning), although **T110-1** may represent the preserved remains of a disturbed ash-urn. The possibility of the pit being the pyre itself is highly unlikely given its size and the lack of sufficient signs of burning. The well-recorded pyres of Lefkandi were characterized by a good depth of ash

deposit and a thick, hard-fired crust of earth or rock around their edges. They were normally built over large rectangular or spool-shaped pits measuring 1.00–1.80 m, features all lacking in Tomb 110 (cf. Popham, Sackett, and Themelis 1979–80:200–201; also similar pyres in and around Athens: Smithson 1961:151–152; 1974). It is also possible the tomb is a secondary cremation without an urn; if this is so, the remains of a pyre, presumably nearby, were placed or swept into the tomb pit and **T110-1** represents pyre debris.

T110-1 (82.153 + 82.1119 + 82.1125) **Fig. 166**

TR 22 S.F.48

FRAGMENTARY WM SKYPHOS, Type 1

H 0.129; D (base) 0.080; D (rim) 0.150–0.155

Many joining and nonjoining frr. preserving about one-third of base, much of body including one complete handle, portion of a second, and most of rim. Complete profile preserved; illustration reconstructed from frr. Vessel affected by burning, with some joining frr. more intensely burned than others.

Local clay with slightly fewer than normal white and light-colored inclusions and much mica, tending fine, both silver and golden; occasional blowouts. Clay mostly discolored light gray due to burning, but where less affected, especially toward base, close to very pale brown 10YR 7/4; where preserved, slip slightly lighter. Fabric and feel similar to **T90-1** and **T117-1**.

Low ring base with comparatively broad resting surface; lower outer face chamfered; underside becoming flat. Curved lower wall; vertical upper wall is proportionately taller than other skyphoi. Gently flaring/outcurved rim with rounded lip. Two horizontal handles, round in section, attached to upper wall and rising to level just below rim.

Slipped and painted: paint rather dull, mostly thickly applied with a tendency to flake, but in parts more dilute. As preserved, mostly fired black, tending brown where more dilute; on one joining fr. (much affected by burning) paint fired deep reddish brown. Brushmarks visible, especially on upper wall on exterior. Three horizontal bands on lower wall, with the uppermost broadest. Upper wall on either side of vessel decorated with opposed "ugly sausages" that extend onto body from the painted decoration of the upper and outer faces of the handles. The lower parts of some "sausages" extend onto the uppermost band below, while others terminate just short. Area above handles painted; reserved below handle arches. Interior painted except for reserved band at rim.

The overall proportions of the vessel are atypical among local Type 1 skyphoi, with the point of max. D set lower than normal and resulting in a taller and deeper upper body. The D of base in relation to D of rim is also greater than on other skyphoi. The general shape recalls the proportions of Classical skyphoi, especially of Attic type: cf. Sparkes and Talcott 1970:84–87, fig. 4, pls. 16–17. Cf. also **T23-1**, **T25-1**, **T103-1**, **T105-1**, **T106-1**, **T108-1**, **T111-2**.

BURNED AND ASSOCIATED SHERDS

In addition to the fragmentary **T110-1**, a small quantity of tiny sherds in the tomb pit fill included three small rim frr. of WM vessels, two of which displayed no traces of burning; five body frr. of WM vessels, all much affected by burning; one small body fr. of a HM open vessel, also affected by burning; plus one tiny body fr. of a HM closed vessel, probably a jug, and evidently unburned.

TOMB 111 (**FIGS. 14, 29A–C; PLS. 32A, 224–226**; CONTENTS: **FIGS. 167A–D; PLS. 400, 440–442, 505**)

TR 22 S.F.17

URN CREMATION; CREMATED REMAINS NONDIAGNOSTIC

Roughly circular pit 0.80 m in diameter, dug through deposit type 4 and into bedrock to an overall depth of 0.43 m; tomb encountered at a depth of 0.27 m below surface. Near the center of the pit, and slightly toward the west, the stemmed kylix **T111-1**, which served as ash-urn, was placed in an upright position (**pl. 226**). Only a very small quantity of cremated human bone was recovered from the ash-urn (total WT: 34 g), with at least one

fragment encountered in the tomb pit fill; the cremated remains were insufficient to determine age or sex. The remainder of the tomb pit was filled with loose-textured, intensely blackened earth representing remains of the pyre. From this were recovered the fire-affected sherds **T111-2–T111-4**, representing at least three different vessels, as well as a variety of marine mollusks, complete and fragmentary, including sea urchin and a quantity of land-snail shells (appendix C). The tomb pit fill also yielded three carbonized cereal seeds (appendix D). The tomb was sealed by two stone covers: the first (**pl. 225**) was a crudely worked, irregularly shaped, and rather heavy slab of conglomerate (inv. S81.12) placed directly over the center of the tomb pit, covering the ash-urn completely. The stone (0.30 long [max.] × 0.07 m thick on average) resembled the stone set on edge beside the ash-urn of Tomb 109 (inv. S82.02), described above. Over it, but covering only the central and west portions of the pit, was a flat piece of worked schist (0.50 m long, not inventoried), oval to rectangular in shape, oriented NW–SE, and surrounded by a number of smaller stones set on edge to the north and south (**pl. 224**). The elaborate tomb covering and the paltry quantity of cremated human remains deposited in the tomb clearly showed how incomplete the process of collecting the cremated deceased could be.

T111-1 (81.732) **Fig. 167a**; **pl. 400**

TR 22 S.F.17

WM RED-SLIP STEMMED KYLIX; PROVENANCE UNCERTAIN

H 0.129; D (base) 0.083; D (rim) 0.152

Intact except for very minor chipping at rim; base and one handle broken during removal, reconstructed. Condition good.

Clay contains a few small white and light-colored inclusions, as well as some red and darker impurities. Much fine mica, predominantly golden; occasional blowouts, some of which are unusually large. Clay body, judging by chips at rim, fired close to reddish yellow 5YR 6/6, reserved underside closer to very pale brown 10YR 7/4.

Shape angular and well thrown. Tall stem, splaying out to broad lower member that forms a flattened resting surface; underside hollow; four grooves at base of stem defining three ridges not unlike those on the black-slip krater foot **T47-2**. Body carinated; shallow, almost horizontal lower wall; vertical, slightly flaring upper wall. Rim very slightly offset on exterior only, terminating in plain rounded lip. Two horizontal handles, round in section, attached to upper wall and rising fractionally above level of rim. Shape and appearance rather metallic.

Interior and exterior surfaces slipped/painted; underside reserved. Thick slip/paint, with a slight sheen in parts; brushmarks visible, especially on body. Slip/paint thickest on interior and upper wall on exterior. Fired light red 2.5YR 6/6 on interior and one side of exterior, closer to reddish yellow 7.5YR 7/6 elsewhere. At several points on body and stem slip/paint discolored to an off-white.

Only example of red-slip ware among the finds from the Terrace V cemetery, although the fabric appears to be related to that of the black-slip: cf. **T24-3**, **T47-2**, **T50-1**, **T104-2**. I know of no parallel for the shape in the Early Iron Age. For contemporary red-slip wares elsewhere in the Aegean cf. especially Popham, Sackett, and Themelis 1979–80: 347; Popham, Touloupa, and Sackett 1982a: 233.

PYRE DEBRIS

Recovered from the tomb pit fill, in addition to the organic material mentioned above, were the fire-affected frr. of at least three vessels—the skyphos **T111-2**, the krater/lekanis **T111-3**, and the HM jug **T111-4**. Forty-three uninventoried burned sherds also were recorded, many of which belonged to one of the three catalogued pieces but including one rim fr. of a second HM jug and a small base fr. of a WM vessel (not related to **T111-2** or **T111-3**).

T111-2 (81.1150A and B) **Fig. 167b**; **pl. 440**

FRAGMENTARY WM SKYPHOS

Dimensions as reconstructed on paper: PH 0.137; D (rim) est. 0.185

Fr. A comprises six joining frr. preserving portion of rim and about one-third of upper

body, including most of one handle. Fr. B comprises four joining frr. preserving portion of lower wall, including junction with base. All frr. much affected by burning with almost nothing preserved of the painted decoration.

Local clay with many small white and light-colored inclusions and much mica, tending fine, predominantly golden; occasional blowouts. Clay mostly light gray due to burning, in parts closer to pink 7.5YR 7/4.

Lower wall curved; upper wall vertical. Gently flaring/outcurved rim, with rounded lip. Preserved horizontal handle, round in section, attached comparatively high on upper wall. Vessel thin walled.

Slipped and painted, but almost completely worn: traces of paint on exterior, including on handle; interior painted.

Probably Type 1 skyphos: cf., among others, **T105-1**, **T106-1**.

T111-3 (81.1151) **Fig. 167c**; **pl. 441**

RIM FR.; WM KRATER/LARGE LEKANIS

PH 0.045; PL 0.040

Single fr., much affected by burning, preserving small portion of rim and upper wall. Painted decoration not preserved.

Local clay with many small white and light-colored inclusions and much silver and golden mica, tending fine. Clay gray, gray/brown due to burning.

Vertical upper wall terminating in knobbed rim, thickened slightly on both interior and exterior and tapering slightly toward both edges; inner and outer rim top concave.

Cf. **T109-2**.

T111-4 (81.1152) **Fig. 167d**; **pl. 442**

FRAGMENTARY UPPER BODY; HM JUG WITH CUTAWAY NECK; IMPORTED, PROBABLY CENTRAL MACEDONIAN

PH 0.080; PL 0.085

Three joining frr. preserving portion of upper body, neck, complete handle, and portion of rim where cut away. Frr. clearly affected by burning, but not as intensely as **T111-2** and **T111-3**.

Imported fabric, better levigated than local, with only the odd small inclusion and a dusting of fine mica, predominantly golden. Clay partially blackened due to burning; fired close to brown 7.5YR 5/4 where less burned.

Shoulder curved; preserved neck sloping in to chamfered rim, cut away. Junction of shoulder and neck marked by a deep groove on exterior, but with no corresponding angle on interior as on local jugs. Vertical, almost loop-shaped handle, with exterior face diagonally grooved, attached from upper body directly to rim where cut away. There is no projection of clay on interior at lower handle attachment.

Exterior burnished smooth, resulting in a good finish with a slight sheen.

Fabric and handle type as **54**. Fabric as the bowls **53** and **T102-5**.

TOMB 112 (**FIGS. 29B–C**; **PLS. 227–229**; CONTENTS: **FIGS. 168A–G**; **PLS. 297**, **395**, **443A–E**, **506A–B**)

TR 22 S.F.45 + S.F.46

DOUBLE CREMATION, IN TWO ASH-URNS; TWO CHILDREN

Large shallow pit, roughly elliptical but assuming a near figure-of-eight shape, cut 0.10 m deep into bedrock, with a maximum length (north–south) of 0.90 m; tomb encountered at a depth of 0.43 m below surface. Two ash-urns were set within the pit: the north-most, roughly in the center (**pl. 228**), the small handmade pyxis **T112-1,** was placed upright but slightly tilted with its mouth facing north. The vessel, recovered complete although cracked in situ, was set in place by a number of small stones to the south and east and contained the cremated remains of a child aged 5–7 years at death (total WT: 31 g). In the south part of the pit a second ash-urn, the vertical-handled wheelmade amphoriskos **T112-2**, also set upright (**pl. 229**), contained the poorly preserved cremated remains of a child of undetermined age (appendix A). The tomb pit fill around both vessels comprised a large quantity of loose-textured blackened earth representing remains of the pyre. This fill, at least one full zembili in volume, yielded a few fire-affected

sherds from at least five vessels (**T112-3–T112-7**), as well as a good variety of burned and unburned seashells (including sea urchin) and more than forty land-snail shells (appendix C). The tomb pit fill also yielded two carbonized seeds (appendix D). The tomb was sealed by many small to medium-size stones (**pl. 227**) that covered both ash-urns but not the whole tomb pit; this represented one of the most substantial stone coverings preserved in the cemetery. Tomb 112 and Tomb 118 were the only instances in the Terrace V burial ground where the cremated remains of more than one individual were placed in two or more separate ash-urns sharing the same tomb pit.

ASH-URN I

T112-1 (82.98) **Fig. 168a**; **pl. 395**

TR 22 S.F.46

HM PYXIS; IMPORTED(?), PROBABLY MACEDONIAN

H 0.091; D (base) 0.050; D (rim) 0. 090

Vessel recovered almost complete, reconstructed from a few frr., but with the outer parts of both small handles not preserved (probably broken prior to the vessel being placed in tomb). Surface slightly worn.

Semicoarse to coarse fabric, perhaps imported, with many small to medium variously colored inclusions and a little mica, mainly fine, predominantly silver. Surfaces on interior and exterior fired close to brown 7.5YR 5/4; partially blackened in parts.

Flat base, with slight angle formed at junction with wall. Comparatively deep, curved body. Rim slightly thickened, flat on top. Scars at rim of two small handle attachments, which indicate something like two small pinched lugs, both clearly pierced vertically and attached directly to rim. At the base of each handle scar are two tiny holes that do not pierce the wall right through; their exact function is unclear, but they may represent guidance marks for the placement of the handles and/or alignment with the presumed tie holes of a lid not preserved; similar guidance marks are known on contemporary Athenian pyxides. Rim higher on one side of the vessel, as shown.

Interior and exterior burnished smooth in a manner similar to **T54-1**, with no visible tooling marks. A slight sheen is preserved where the surface is not so worn.

Fabric and burnishing very similar to **T54-1** and **T97-1**, which are also considered imports (appendix E). The shape is that of a series of HM vessels, particularly common in Athens during Submycenaean and Late Protogeometric, referred to as Attic Fine Handmade pyxides; a list of published examples is provided by Sourvinou-Inwood 1975:166–167; see now Reber 1991:20–37, 72–73. A close parallel to **T112-1** is Kraiker and Kübler 1939:37, pl. 25, inv. 491 (classified as a *Salbgefäss*).

ASH-URN II

T112-2 (82 90) **Fig. 168b**; **pl. 297**

TR 22 S.F.45

WM VERTICAL-HANDLED AMPHORISKOS

H 0.136; D (base) 0.050; D (rim) 0.109

Intact except for very minor chipping at base and rim, which has been restored.

Local clay with small white and light-colored inclusions and much mica, mainly fine, golden tending to predominate; occasional blowouts. Clay evenly fired close to reddish yellow 7.5YR 6/6; slip slightly lighter.

Low, heavy ring base with narrow resting surface; underside flat; slight groove at junction of base and body on exterior. Body rounded; wide, vertical neck, offset from shoulder by ridge. Flaring rim with rounded lip. Two vertical handles, with concave upper faces, attached from shoulder to neck below rim; one handle set slightly askew. Wheelmarks prominent on interior.

Vessel slipped but not painted.

For shape cf., among others, **T99-1**.

PYRE DEBRIS

Recovered from the tomb pit fill was a small quantity of fire-affected sherds; in addition to the five frr. catalogued (**T112-3–T112-7**) there were only two more body sherds, both of WM vessels, the shape of which could not be determined. The or-

ganic remains from the pyre debris are presented more fully in appendices C and D.

T112-3 (82.1142) **Fig. 168c**; **pl. 443a**
BASE FR.; WM AMPHORA
PH 0.025; D (base) 0.095
Single fr., affected by burning, preserving about one-half of base; chipped. Local clay with small white and light-colored inclusions and much silver and golden mica, the former tending to predominate. Fr. fired close to pale brown 10YR 6/3 where less affected by burning.
Low ring base.
Slipped and painted but poorly preserved: paint dull, fired black. Traces of horizontal band at junction of base and body.
Cf., among others, **T24-1**.

T112-4 (82.1143) **Fig. 168d**; **pl. 443b**
BASE FR.; WM SKYPHOS, Type 1
PH 0.024; D (base) est. 0.090
Single fr., much affected by burning, preserving small portion of base.
Local clay with small white inclusions and much mica, golden tending to predominate. Clay gray/brown and in parts blackened due to burning.
Low ring base, different from **T112-3**.
Slipped and painted, but much worn: paint, as preserved, dull, with a tendency to flake; fired black. Horizontal band at junction of base and body; interior painted.
For shape and decoration cf., among others, **T105-1**, **T106-1**.

T112-5 (82.1145) **Fig. 168e**; **pl. 443c**
HANDLE FR.; PROBABLY WM SKYPHOS
PL 0.045
Single fr., much affected by burning, preserving almost complete handle.
Local clay with many small to medium white and light-colored inclusions and much mica, tending fine, predominantly golden. Clay gray/brown due to burning.
Horizontal handle, thin and round in section.
Only very faint traces of paint preserved.
The size of the handle appears to be too small to be of the same vessel as the base fr. **T112-4**.

T112-6 (82.1144) **Fig. 168f**; **pl. 443d**
HANDLE FR.; PROBABLY WM LEKANIS
PL 0.035
Single fr., much affected by burning, preserving small portion of handle.
Local clay with many small white and light-colored inclusions and much silver and golden mica, the latter tending to predominate. Clay gray/brown due to burning.
Horizontal ribbon handle, with concave outer face.
Slipped and painted, but poorly preserved: paint dull, rather thickly applied with a tendency to flake; fired black. Upper and outer faces of handle painted.
For handle type cf., among others, **T41-2**, **T47-3**, **T51-3**, **T83-2**.

T112-7 (82.1146) **Fig. 168g**; **pl. 443e**
HANDLE FR.; HM BOWL WITH SQUARE-CUT HANDLES
PH 0.047; PL 0.070
Single fr., much affected by burning, preserving upper part of handle.
Local clay with many small white and light-colored inclusions and much mica, predominantly golden. Clay gray/brown due to burning; in parts more reddish brown.
High square-cut handle, with outer edges and central hole chamfered.
Surface burnished, but much worn.
Cf. **T67-2**, **T113-13-15**.

TOMB 113 (**FIG. 29C**; **PLS. 227, 230**; CONTENTS: **FIGS. 169A–Q**; **PLS. 407, 444–446**)

TR 22 S.F.44
URN CREMATION; SINGLE ADULT
Tomb pit ca. 0.50 m long (max.), dug ca. 0.15 m deep through deposit type 4 down to the level of bedrock; tomb encountered at a depth of 0.50 m below surface. Within the pit the handmade pitharion **T113-1**, which served as ash-urn, was placed on its side with its base toward the NW; the vessel lay on flat bedrock right up against the scarp of the Early Iron Age cutting (**fig. 29c**), supported on the west side by a single chocking stone. Only about one-third of the body lengthways and a small portion of

the base of **T113-1** was preserved, with none of the missing fragments recovered. Although no tomb covering was found, disturbance to the tomb appeared to be minor, suggesting the ash-urn may have been placed into the tomb in a broken state (cf. the ash-urn of Tomb 89). The tomb pit fill around the ash-urn and slightly above it as preserved comprised loose-textured blackened earth representing remains of the pyre, and yielded one of the largest quantities of sherds—216—associated with any one tomb. These fragments represent a minimum of at least sixteen vessels, **T113-2–T113-17**, and probably an original total of well over forty different vessels. Individual fragments varied from being much affected to completely unaffected by burning. Compared to the number of burned sherds, the amount of organic material recovered from the pyre debris was minimal—only one large fragment of a burned *Spondylus* shell (appendix C).

T113-1 (82.92) **Fig. 169a**

TR 22 S.F.44

FRAGMENTARY HM PITHARION

PH 0.220; est. D at point of max. D 0.226

Twenty-two joining and five nonjoining frr. preserving very small portion of base, about one-third of the body lengthways, and a small portion of lower neck; chipped and worn.

Coarse local clay with many small to large white and light-colored inclusions and much mica, exclusively golden. Clay fired close to light brown 7.5YR 6/4; exterior surface variously fired, mainly close to yellowish red 5YR 5/6 and strong brown 7.5YR 5/6, in parts blackened.

Flattened base; curved body, tending tall and ovoid; neck becoming vertical, offset from body as shown. Slight thickening of wall on one side indicating presence of handle on upper body below neck.

Exterior surface somewhat worn but clearly burnished, with no visible tooling marks. Interior surface appears to be lined with a thin coating of an unidentified, resin-like substance.

For shape cf. **T38-1**, **T70-1**.

PYRE DEBRIS

Of the 216 sherds recovered from the tomb pit fill only a selection has been catalogued below. WM vessels include an amphora **T113-2**; at least three, and perhaps five, skyphoi (**T113-3–T113-7**), although it could not be established whether **T113-6–T113-7** represent different vessels or were, in fact, frr. of the skyphoi **T113-3–T113-5**; a lekanis, **T113-8**; frr. of a small imported closed vessel, **T113-9**; and a body sherd of a large closed vessel with a compass-incised circle, **T113-10** (see chapter 6). HM vessels include handle frr. of at least three bowls with square-cut handles (**T113-13–T113-15**) and a rim fr. of a similar bowl, **T113-16**; a rim fr. of a two-handled jar, **T113-11**; a fr. of a tripod cauldron, **T113-17**; as well as frr. of the large jar or tripod, **T113-12**. In addition to these frr. the following were noted but not catalogued:

WM

- Ten rim frr., including one from an amphora other than **T113-2**, the remainder being of skyphoi or lekanides
- Eight base frr. of both open and closed vessel forms, although it was impossible to determine how many of these belonged to the same vessels as catalogued rim frr.
- Nineteen handle frr., mainly of skyphoi
- Ninety-five body frr. clearly representing more vessels than those catalogued.

HM

- Four rim frr. of jugs with cutaway neck (representing at least three vessels)
- Four handle frr. of open vessels
- Eight rim frr., of which five are from bowls with square-cut handles (cf. **T113-13–T113-16**)
- One base fr. probably of a similar bowl
- Fifty-three body frr. of various shapes, many of which are nonjoining frr. of catalogued vessels.

As noted, individual frr. varied from being much affected by burning to only partially affected or not affected at all.

T113-2 (82.1124) **Fig. 169b**; **pl. 444b**
RIM FR.; WM AMPHORA
PH 0.042; PL 0.067; D (rim) est. 0.140
Single fr. preserving small portion of neck and rim; chipped and worn, but with no signs of having been burned. Several nonjoining frr. of body not catalogued.
Local clay with many small to medium white, light-colored, and occasional darker inclusions; much mica, almost exclusively golden. Clay evenly fired close to reddish yellow 7.5YR 7/6 and pink 7.5YR 7/4.
Vertical neck; flaring rim with rounded lip.
No preserved decoration.
Shape consistent with belly-handled amphorai: cf. **T20-1**, **T51-1**, **T65-1**.

T113-3 (82.1120) **Fig. 169c**
RIM FR.; WM SKYPHOS
PH 0.041; PL 0.045
Single fr., much affected by burning, preserving small portion of rim and upper body; chipped.
Local clay with many small to medium white and light-colored inclusions and much silver and golden mica. Clay dark gray due to burning.
Vertical upper wall becoming thinner walled toward top; slightly flaring rim with rounded lip.
Slipped and painted: paint dull, rather thickly applied; fired black. Preserved exterior, interior and rim top painted.
Rim form consistent with skyphoi of Types 1–3: cf., among others, **T23-1**, **T28-1**, **T94-1**.

T113-4 (82.1121) **Fig. 169d**
RIM FR.; WM SKYPHOS
PH 0.039; PL 0.040
Single fr., much affected by burning with little of original surface remaining, preserving small portion of rim and upper wall.
Local clay with small white inclusions and some fine mica, almost exclusively golden. Clay gray/brown and in parts blackened due to burning.
Vertical upper wall; gently flaring rim with rounded lip. Fr. thin walled.
No preserved decoration.
Cf. **T113-3**, but from different vessel.

T113-5 (82.1122) **Fig. 169e**
RIM FR.; WM SKYPHOS
PH 0.036; PL 0.030
Single fr. preserving small portion of rim and upper wall; rather worn, but with no signs of having been burned.
Local clay with small white inclusions and some silver and golden mica, the latter predominating. Clay evenly fired close to light brown 7.5YR 6/4; slip closer to pink 7.5YR 7/4.
Vertical upper wall; outcurved rim with rounded lip.
Slipped and painted: paint on interior dull, with a pronounced tendency to flake; fired black. Interior and rim top painted; preserved exterior reserved.
Cf. **T113-3–T113-4**.

T113-6 (82.1126) **Fig. 169f**; **pl. 444c**
BASE FR.; WM SKYPHOS, Type 1
PH 0.019; D (base) est. 0.065
Single fr., much affected by burning, preserving about one-quarter of base.
Local clay with some small white and light-colored inclusions and silver and golden mica, tending fine. Clay dark gray and in parts blackened due to burning.
Low ring base with narrow resting surface; lower outside edge chamfered; underside flat, with very small central nipple.
Slipped and painted: faint traces of black paint preserved only on interior.
The fr. could not be matched, with any certainty, with any of the catalogued rim frr.
For form of base cf., among others, **T106-1**, **T108-1**.

T113-7 (82.1129) **Fig. 169g**; **pl. 444e**
BODY FR.; WM OPEN VESSEL, PROBABLY SKYPHOS; MENDED IN ANTIQUITY
PH 0.041; PL 0.050

Single fr., broken on all sides and much affected by burning, preserving small portion of body; chipped.

Local clay with some small white and light-colored inclusions and mica tending fine, predominantly golden. Clay gray, gray/brown due to burning.

Fr. thin walled; slightly curved toward lower break, vertical toward preserved top.

Slipped and painted, but much worn, especially on interior: paint dull, rather thickly applied with a tendency to flake; fired black. Preserved interior and exterior painted.

Vessel mended in antiquity, with single mending hole preserved near lower break.

Cf. **T101-15**.

T113-8 (82.1123) **Fig. 169h**; **pl. 444a**

RIM FR.; WM LEKANIS, Type 1

PH 0.040; PL (including handle) 0.080

Single fr., much affected by intense burning, preserving portion of rim and handle.

Local clay with many small to medium white and light-colored inclusions and much silver and golden mica, the latter tending to predominate. Clay gray and in parts blackened due to burning.

Preserved lower wall curved; upper wall vertical. Thickened knobbed rim, almost horizontal, flat on top and with rounded outside edge. About one-half of horizontal ribbon handle preserved, with concave outer face, attached directly below rim and rising slightly above level of rim top.

Slipped and painted: paint dull, rather thickly applied; fired black. Horizontal band on upper body extending from outer face of handle. Interior painted, but poorly preserved.

Cf. **T47-3**, **T51-3**, **T124-3**.

T113-9 (82.1127) **Fig. 169i**; **pl. 444d**

BODY FRR.; SMALL WM CLOSED VESSEL; IMPORTED, PROBABLY EUBOIAN

PH 0.060; PL 0.064; est. max. D (body) 0.080

Two joining frr., broken on all sides, preserving portion of body. Chipped and worn, but with no significant signs of having been burned.

Imported fabric, fine and better levigated than local, with only the odd white inclusion. Clay evenly fired close to reddish yellow 5YR 6/6.

Small closed vessel with slender ovoid body, tending almost to biconical; upper part of preserved frr. thin walled. Wheelmarks prominent on interior.

Slipped and painted: good lustrous black paint. Preserved lower wall to point of max. D painted solid. Shoulder decorated with four thin horizontal bands arranged in two groups, each group enclosing a tremulous line in dilute paint.

Shape and details of fabric similar to the amphoriskos **T22-2**. Although **T113-9** may be a vertical-handled amphoriskos, the rather biconical form coupled with the absence of preserved handles may indicate a one-handled vessel form such as a lekythos, oinochoe, or jug. For Euboian parallels cf. Popham, Sackett, and Themelis 1979–80: 308–311 (for amphoriskoi, note esp. the decoration of S16, 4); 313–326 (for the lekythos, oinochoe, and one-handled jug, esp. the lekythoi, 314, fig. 14); Popham, Touloupa, and Sackett 1982a: pl. 22, no. 3; pl. 23, nos. 2, 4; Catling and Lemos 1991: pl. 72, nos. 725, 743. Cf. also some of the Thessalian closed forms: Sipsie-Eschbach 1991: pls. 54–61, various examples. For comparative forms in Athens cf. Kraiker and Kübler 1939: pls. 12–15; Kübler 1943: pls. 13–19; Desborough 1952:45–77, pls. 7–9; Smithson 1961: pl. 24, no. 34, pls. 25–26; Styrenius 1962: pl. III, nos. 3619, 3620. A particularly close early parallel comes from Heidelberg Tomb A: Kraiker and Kübler 1939: pl. 36 (middle). **T113-9** remains difficult to place chronologically, as parallels may be found from Submycenaean through Late Protogeometric.

T113-10 (82.1128) **Fig. 169j**; **pl. 407**

BODY FR.; LARGE WM CLOSED VESSEL, PROBABLY AMPHORA; COMPASS-INCISED CIRCLE

Papadopoulos, Vedder, and Schreiber 1998: 520, fig. 13

PH 0.057; PL 0.065
Single fr., broken on all sides, preserving small portion of shoulder. Chipped and slightly worn but with no obvious signs of having been burned.
Fabric a little unusual but probably local, not unlike that of **KP-9**, which is also of similar shape. Clay rather dense with a few small to medium white, and many small to medium red inclusions but only a dusting of fine mica. Clay evenly fired close to reddish yellow 7.5YR 7/6–6/6.
Thick-walled, slightly curved shoulder of large vessel.
Slipped and painted: thickly applied semilustrous paint, tending to streak; fired dark reddish brown. Preserved exterior painted solid.
Fr. preserves an almost complete incised circle, executed with a compass implement *after* firing, as well as the central dot created by the pivot point. The cut edges of the circle are slightly chipped or splintered on account of the resistance offered to the cutting implement by the hardened surface of the pot. D of circle: 0.050 m.
The fr. is discussed in chapter 6. For cutting compasses employed for later pot marks cf. Johnston 1979:5, 81, esp. type 21A vii.

T113-11 (82.1133) **Fig. 169k**; **pl. 445a**
RIM FR.; HM (TWO-HANDLED) JAR
PH 0.045; PL 0.042; D (rim) est. 0.120
Single fr., partially affected by burning and rather worn, preserving portion of rim and neck.
Local clay with many small to medium white and light-colored inclusions and a great deal of mica, golden tending to predominate. Clay gray/brown due to burning.
Vertical neck; flaring rim with chamfered lip.
Preserved interior and exterior burnished, with faintly preserved tooling marks running vertically on exterior, horizontally on interior.
Cf. **T63-1**, **T100-1**, **T118-1**, **T128-1**, **T130-1**.

T113-12 (82.1134) **Fig. 169l**; **pl. 445b**
RIM FR.; HM VESSEL, JAR OR TRIPOD CAULDRON
PH 0.047; PL 0.057
Single fr. (with other possible frr. not catalogued) preserving portion of neck and rim; worn. Partially blackened on exterior only due to burning.
Local clay, rather gritty, with a great many predominantly small light-colored, and occasional darker, inclusions; a great deal of mica, exclusively golden. Clay core and surfaces where not blackened fired close to reddish brown 5YR 5/4.
As preserved, vertical to concave neck; flaring rim with chamfered lip. Vessel evidently warped at rim, with surface on exterior prone to splitting.
Interior and exterior roughly burnished smooth, with interior rather better finished.
Vessel perhaps a larger variant of a jar as **T113-11**, although more likely the rim of a tripod cauldron: cf., for instance, **T123-2**.

T113-13 (82.1130) **Fig. 169m**; **pl. 446a**
HANDLE FR.; HM BOWL WITH SQUARE-CUT HANDLES
PH 0.053; PL 0.070
Single fr., affected by burning, preserving much of handle.
Local clay with many small to medium white and light-colored inclusions and much silver and golden mica, the latter tending to predominate. Clay gray/brown due to burning.
Square-cut handle with central hole and edges chamfered.
Surfaces burnished but poorly preserved.
Cf. **T67-2**.

T113-14 (82.1131) **Fig. 169n**; **pl. 446b**
HANDLE FR.; HM BOWL WITH SQUARE-CUT HANDLES
PH 0.048; PL 0.060
Single fr., only partially affected by burning, preserving large portion of handle; worn, especially at breaks.
Local clay with a great many small to rather large white and light-colored inclusions and very much mica, predominantly golden. Clay gray/brown due to burning.
Shape as **T113-13**, but with central hole proportionately larger.

Surface facing interior nicely burnished, with tooling marks running horizontally and also following the contour of the central hole, producing a good surface with a slight sheen. Exterior surface more roughly burnished smooth, without the sheen.

Cf. **T67-2**, **T113-13**, and the rim fr. **T113-16**.

T113-15 (82.1132) **Fig. 169o**; **pl. 446c**

HANDLE FR.; HM BOWL WITH SQUARE-CUT HANDLES

PH 0.033; PL 0.033

Single fr., partially affected by burning, preserving about one-half of handle.

Local clay with many, mainly small, white and light-colored inclusions and a great deal of silver and golden mica. Clay discolored dark reddish brown due to burning.

Shape as **T113-13–T113-14**, but from a smaller vessel.

Surfaces roughly burnished smooth, with scratchlike marks visible.

Cf. **T113-13** and **T113-14**.

T113-16 (82.1135) **Fig. 169p**; **pl. 445c**

RIM FR.; HM BOWL WITH SQUARE-CUT HANDLES

PH 0.031; PL 0.046

Single fr., only partially affected by burning, preserving small portion of rim.

Local clay, details as **T113-14**.

Exterior profile rises vertically to chamfered lip; rim thickened on interior.

Burnishing, including treatment of interior and exterior as **T113-14**.

Perhaps from the same vessel as **T113-14**; for shape cf. **T67-2**.

T113-17 (82.1136) **Fig. 169q**; **pl. 445d**

BODY AND LEG FR.; HM TRIPOD CAULDRON

PH (including leg) 0.050; PL 0.060

Single fr., broken on all sides and only partially affected by burning, preserving portion of body and one leg.

Coarse local clay with a great many small to very large white and light-colored inclusions and much mica, exclusively golden. Clay variously fired and discolored brown, gray, and in parts blackened due to burning.

Body curved; thick leg, oval in section, beginning to taper toward bottom.

Exterior surface burnished, with broad shallow tooling marks running vertically, producing a good surface with a distinct sheen, similar to **T38-1**. Interior surface burnished smooth; dull.

Cf., among others, **T123-2** and **T123-3**.

TOMB 114 (**FIGS. 29B–C**; **PL. 231**; CONTENTS: **FIGS. 170A–G**; **PLS. 406**, **447–448**, **521**)

TR 22 S.F.47

URN CREMATION; SINGLE ADULT

Tomb pit dug through deposit type 4 and cut partly into bedrock to an overall depth of at least 0.29 m; the east end of the pit was defined by the higher bedrock against which the ash-urn of Tomb 113, further to the north, was placed. The upper part of the pit assumed an elliptical shape, becoming more circular toward the bottom where its maximum length was 0.75 m; tomb encountered at a depth of 0.53 m below surface. Near the center of the pit and flush against the higher bedrock to the east, the belly-handled amphora **T114-1**, which served as ash-urn, was placed upright and covered by the pithos body fragments **T114-2**. Although recovered almost complete, the ash-urn was in such a poor state of preservation it could not be restored.[38] The tomb pit was filled with enough loose-textured blackened earth representing remains of the pyre to fill three *zembilia*, one of the most substantial quantities recovered in the cemetery. This fill yielded fragments of at least five fire-affected vessels **T114-3–T114-7,** a single fragment of cremated human bone, and a good variety of seashells (including sea urchin) and land-snail shells (appendix C); fragments of at least two more marine shells were found inside the ash-urn with the cremated remains of the deceased. The tomb pit fill also yielded two carbonized grape seeds (appendix D).

T114-1 (82.97) **Fig. 170a**

TR 22 S.F.47

WM BELLY-HANDLED AMPHORA

The drawing as presented was reconstructed on paper from many frr. that were measured individually; it should therefore be considered as highly tentative.

PH 0.484; D (base) 0.125; D (neck) min 0.087

Vessel recovered almost complete but beyond restoration, preserved in hundreds of small frr. and chips. Extremely worn, with little of the original surface preserved; all parts of the vessel are preserved except for rim.

Local clay with many small to medium white, light-colored, and occasional darker inclusions; much silver and golden mica, tending fine. Clay core fired light gray, elsewhere close to light brown 7.5YR 6/4; slip, where preserved, lighter, approaching off-white; fabric probably poorly fired.

Flat disk base; body comparatively tall with lower wall rising steeply to point of max. D, which is set quite high; shoulder more curved. Slender vertical neck, offset from body by pronounced ridge, much worn. Two horizontal belly handles, round in section, attached at point of max. D. Vessel particularly thin walled.

Slipped and painted, but extremely worn, with little of the decoration preserved: paint, as preserved, dull, rather thickly applied with a tendency to flake; fired red. Thin horizontal band below handle attachment. No other preserved decoration on lower body or belly zone. Upper and outer faces of both handles painted (not indicated on drawing), with the paint extending for a short distance onto body. Shoulder decorated with a broad band enclosed by a thinner band above and below. Upper shoulder, immediately below ridge, decorated with sets of mechanically drawn concentric pendent semicircles, very poorly preserved. It was not possible to determine how many sets were positioned around the shoulder, nor how many arcs each set comprised. In the shoulder fr. drawn and in a few others there are never more than three preserved arcs with a small dot at center, although four or five arcs would seem more likely. Preserved neck, above ridge, painted solid. Splashes of paint, tool marks, and other smears, similar to those of **T104-1**, visible at handle attachments.

The vessel shares much in common in terms of size, shape, decoration, and details of fabric and paint with **T104-1** (cf. also **T60-1** and **T115-1**), and is probably to be restored with an everted rim: cf. Desborough 1972: 36, fig. 3. The form of the body and proportionately slender neck are characteristics common among Cretan Protogeometric belly-handled amphorai: cf. Desborough 1952: pl. 36, no. VI, 32, and VI, north of 8 (cf. Brock 1957: pl. 7, nos. 84, 70; pl. 10, no. 165).

T114-2 (82.97B) **Fig. 168b**; **pl. 406**

TR 22 S.F.47 bis

BODY FRR.; HM PITHOS

PH 0.145; PL 0.150

Four joining frr., broken on all sides, preserving small portion of body.

Coarse local clay with many small to very large white and light-colored inclusions and much mica, exclusively golden. Clay evenly fired close to yellowish brown 5YR 5/8; surfaces closer to 5YR 5/6.

Preserved frr. thick walled and almost vertical; probably from central portion of body of large pithos.

Interior and exterior surfaces wet-smoothed, producing a good, dull surface; exterior slightly better finished.

Cf. **T104-3**, **T105-2**, **T107-2**, **T108-2**; fabric and feel particularly close to **T7-1**.

PYRE DEBRIS

Recovered from the tomb pit fill, apart from the organic material already noted, were frr. representing at least five different vessels, including many frr. of the HM jug **T114-3** preserving almost complete profile; frr. of a WM amphora **T114-4** and skyphos **T114-5**; a handle fr. of a HM bowl **T114-6**; and the leg of the tripod cauldron **T114-7**. In addition, there were sixty-four uncatalogued frr., mainly small body sherds (many almost certainly nonjoining frr. of catalogued vessels), although there were at least two more

WM vessels of uncertain shape represented among the frr. and at least one other HM bowl, not unlike **T114-6**, but clearly not from the same vessel. The majority of frr. were much affected by burning.

T114-3 (82.810) **Fig. 170c**
FRAGMENTARY HM JUG WITH CUTAWAY NECK
Dimensions of reconstructed drawing: H 0.190; D (base) approx. 0.075; max. D (rim) est. 0.053
Sixteen joining and nonjoining frr. preserving small portion of base, various parts of body, portion of handle, and most of neck and rim. All frr. much affected by intense burning, resulting in a rather brittle feel.
Local clay with many small white and light-colored inclusions and much mica, predominantly golden. Clay and surfaces light to dark gray and in parts blackened due to burning.
Flattened base; lower wall rising steeply to point of max. D, which is set rather high; shoulder more curved. Tall vertical neck, offset from body by deep groove on exterior corresponding to angle formed on interior. Rim slightly flaring; lip chamfered; neck cut away. Portion of preserved vertical handle round to plano-convex in section. Small mastos preserved on upper wall on one fr.; vessel thin walled.
Exterior burnished, with pronounced tooling marks running vertically on neck, horizontally on upper body, diagonally opposed on lower wall and crisscrossing on underside, producing a good, dull surface.
Cf., among others, **T58-2**, **T75-2**, **T84-2**, **T86-2**; proportions of body similar to those of **T109-5**.

T114-4 (82.1152A–C) **Fig. 170d**; **pl. 447**
NECK, SHOULDER, AND BODY FRR.; SMALL WM AMPHORA
Frr. A + B: PH 0.040; PL 0.050
Fr. C: PH 0.035; PL 0.072
Two nonjoining frr. (A + B), broken on all sides, preserving portion of shoulder and neck, plus two joining frr., broken on all sides, preserving small portion of lower wall (fr. C). All frr. much affected by burning.
Local clay with many small to medium white and light-colored inclusions and some mica, tending fine. Clay gray/brown due to burning.
As preserved, lower wall rising steeply; shoulder curved; vertical neck, offset from body by small ridge.
Slipped and painted: paint dull, fired black. Three thin horizontal bands on preserved lower wall; thin band on upper shoulder; neck, above small ridge, painted solid.
Decoration, especially the painted neck, indicates a belly-handled amphora: cf., for instance, **T115-1**.

T114-5 (82.1153) **Fig. 170e**; **pl. 448a**
BASE FR.; WM SKYPHOS, cf. Type 3
PH 0.027; D (base) est. 0.086
Single fr., much affected by burning, preserving portion of base.
Local clay with many, mainly small, white and light-colored inclusions and much mica, mostly fine, golden tending to predominate. Clay light gray due to burning.
Comparatively heavy flaring foot, with rather broad resting surface.
No preserved decoration.
A heavier version of bases like those of **T28-1** and **T37-1**; cf. **T116-2** and **T117-7**.

T114-6 (82.1154) **Fig. 170f**; **pl. 448b**
HANDLE FR.; HM BOWL WITH SQUARE-CUT HANDLES
PH 0.048; PL 0.072
Single fr., partially affected by burning, preserving upper portion of handle; worn.
Local clay with many small white and light-colored inclusions and much mica, mainly fine, predominantly golden. Clay brown due to burning.
Square-cut handle with central hole and edges chamfered.
Surfaces burnished, with faint tooling marks preserved; surface facing interior somewhat better finished, preserving a slight sheen.
Cf. **T67-2**, **T113-13**-**T113-15**.

T114-7 (82.1155) **Fig. 170g**; **pl. 448c**
LEG FR.; SMALL HM TRIPOD CAULDRON
PH 0.034; W 0.025
Single fr., much affected by burning, preserving small portion of leg, including resting surface.
Coarse local clay with a great many small to very large white and light-colored inclusions and much mica, exclusively golden. Clay and surfaces gray/brown and in parts blackened due to burning.
Leg tapering to rounded resting surface; thin and rectangular in section; from small cauldron.
Surfaces burnished smooth, but poorly preserved.
Shape and size especially close to **T101-11**.

TOMB 115 (**FIG. 29C**; **PLS. 33**, **232**; CONTENTS: **FIGS. 171A–L**; **PLS. 271**, **453–454**, **517**)

TR 22 S.F.24 + 25 + 26 + 27
URN CREMATION; SINGLE ADULT
Circular pit 0.70 m in diameter, cut 0.25 m deep into bedrock; tomb encountered at a depth of 0.65 m below surface. In the center of the pit the wheel-made belly-handled amphora **T115-1**, which served as ash-urn, was placed upright and firmly set by many small stones on its south, east, and west sides. The remainder of the tomb pit was filled with loose-textured blackened earth representing the remains of the pyre, from which was recovered a quantity of fire-affected sherds representing perhaps as many as nine vessels (**T115-5–T115-13**), as well as a good variety of seashells, including sea urchin; a large number of complete and fragmentary land-snail shells also were recovered (appendix C). No tomb covering was preserved, with the result that the upper part of the ash-urn was slightly damaged; the blackened earth of the tomb pit fill extended for a short distance around the pit. The partial disturbance was probably the result of the foundations laid for the nearby Classical wall TR 22 *b/d*, and perhaps also the later stone-robbing activity associated with deposit type 2. Recovered from the blackened earth around the pit was the bronze fibula **T115-2**, which lay 0.05 m south of the pit; less than 0.10 m to its south was another bronze fibula, **T115-3**. Approximately 0.10 m north of the tomb pit (see **pl. 33**), a complete unburned *Spondylus* shell (**T115-4**) was encountered on bedrock. The location and state of preservation of **T115-4** was unique, particularly in light of the more fragmentary marine material recovered from the water-sieved pyre debris, and it is possible the shell may have been intentionally placed, perhaps even as a *kterisma* (for the importance of the *Spondylus* shell in prehistoric exchange in northern Greece, southeastern and central Europe, see Renfrew, Gimbutas, and Elster 1986:11, 320, 482).

T115-1 (82.15) **Fig. 171a**; **pl. 271**
TR 22 S.F.24
WM BELLY-HANDLED AMPHORA
PH 0.251; D (base) 0.094; max. D (body) 0.236
Vessel intact except for upper neck and rim, which were not preserved; one handle reconstructed. Condition very poor, surface particularly fragile; much chipped and worn.
Local clay with many small to medium, and occasional larger, white and light-colored inclusions and some silver and golden mica, the latter tending to predominate. Clay evenly fired close to yellowish red 5YR 5/6 and brown 7.5YR 5/4; slip, where preserved, slightly lighter.
Flat disk base, with outer edge more noticeably rounded. Body rather thick walled, with lower wall rising steeply to point of max. D; shoulder more curved. Preserved neck vertical, offset from body by small ridge. Two horizontal belly handles, round in section, attached at point of max. D.
Slipped and painted, but poorly preserved: paint dull, mostly fired dark brown to black. Four thin horizontal bands on upper part of lower wall; seven horizontal bands on shoulder, as shown, the lowest being the broadest and the upper four slightly separated from the lower three. Upper and outer faces of both handles painted, with the decoration extending onto body, although the actual terminations are not preserved. Belly zone evidently reserved, but with surface very poorly preserved. Neck, as preserved above small ridge, painted solid.
Cf. **T60-1**, **T95-1**, **T114-1**.

T115-2 (82.04) **Fig. 171b**; **pls. 453a–b**
TR 22 S.F.27
BRONZE ARCHED FIBULA
L 0.073; WT 12.71g
Complete except for pin, which was not preserved. Slightly corroded, but generally nicely patinated.
Arched fibula with stem, bow, and forearm articulated by double fillet moldings. Bow slightly swollen, circular in section; stem and forearm thinner and more oval in section. Catch plate short but relatively wide. Spring (two turns) with catch to left.
The basic form accords with Blinkenberg 1926:12, 17, 19, type II, as well as some island varieties, type IV (cf. Sapouna-Sakellarakis 1978: pl. 20, no. 622; pl. 19, no. 614; pl. 22, nos. 651, 653, 659A, 649). Cf. also Brock 1957:97, pls. 75, 167, no. 1098; Müller-Karpe 1962:86, fig. 4, no. 7; 108, fig. 26, no. 3; Popham, Sackett, and Themelis 1979–80: pl. 248, nos. 2, 5–8.

T115-3 (82.03) **Fig. 171c**; **pl. 454**
TR 22 S.F.26
BRONZE ARCHED FIBULA
PL 0.056; WT 8.40 g
Complete except for spring and pin; much corroded, especially on forearm.
Asymmetrical arched fibula with thin circular stem only slightly articulated from bow. Bow even, circular in section; forearm thicker, circular to plano-convex in section. Small, short catch plate.
Cf. generally Blinkenberg 1926:15–23, type II. The thickening of the forearm is unusual: cf. the iron fibula Andronikos 1969:232, fig. 73.

T115-4 (82.08) **Pl. 517**
TR 22 S.F.25
MARINE SHELL, *Spondylus gaederopus*
L 0.084
Complete half preserved.
See appendix C.
Cf. Evans and Renfrew 1968:127, pl. LVIII, no. l.

PYRE DEBRIS

Recovered from the tomb pit fill were a number of sherds representing perhaps as many as nine vessels. WM vessels include a fr. of the amphora **T115-5**; a krater base, **T115-6**, to which the body fr. **T115-7** may have belonged; a skyphos rim fr., **T115-8**; and a rim and a base fr. of either one or two lekanides, **T115-9** and **T115-10**. HM vessels include the fr. of a jug, **T115-11**, and frr. of two tripod cauldrons, **T115-12** and **T115-13**. In addition to these, there were five small uncatalogued body frr., all of WM vessels, some with traces of paint. Most frr. were much affected by burning.

T115-5 (82.993) **Fig. 171d**
SHOULDER FR.; SMALL WM AMPHORA
PH 0.037; PL 0.024
Single fr., broken on all sides and partially affected by burning, preserving small portion of shoulder.
Local clay with small white and light-colored inclusions and predominantly fine silver and golden mica. Clay light brown as preserved.
Shoulder curving in to neck becoming vertical.
Slipped and painted but almost nothing preserved of decoration except for faint traces of possible horizontal band on lower neck.
Small amphora rather than amphoriskos: cf., among others, **1**, **9**, **T51-1**.

T115-6 (82.996) **Fig. 171e**
BASE FR.; LARGE WM OPEN VESSEL, ALMOST CERTAINLY KRATER
PH 0.031; PL 0.074
Single fr., broken on all sides and much affected by burning, preserving small portion of upper base at junction with wall; resting surface not preserved.
Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden. Clay gray/brown and in parts blackened due to burning.
Lower wall shallow and thick, with only upper part of base preserved, which appears to be of a tall foot rather than ring base. Wheelmarks prominent on interior.

Slipped and painted: paint dull, fired black. Band at juncture of base and body; lower wall reserved. Traces of paint on interior.

Probably krater of Type 2, or Transitional local type, rather than Type 1; cf., among others, **T35-1**, **T48-1**.

T115-7 (82.994) **Fig. 171f**

BODY FR.; LARGE WM OPEN VESSEL, PROBABLY KRATER

PH 0.034; PL 0.045

Single fr., broken on all sides and much affected by burning, preserving small portion of body.

Local clay with small white and light-colored inclusions and mica mainly fine, predominantly golden. Clay gray/brown due to burning.

Fr. from lower body; slightly curved.

Slipped and painted: paint dull, rather thickly applied; fired black. Preserved exterior reserved; interior painted.

Perhaps from the same vessel as **T115-6**, but not certain.

T115-8 (82.992) **Fig. 171g**

RIM FR.; WM SKPHOS

PH 0.023; PL 0.032

Single fr., much affected by intense burning, preserving small portion of rim.

Clay evidently local but fr. too small to determine. Clay light gray and in parts blackened due to burning.

Gently flaring rim with rounded lip.

No preserved decoration.

Cf. **T104-14**.

T115-9 (82.991) **Fig. 171h**

RIM FR.; WM LEKANIS, Type 1

PH 0.025; PL 0.030

Single fr., much affected by burning, preserving small portion of rim and handle scar.

Local clay with some small white and light-colored inclusions and predominantly fine silver and golden mica. Clay light gray due to burning.

Upper wall vertical; outward thickened to horizontal rim, flat on top and with rounded outside edge. Scar of horizontal handle preserved below rim.

Slipped and painted, but poorly preserved: paint black. Broad band on upper wall on exterior extending onto body from the outer edge of the handle. Interior painted. Rim top barred, with parts of four strokes preserved.

Cf. **T47-3**, **T51-3**, **T113-8**.

T115-10 (82.995) **Fig. 171i**

BASE FR.; WM OPEN VESSEL, PROBABLY LEKANIS

PH 0.023; PD (base at break) 0.052

Single fr., broken on all sides and much affected by burning, preserving portion of base at junction with wall; resting surface not preserved.

Fabric as **T115-9**.

Upper portion preserved of conical foot; lower wall shallow.

Slipped and painted: paint poorly preserved, fired black. Exterior face of foot and junction with lower wall painted; lower wall at break reserved. Interior painted.

Form of base consistent with lekanides of Type 1: cf. **T51-3**, **T124-3**; also with Type 2 skyphoi: cf. **T94-1**. Fr. perhaps from the same vessel as **T115-9**, but not certain.

T115-11 (82.997) **Fig. 171j**

RIM AND BODY FRR.; HM JUG WITH CUTAWAY NECK

Dimensions of rim frr.: PH 0.060; PL 0.046

Two joining frr. preserving portion of rim and neck, and five nonjoining frr. preserving portion of neck and upper body. All frr. much affected by burning.

Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden. Clay dark gray and in parts blackened due to burning.

As preserved, tall neck, cut away; rim chamfered.

Exterior burnished, with tooling marks running vertically on neck.

Cf., among others, **T114-3**.

T115-12 (82.988A–C) **Fig. 171k**
FRAGMENTARY HM TRIPOD CAULDRON
82.988A: PH 0.075; PL 0.090
82.988B: PH 0.024; PL 0.047
Restored H (A + B): 0.120
A total of six frr. of which three join (82.988A) preserving portion of body, leg, and handle; one fr. (82. 988B) preserving portion of rim and upper handle attachment; plus two joining frr. (82.988C) preserving portion of handle. All frr. chipped and worn, but only partially affected by burning.
Coarse local clay with a great many small to very large white and light-colored inclusions and much mica, exclusively golden. Preserved body and portion of leg blackened; elsewhere clay core fired dark gray, surfaces close to yellowish red 5YR 6/6.
Rounded cauldron; tall outcurved rim; chamfered lip. Upper portion of one leg preserved, thick and rectangular in section, forming continuous attachment with vertical handle, oval in section, with upper attachment directly to rim.
Interior and exterior roughly burnished smooth, surface dull.
Cf. **T123-2**, **T115-13**.

T115-13 (82.989 and 82.990) **Fig. 171l**
LEG FRR.; HM TRIPOD CAULDRON
82.989: PH 0.083
82.990: PH 0.088
82.989 comprises two joining frr. preserving portion of upper leg and scar of attachment to body, much affected by intense burning; 82.990 comprises single fr. preserving portion of second leg, much affected by burning, but not as intensely as 82.989.
Coarse local clay with a great many small to very large white and light-colored inclusions and much mica, exclusively golden. Clay light to dark gray and in parts blackened due to burning.
Thick legs, rectangular in section and larger than that of **T115-12**, tapering slightly toward bottom; resting surface not preserved.
Leg faces burnished smooth; surfaces dull.
Cf. **T115-12**.

TOMB 116 (**FIG. 29C**; **PL. 233**; CONTENTS: **FIGS. 172A–F**; **PLS. 326A–B**, **471**)

TR 22 S.F.51
URN CREMATION; SINGLE ADULT; TOMB POORLY PRESERVED
Papadopoulos 1990:13–24
The tomb, located only 0.10 m SE of Tomb 115 and encountered in a poor state of preservation, was probably disturbed by either the foundations of walls of the Classical structures in the vicinity or the later stone-robbing activity associated with deposit type 2, or by both. As preserved, the tomb consisted of a shallow circular pit 0.52 m in diameter, cut a few centimeters deep into bedrock; tomb encountered at a depth of 0.80 m below surface. Within the pit, and surrounded by loose-textured blackened earth representing remains of the pyre, were a few small scattered stones, many displaced fragments of a large wheelmade krater **T116-1**, which presumably served as ash-urn, a small quantity of fire-affected sherds representing at least three vessels (**T116-2–T116-4**), a quantity of cremated human bone from a single adult, and a complete *Spondylus gaedoropus* shell (appendix C); the excavator noted two other seashell fragments. The tomb was therefore consistent with other tombs in the vicinity, but disturbed. The krater was probably originally placed upright within the tomb pit, supported by a few small stones and surrounded by the blackened remains of the pyre much as in Tomb 117. Noteworthy is that the preserved top of the nearby Tomb 115 to the NW was at a level 0.15 m higher, but suffered considerably less damage; also at a slightly higher level was the better preserved Tomb 117, approximately 0.30 m SE.

T116-1 (82.143) **Fig. 172a–c**; **pls. 326a–b**, **471**
TR 22 S.F.51
Papadopoulos 1990: pl. 5
WM KRATER, Type 1; VESSEL MENDED IN ANTIQUITY
H 0.264; D (base) 0.122; D (rim) est. 0.382
Many joining and nonjoining frr. preserving entire base, much of lower body, about one-half of upper body including portion of one handle, and about one-quarter of rim. Reconstructed and partially restored. Vessel chipped and worn; surface powdery to touch.

Local clay but with fewer than normal small white and light-colored inclusions; quite some mica, tending fine, predominantly golden. Clay rather soft textured. Clay core light gray, elsewhere clay fired close to reddish yellow 7.5YR 6/6. Thick slip, approaching off-white, with a slight sheen. Fabric and slip closely related to that of **T109-1**.

Low ring base with flat resting surface; underside flat; groove at junction of base and body on exterior. Shallow lower wall, rising at an angle of about 45°; upper wall very slightly curved, tending vertical and thickening slightly at rim. Short horizontal rim, flat on top with a small upturned lip along the upper outer edge toward exterior; exterior face of rim beveled. Angle formed on interior at junction of rim and body. Rather small horizontal handle, round in section, attached to upper wall. Wheelmarks prominent on interior.

Slipped and painted: paint, although worn, thickly applied over white slip and with a tendency to flake; evenly fired red, with a slight luster (cf. **T109-1**). Two horizontal bands on lower wall, above which are two more bands near midpoint. Horizontal band on upper wall immediately below rim; outer edge of rim reserved. Rim top decorated with linked Xs, which, although poorly preserved, are continuous round the rim. Outer face of preserved handle painted, with the decoration extending onto body in the form of an upward sweep. On one fr. is preserved the corresponding decoration onto body of the second handle (itself not preserved). The horizontal bands and handle decoration emphasize the handle zone, which bears the figured decoration. The central figure, and the best preserved, is perhaps a bird or alternatively a ship, consisting of a triangle painted solid with three short diagonal strokes on the left side, below which is a slightly thicker stroke, perhaps representing the tail or ship's ram. On the right side is a downward curved line, poorly preserved. From the apex of the triangle, a longer curved line extends first upward and slightly to the left, then horizontally to the right; it appears to represent the neck and head of the bird or else the prow of a ship. On the same fr., but only fractionally preserved at the break to the left, is a painted motif that tapers to a point. A similar, partially preserved motif is found on another fr. from the same side of the vessel. The two closely resemble heads and beaks of birds; although they are very poorly preserved, it would seem reasonable to reconstruct a line or file of three stylized birds facing right, or else a ship flanked by two unidentified motifs. The interior of the vase is painted.

Vessel mended in antiquity, with portions of four lead clamps preserved and mending holes indicating the existence of more. One clamp (inv. 82.142) is almost complete (**fig. 172c**; **pl. 471**), surviving in two frr. (reconstructed L: 0.045 m).

The vessel preserves one of the few known examples of figured drawing in Early Iron Age Torone and the only example from the Terrace V cemetery. For a fragment of an Early Iron Age amphora with figured drawing from the settlement at Torone see Cambitoglou and Papadopoulos 1994:150, fig. 3. The shape is that of the local Type 1 krater (cf. **T102-1**), and also the Transitional type, **T48-1**; cf. also **T40-1**. The shape and decoration recall Mycenaean IIIC figured kraters: Furumark 1972a: Shape 282 (cf. Mountjoy 1986:176, fig. 226; 191, fig. 253). See also, generally, Vermeule and Karageorghis 1982: passim. If the motifs are indeed birds they are unique, with no exact parallels in either Mycenaean or Geometric figured work; the closest is perhaps Pieridou 1973: pl. 31, no. 7. For figured representations in Protogeometric see Benson 1970: 32–37; Kopcke 1977; Coldstream 1984. For further discussion see Papadopoulos 1990. The alternative interpretation, that the scene represents a ship, is more fully discussed in chapter 5.

PYRE DEBRIS

Only a small quantity of fire-affected sherds was recovered from the blackened tomb pit fill, including frr. of a WM skyphos (**T116-2**), a lekanis

(**T116-3**), and a HM tripod cauldron (**T116-4**). In addition there were six small body frr.; of these, two probably belonged to the same vessel as **T116-2**, one with **T116-3** and two with **T116-4**; a further fr. appeared to be of a second HM vessel (not catalogued). All frr. were much affected by burning.

T116-2 (82.1176) **Fig. 172d**
BASE FR.; WM SKYPHOS, cf. Type 3
PH 0.022; D (base) est. 0.092
Single fr., much affected by intense burning, preserving portion of base.
Local clay with many small to medium white and light-colored inclusions and much silver and golden mica, the latter tending to predominate. Clay gray due to burning.
Flaring foot with slightly flattened resting surface. Fr. thickening considerably toward junction with wall.
No preserved decoration.
Cf. **T117-7**, **T114-5**.

T116-3 (82.1177) **Fig. 172e**
RIM FR.; WM LEKANIS, Type 1
PH 0.028; PL 0.019
Single fr., much affected by burning, preserving small portion of rim.
Local clay with small white and light-colored inclusions and some fine mica. Clay light gray/brown due to burning.
Upper wall vertical; short horizontal rim, flat on top and tapering slightly to rounded outside edge.
Slipped and painted but with only very faint traces of paint preserved on interior and exterior.
Cf. **89**, **T124-3**.

T116-4 (82.1178) **Fig. 172f**
LEG FR.; HM TRIPOD CAULDRON
PH 0.056
Single fr., much affected by intense burning, preserving portion of leg.
Coarse local clay with a great many small to very large white and light-colored inclusions and much mica, exclusively golden. Clay light gray and in parts blackened due to burning.
Small leg, rectangular in section, tapering slightly toward resting surface, which is not preserved.
Surfaces burnished smooth but poorly preserved.
Cf. especially **T101-11**, **T114-7**.

TOMB 117 (**FIGS. 29B–C**; **PLS. 234–235**; CONTENTS: **FIGS. 173A–T**; **PLS. 313**, **449**)

TR 22 S.F.50
URN CREMATION; CREMATED REMAINS NONDIAGNOSTIC
Circular pit 0.52 m in diameter, dug through deposit type 4 and partly into bedrock to an overall depth of 0.33 m, the cutting into bedrock 0.10 m deep; tomb encountered at a depth of 0.62 m below surface. In the center of the pit the wheelmade skyphos **T117-1**, which served as ash-urn, was placed upright. The rest of the tomb pit was filled with loose-textured blackened earth representing remains of the pyre, in volume at least one full zembili, and from which was recovered a large quantity of fire-affected sherds representing at least nineteen vessels (**T117-2–T117-20**), and clearly more that remain uncatalogued. This fill also yielded a good variety of sea- and land-snail shells, fragments of sea urchin, one burned and one unburned fish vertebrae (appendix C), one carbonized seed of Fabaceae, and three other unidentified charred seeds (appendix D). The tomb was sealed by a single piece of crudely worked dark gray-green schist (inv. S82.09), almost rectangular in plan and wedge shaped in section (0.255 m × 0.130 m), placed directly over the ash-urn but not entirely covering the tomb pit. The ash-urn, although cracked in situ, was recovered complete except for the base, which was not preserved, indicating the vessel was placed into the tomb in a damaged state. The small quantity of cremated human bone recovered from both the ash-urn and the tomb pit fill, a mere 10 g in total, was insufficient to determine age or sex of the deceased, and again showed that only a small collection of cremated bone was deemed necessary in some cases.

T117-1 (82.144) **Fig. 173a**; **pl. 313**
TR 22 S.F.50
WM SKYPHOS, Type 2

PH 0.120; PD (base at break) 0.035; D (rim) 0.160

Vessel recovered complete except for base; reconstructed from frr. and partially restored; chipped, especially toward lower body.

Local clay with many small white and light-colored inclusions and much mica, predominantly fine, almost exclusively golden; occasional blowouts. Clay evenly fired close to reddish yellow 5YR 6/6; thick slip, noticeably lighter to body clay, approaching off-white, something like very pale brown 10YR 8/3–7/3. Details of fabric and slip similar to **T45-1**, **T104-1**.

Base not preserved (restored flat in order to stabilize); the narrow D at junction of base and body and the general shape indicates the vessel originally had a small conical foot (as **T90-1**), which would also account for its broken state. Lower wall rising at an angle of about 45° to point of max. D; upper wall vertical. Short flaring rim, rounded lip. Two horizontal handles, round in section, attached to upper wall and rising to level just below rim. Vessel thin walled.

Slipped and painted: paint dull, in parts thickly applied with a tendency to flake; evenly fired red. Five horizontal bands on lower wall merge at points on one side. Upper wall decorated on both sides with opposed "ugly sausages" that extend onto body from the painted decoration of the upper and outer handle faces. The lower parts of two of the four "sausages" extend below the point of max. D onto the uppermost of the bands. Area above handles painted, but in dilute paint; reserved below handle arches. Rim top barred with short, thick strokes almost resembling blobs due to thickness of paint. Interior painted solid, with only slight evidence of use/cleaning.

Cf. **T90-1** and **38**.

PYRE DEBRIS

Recovered from the tomb pit fill, in addition to the organic material already noted, was a great quantity of fire-affected sherds representing one of the largest collections—nineteen different vessels (**T117-2–T117-20**)—associated with any one tomb:

WM

- Frr. of two amphorai (**T117-2**, **T117-3**)
- Frr. of six skyphoi (**T117-4–T117-9**)
- Frr. of four lekanides and related forms (**T117-10–T117-13**)
- Frr. of two imported vessels (**T117-14**, **T117-15**).

HM

- Rim frr. of two bowls (**T117-16**, **T117-17**)
- One jug fr. (**T117-18**)
- One rim fr. of a tripod cauldron (**T117-19**)
- Many frr. of an unusual small closed vessel (**T117-20**)

In addition to the catalogued frr., sixty-one body frr. of WM vessels (some preserving painted decoration) were recovered. Although some of these were nonjoining frr. of pieces catalogued, many clearly represent other vessels, perhaps as many as twenty or more, in addition to eleven body frr. of HM vessels, very few of which could be definitely associated with the vessels **T117-16–T117-20**. All frr. were fire affected, some rather intensely, others only partially. Inventoried but uncatalogued frr. are listed below. The total of fire-affected vessels may have numbered more than forty.

T117-2 (82.1007) **Fig. 173b**; **pl. 449**

BASE FR.; WM AMPHORA

PH 0.037; D (base) 0.084

Single fr., much affected by burning, preserving about one-half of base and small portion of lower wall.

Local clay with many small to medium white and light-colored inclusions and quite some mica, silver tending to predominate. Clay gray and in parts blackened due to burning.

Flat disk base, becoming very thin walled toward center; lower wall rising steeply.

Slipped and painted: as preserved, paint dull, with a tendency to flake, fired black. Thin horizontal band on lower wall.

Shape and decoration consistent with both belly- and neck-handled amphorai: cf., among others, **T51-1**, **T52-1**.

T117-3 (82.1004) **Fig. 173c**; **pl. 449**
RIM FRR.; PROBABLY WM AMPHORA
PH 0.022; D (rim) est. 0.140
Two joining frr., much affected by burning, preserving small portion of rim.
Clay probably local, but frr. too fire damaged to be certain; some fine mica visible. Clay gray and in parts blackened due to burning.
Preserved neck vertical; everted rim with rounded lip. Unlikely to be from the same vessel as **T117-2**.
Slipped and painted: traces only of black paint on exterior, extending over rim onto interior, but very poorly preserved.
For rim form cf., among others, **T67-1**.

T117-4 (82.1006) **Fig. 173d**; **pl. 449**
RIM FR.; WM SKYPHOS
PH 0.017; D (rim) est. 0.190
Single fr., much affected by burning, preserving small portion of rim.
Local clay with many small to medium white and light-colored inclusions and much mica, tending fine, predominantly golden. Clay dark gray and in parts blackened due to burning.
Gently flaring/outcurved rim, with rounded lip.
Slipped and painted: as preserved, paint dull, evenly applied, fired black. Preserved interior, exterior and rim top painted.
Cf. **T104-14**, **T115-8**.

T117-5 (82.1005) **Fig. 173e**; **pl. 449**
RIM FR.; WM SKYPHOS
PH 0.030; D (rim) est. approx. 0.170
Single fr., much affected by burning, preserving small portion of rim.
Local clay with some small white and light-colored inclusions and quite some mica, golden tending to predominate. Clay dark gray due to burning.
Upper wall almost vertical, sloping slightly in to short flaring rim, with rounded lip.
Slipped and painted: paint dull, evenly and thickly applied; black as preserved. Interior, exterior and rim top painted solid.
Cf. **T113-3**, **T117-4**.

T117-6 (82.1008) **Fig. 173f**; **pl. 449**
BASE FR.; WM SKYPHOS, Type 1
PH 0.022; D (base) est. 0.070
Single fr., much affected by burning and cracked, preserving portion of base.
Local clay with some white and light-colored inclusions and much silver and golden mica, tending fine. Clay gray and in parts blackened due to burning.
Low, heavy ring base, with obliquely cut resting surface; underside flat.
No preserved decoration.
Fr. could not be matched, with certainty, with any of the other skyphos frr. from this tomb.
For form of base cf., among others, **T23-1**, **T103-1**.

T117-7 (82.1009) **Fig. 173g**; **pl. 449**
BASE FR.; WM SKYPHOS, Type 3
PH 0.025; D (base) est. 0.090
Single fr., much affected by burning, preserving portion of base.
Local clay with many small to medium, and occasional larger, white and light-colored inclusions and much silver and golden mica, the latter tending to predominate. Clay gray due to burning.
Flaring foot, with narrow, slightly flattened resting surface; fr. thickening considerably toward junction with wall.
No preserved decoration.
For general form of base cf. **T28-1**, **T37-1**; and especially **T116-2**.

T117-8 (82.1020) **Fig. 173h**; **pl. 449**
BODY FR.; PROBABLY WM SKYPHOS
PH 0.039; PL 0. 035
Single fr., broken on all sides and much affected by intense burning, preserving small portion of upper body.
Local clay with many small to medium white and light-colored inclusions and some fine

mica. Clay discolored gray, but mostly blackened due to burning.
Upper wall vertical, curving slightly toward bottom of fr.
Slipped and painted, but poorly preserved: paint dull, fired black. Upper body decorated with four tremulous lines executed from right to left according to thickness of paint, above which, at upper break, is portion of a horizontal band or area painted solid. Faint traces of paint preserved on interior.
Fr. could not be definitely matched with any of the other skyphos fr. from this tomb.
For decoration cf. especially **T28-1**.

T117-9 (82.1011) **Fig. 173i**; **pl. 449**
BODY FR.; WM OPEN VESSEL, PROBABLY SKYPHOS
PH 0. 030; PL 0. 040
Single fr., broken on all sides and only partially affected by burning, preserving small portion of lower wall at juncture with base.
Local clay with some small to medium inclusions and quite some mica, predominantly golden. Clay light gray/brown due to burning.
Lower wall rising at an angle of about 45°, thickening toward junction with base.
Slipped and painted: paint dull, thickly applied; fired black. Portion of horizontal band preserved at junction of base and body, above which is another band. Interior painted.
Fr. could not be definitely matched with any of the other skyphos frr. from this tomb.
For banded decoration at lower body cf., for instance, **T106-1** and **T108-1**.

T117-10 (82.1000) **Fig. 173j**; **pl. 449**
RIM FR.; WM LEKANIS, Type 1
PH 0.029; D (rim) est. 0.210
Single fr., partially affected by burning, preserving portion of rim and handle scar.
Local clay with many small to medium white and light-colored inclusions but only a little fine mica. Clay light gray due to burning.
Vertical upper wall; outward thickened rim, flat on top, with rounded outside edge. Portion of handle scar preserved on upper wall immediately below rim.
Slipped and painted: paint dull, rather thickly applied with a tendency to flake; fired dark brown to black. Horizontal band on upper body below rim, which extends from the painted outer face of the handle. Rim top decorated with diagonal, petal-like strokes, six of which are preserved; interior painted.
Cf. **T104-15**, **T113-8**, **T115-9**; also Popham, Sackett, and Themelis 1979–80: pl. 181, T Tomb 24.1.

T117-11 (82.1001) **Fig. 173k**; **pl. 449**
RIM AND SPOUT FR.; WM LEKANIS, Type 1
PH 0.028; D (rim) est. 0.310
Single fr., much affected by intense burning, preserving portion of rim, upper wall, and hole and scar of spout.
Local clay with many small to medium white and light-colored inclusions and much silver and golden mica, the latter tending to predominate. Clay mainly light gray, in parts blackened due to burning.
Vertical upper wall; horizontal/knobbed rim, thickened slightly on interior and tapering slightly toward both edges, flat on top. Portion of spout hole preserved at break, to the left of which is part of the scar for the spout, itself not preserved.
No preserved decoration.
Cf. **T51-3**.

T117-12 (82.999) **Fig. 173l**; **pl. 449**
RIM AND SPOUT FR.; LARGE WM OPEN VESSEL, KRATER RATHER THAN LEKANIS
PH 0.035; D (rim) est. 0.280
Single fr., much affected by burning, preserving portion of rim, upper wall, hole and scar of spout.
Local clay with many small to medium white and light-colored inclusions and much silver and golden mica, tending fine. Clay light gray to light brown due to burning.
Vertical upper wall; thickened/knobbed rim, tapering slightly to rounded outside edge.

Small portion of scar and hole of spout preserved at break.

Slipped and painted: paint dull, rather thickly applied, fired brown on exterior and rim top, black on interior. Entire preserved interior, exterior and rim top (not including area of spout scar) painted.

The rim is particularly close to the krater **T102-1**. Cf. Wardle 1980:251, fig. 14, nos. 28, 31 (local Mycenaean from Assiros Toumba).

T117-13 (82.1002) **Fig. 173m**; **pl. 449**

RIM FR.; SMALL WM OPEN VESSEL

PH 0.019; D (rim) est. 0.110

Single fr., partially affected by burning, preserving small portion of rim.

Local clay with small white and light-colored inclusions and much mica, tending fine, predominantly golden. Clay discolored gray to reddish brown due to burning.

Small open vessel; upper wall slightly curved; short knobbed rim, flat on top and with rounded outside edge.

Slipped and painted: paint dull, fired black. Preserved exterior reserved; interior painted. Portion of what appears to be a broad stroke preserved on rim top.

Vessel unique.

T117-14 (82.1010 + 82.1015) **Fig. 173n**; **pl. 449**

BASE AND LOWER BODY FRR.; WM ONE-HANDLED CUP RATHER THAN SKYPHOS; IMPORTED, PROBABLY EUBOIAN

PH 0.040; D (base) est. 0.052

Two nonjoining frr., both much affected by burning, preserving portion of base and lower wall.

Imported fabric, similar to **T127-1**; better levigated than local with only the occasional small impurity and a very faint dusting of surface mica. Clay discolored gray to light brown due to burning.

Small conical foot with narrow resting surface; lower wall slightly curved.

Slipped and painted: good lustrous paint, evenly applied; fired black. Base, lower body, and interior painted. Lower outside edge of foot reserved.

For provenance see appendix E.

The size of the base would indicate a one-handled cup rather than skyphos. For the shape in Euboia see Popham, Sackett, and Themelis 1979–80:293–302, figs. 7–8 (skyphoi and cups), and esp. pl. 152, P pyre 11.9; pl. 172, T Tomb 7.2; Catling and Lemos 1991: pl. 45, various examples, especially no. 8; pl. 50, no. 896; pl. 51, various examples. Cf. Sipsie-Eschbach 1991: pl. 3, nos. 3–5; pls. 7–8; pls. 20–21; pl. 24, esp. nos. 10–11; pl. 58, nos. 1, 3–4; pl. 59, nos. 1, 4 (Iolkos). For the shape in Attic cf. Desborough 1952: pl. 1, G 82e, f; pl. 11, nos. 1104 (45), 1082 (37).

T117-15 (82.1012 + 82.1016) **Fig. 173o**; **pl. 449**

BODY AND HANDLE FRR.; SMALL WM CLOSED VESSEL; IMPORTED, PROBABLY EUBOIAN

82.1012: PH 0.019

82.1016: PH 0.017; PL 0.033

Two nonjoining frr., 82.1012 preserving small portion of handle, 82.1016 preserving portion of body; the former much affected by burning, the latter only partially.

Imported fabric as **T117-14** and **T113-9**; where less affected by burning clay fired close to light red 2.5YR 6/6 and reddish yellow 5YR 6/6; elsewhere discolored gray due to burning.

Small closed vessel with curved shoulder and at least one vertical handle, oval in section.

Slipped and painted: details of paint as **T113-9** and **T117-14**. Lower preserved shoulder painted solid, upper part reserved and decorated with thin band(s) in dilute paint. Upper, and portion of outer, faces of handle painted.

See appendix E.

Exact shape undetermined: cf. **T113-9** and parallels cited there; also **T22-2**.

T117-16 (82.1030) **Fig. 173p**; **pl. 449**

RIM FR.; HM BOWL WITH SQUARE-CUT HANDLES

PH 0.031; PL 0.043
Single fr., much affected by burning, especially on interior, preserving portion of rim.
Local clay with many small to medium white and light-colored inclusions and a great deal of silver and golden mica. Clay much blackened due to burning.
Vertical, thin-walled upper body; rim thickened on interior, corresponding to a slight concavity on exterior; lip chamfered.
Surfaces burnished but poorly preserved; interior better finished than exterior.
Cf. **T67-2**, **T113-16**.

T117-17 (82.1029) **Fig. 173q**; **pl. 449**
RIM FR.; HM BOWL WITH SQUARE-CUT HANDLES
PH 0.031; PL 0.032
Single fr., much affected by burning, especially on exterior, preserving small portion of rim.
Local clay with fewer than normal small white and light-colored inclusions, but a great deal of mica, predominantly golden. Clay much blackened due to burning.
Vertical upper wall; rim thickened on interior; chamfered lip.
Surfaces burnished but poorly preserved.
A slightly larger and thicker-walled version of **T117-16**.

T117-18 (82.1031) **Fig. 173r**; **pl. 449**
NECK AND RIM FR.; HM JUG WITH CUTAWAY NECK
PH 0.040; PL 0.035
Single fr., much affected by intense burning, preserving small portion of neck and rim where cut away.
Local clay with many small white and light-colored inclusions and much mica, golden tending to predominate. Clay much blackened due to burning.
Vertical neck, cut away; chamfered rim.
Exterior burnished, with preserved tooling marks running vertically.
Cf., among others, **T114-3**.

T117-19 (82.1028) **Fig. 173s**; **pl. 449**
RIM FR.; HM TRIPOD CAULDRON
PH 0.052; PL 0.065
Single fr., only partially affected by burning, preserving portion of rim.
Coarse local clay with a great many small to very large white and light-colored inclusions and much mica, exclusively golden. Where not blackened clay and surfaces evenly fired close to yellowish red 5YR 5/6.
Vertical upper wall; short outcurved rim, with chamfered lip.
Exterior burnished smooth; interior somewhat better finished with broad shallow tooling marks running horizontally, producing a good, dull surface.
Cf. especially **T99-3**.

T117-20 (82.1033A–C) **Fig. 173t**; **pl. 449**
RIM, HANDLE, AND BODY FRR.; SMALL HM CLOSED VESSEL
82.1033A: PH 0.036; D (rim) est. 0.070
82.1033B: PH 0.042; PL 0.065
Restored PH (A + B): 0.090
Three nonjoining frr., all much affected by burning: 82.1033A preserving small portion of rim, neck, and one handle; 82.1033B and C preserving small portions of body. Drawing reconstructed from frr. A and B.
Clay evidently local with many small to medium white and light-colored inclusions and a great deal of mica, predominantly golden. Clay partially blackened due to burning.
Body, as preserved, almost spherical; base not preserved. Vertical neck, terminating in plain rim with chamfered lip. Upper portion of one handle stump preserved (drawing has been reconstructed with two handles, although this is not certain). Vertical handle, wide and thin section, attached directly to rim and pierced vertically at its center with a small hole that corresponds with another small hole pierced horizontally on upper neck. Vessel thin walled.
Preserved exterior and neck on interior burnished, with faint tooling marks running horizontally, producing a good surface with a slight sheen.
Vessel form unique at Torone; shape not unlike Wardle 1980:248, fig. 12, no. 21 (Assiros), although the handles are different.

Inventoried fragments not catalogued (nonjoining sherds of catalogued pieces)

82.1003	Cf. **T117-12**
82.1018 + 82.1019	Cf. **T117-2**
82.1022	Cf. **T117-5**
82.1024 + 82.1026	Cf. **T117-4**
82.1025	Cf. **T117-9**

Inventoried frr. representing vessels other than those catalogued

WM	82.998, 82.1013, 82.1014, 82.1021, 82.1023, 82.1027
HM	82.1032

TOMB 118 (**FIG. 29C**; **PLS. 236–237**; CONTENTS: **FIGS. 174A–K**; **PLS. 292**, **337**, **385**)

TR 22 S.F.39 + 40 + 41 + 42
DOUBLE OR TRIPLE CREMATION; IN TWO OR THREE ASH-URNS

Large irregularly shaped pit with a maximum preserved length of 1.17 m, cut 0.23 m deep into bedrock; tomb encountered at a depth of 0.55 m below surface. In the south part of the pit the handmade two-handled jar **T118-1**, which served as one ash-urn, was placed upright and covered by the fragments of a wheelmade amphora, **T118-2**. **T118-1** was set in place by a small quantity of bedrock chips around its base; to the NE a medium-size stone set on edge separated the vessel from the other contents of the tomb. The cremated human remains recovered from **T118-1**, a mere 3 g, were nondiagnostic for age and sex; an unburned, or not greatly fire-affected fragment of bone of a small carnivore was also found inside the ash-urn (appendix B). A few centimeters to the NE, also upright, was the handmade pitharion **T118-3**, which served as a second ash-urn. It contained 87 g of cremated adult human bone. No tomb covering was preserved, with the result that the upper parts of both **T118-1** and **T118-3** were damaged. Approximately 0.20 m NE of **T118-3**, and directly in line with it and with **T118-1**, were the scattered sherds of **T118-4**, which preserved portion of the body, rim, and one handle of another handmade pitharion; with these fragments were a few small stones as well as a small quantity of cremated human bone (11 g), which proved nondiagnostic for age or sex. As preserved, it was not clear whether **T118-4** represents the disturbed remains of a third ash-urn (perhaps originally laid on its side) or alternatively the displaced lid/cover for **T118-3** (in the same manner as **T118-2** served as lid/cover for **T118-1**); in the latter case, the scattered cremated human bone was perhaps displaced from **T118-3**. The remainder of the tomb pit was filled with loose-textured blackened earth representing remains of the pyre.[39] This fill yielded a quantity of fire-affected sherds (**T118-5–T118-11**), as well as a good variety of seashells (including at least one fragment of sea urchin), and a number of land-snail shells (appendix C). This tomb and Tomb 112 were the only two cremation tombs in the cemetery where more than one ash-urn was placed in the same tomb pit.

ASH-URN I

T118-1 (82.70) **Fig. 174a**; **pl. 337**

TR 22 S.F.42

HM TWO-HANDLED JAR (BELLY-HANDLED)

POTTER'S MARK (= Papadopoulos 1994: 451, fig. 11, pl. 115f, no. B11)

H 0.180; D (base) 0.075–0.080; D (rim) est. 0.117

Reconstructed from several frr. preserving entire base and most of body, including one complete handle and parts of the second, but only small portion of neck and rim. Condition otherwise quite good.

Local clay with many small white and light-colored inclusions and much mica, predominantly silver. Clay and surfaces variously fired: on one side clay fired close to red 2.5YR 5/6, with the surface light brown 5YR 6/4; on the other side clay fired close to reddish brown 5YR 4/4, with the surface discolored gray/brown.

Flat base, with a slight angle formed at junction with wall. Rounded body; vertical neck, offset from shoulder by shallow groove on exterior corresponding to a slight thickening on interior. Flaring rim, with chamfered lip. Two horizontal handles, round in section, attached slightly above point of max. D and tending to rise vertically.

Exterior burnished smooth, producing a good, dull surface.

Potter's mark: Incised motif on shoulder on one side of the vessel only: five short strokes set vertically in line from the groove at junction of body and neck. Strokes incised prior to firing.

For shape cf. **T63-1**, **T100-1**, **T130-1**, **T133-1**.

T118-2 (82.67A–C) **Fig. 174b**; **pl. 292**

TR 22 S.F.39

BODY FRR.; WM AMPHORA (LID/COVER FOR **T118-1**)

82.67A: PH 0.047; PL 0.153

82.67B: PH 0.118; PL 0.178

82.67C: PH 0.102; PL 0.133

Fr. A (not illustrated) comprises single fr. preserving portion of shoulder; fr. B comprises four joining frr. of shoulder near neck; fr. C comprises three joining frr. preserving portion of lower body. Surface and breaks of all frr. much worn; painted decoration poorly preserved.

Local clay with fewer than normal mainly small white and light-colored inclusions and much mica, predominantly golden; occasional blowouts. Clay core fired light gray; elsewhere closer to reddish yellow 7.5YR 6/6; slip closer to reddish yellow 7.5YR 7/6 and pink 7.5YR 7/4.

Lower wall (fr. C) rising steeply; shoulder (fr. B) more curved; small ridge, much worn, preserved at upper break at junction of body and neck.

Slipped and painted, but poorly preserved: paint dull, fired red. Portions of two horizontal bands on lower wall. Two horizontal bands on shoulder, above which are the preserved traces of two sets of mechanically drawn concentric circles. Only the two inner circles of both sets are clearly visible. Under good light slight traces of more circles are visible on the right set and it is likely that each set originally comprised between seven and nine circles (see restored drawing **fig. 174b**).

Cf. especially **T44-2**.

Amphora type undetermined, perhaps neck-handled: cf. **T77-1**, **T124-1**, but also the belly-handled amphora **T104-1**, and the amphora with belly and shoulder handles **T67-1**.

ASH-URN II

T118-3 (82.69) **Fig. 174c**; **pl. 385**

TR 22 S.F.41

HM PITHARION

PH 0.106; max. D (body) 0.144

Reconstructed from two large joining frr. preserving base, most of body, including both handles, and portion of lower neck; upper neck and rim not preserved. Vessel cracked at points.

Coarse local clay with a great many small to large white and light-colored inclusions and much mica, almost exclusively golden. Clay core fired dark gray approaching black; interior and exterior surfaces fired close to yellowish red 5YR 5/6.

Base only slightly flattened; rounded body; neck becoming vertical, offset from shoulder as shown. Two horizontal handles, round in section, attached near point of max. D and tending to rise vertically. Vessel thick walled.

Exterior mostly burnished smooth, surface dull, but with faint tooling marks, broad and shallow, visible at points, especially toward neck, similar to those on **T38-1**.

The vessel is a smaller and somewhat squatter version of the standard pitharion. For general form cf. **T70-1** and the larger **T38-1**; cf. also **T49-1**, **T126-1**.

POSSIBLE ASH-URN III

T118-4 (82.68) **Fig. 174d**

BODY, HANDLE, AND RIM FRR.; HM PITHARION

PH 0.180; D (rim) est. 0.120

Ten joining and nonjoining frr. preserving portion of body, including one handle, neck, and rim.

Coarse local clay with a great many small to very large white and light-colored inclusions and much mica, exclusively golden. Clay

and surfaces mostly fired close to yellowish red 5YR 5/6, in parts closer to reddish brown 5YR 4/4.

Shoulder steep, offset from neck as shown; neck tending vertical; chamfered lip. Large horizontal handle, thick and round in section, attached to upper body.

Exterior and interior at neck burnished, with broad, shallow tooling marks running mainly horizontally, producing a good surface with a slight sheen.

Shape, burnishing and fabric particularly close to **T38-1**.

PYRE DEBRIS

Recovered from the blackened tomb pit fill was a quantity of fire-affected sherds representing at least six or seven vessels. Frr. catalogued include those of an amphora (**T118-5**) and of another closed vessel (**T118-6**), a krater rim fr. (**T118-7**), a skyphos fr. (**T118-8**), two cup frr. (**T118-9**, **T118-10**, perhaps from the same vessel), as well as many frr. of the HM tripod cauldron **T118-11**. In addition there were three painted body frr. and another rim fr. of WM vessels not catalogued, as well as nineteen very small nonjoining frr. probably of **T118-11**. Several very small nondiagnostic body sherds, evidently unburned, are conceivably intrusive. Of the catalogued pieces **T118-6** is imported; the provenance of **T118-9** and **T118-10** is uncertain.

T118-5 (82.1095) **Fig. 174e**

BASE FR.; WM CLOSED VESSEL, PROBABLY AMPHORA

PH 0.025; D (base) est. 0.105

Single fr., partially affected by burning, preserving portion of base.

Local clay with many small to medium, and occasional larger, white and light-colored inclusions and much mica, mostly fine, golden tending to predominate. Clay mostly fired gray/brown due to burning; occasional blowouts.

Flat disk base.

Slipped and painted but much worn: lower outside edge of base reserved; preserved lower wall, including junction with base, painted.

Cf. **T117-2**.

T118-6 (82.1094) **Fig. 174f**

BODY FRR.; WM CLOSED VESSEL; IMPORTED, PROBABLY EUBOIAN (appendix E)

PH 0.040; PL 0.045

Two joining frr., broken on all sides, one of which is more clearly affected by burning than the other, preserving small portion of body; chipped.

Imported fabric, fine, with far fewer than normal visible inclusions and no mica. Color of clay of joining fr. less affected by burning close to light reddish brown 5YR 6/3; other fr. gray due to burning.

Body curved; clearly from small closed vessel.

Slipped and painted: paint semilustrous, tending to streak, fired black. Lower part of preserved frr. painted solid; upper part reserved and decorated with what appear to be portions of two diagonal strokes. Interior unpainted.

Cf. **T113-9** and **T117-15**; also **T72-1**. Shape undetermined, although shape and decoration may indicate a globular pyxis: cf. Desborough 1952: pl. 8, nos. 575 (7), 912 (28), 913 (28) (Attic), rather than another form: cf. Popham, Sackett, and Themelis 1979–80:328, fig. 17, esp. E and C (Euboian).

T118-7 (82.1093) **Fig. 174g**

RIM FR.; WM KRATER

PH 0.028; PL 0.035; D (rim) N/R

Single fr., much affected by burning, preserving small portion of rim.

Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden. Clay gray/brown and in parts blackened due to burning.

Vertical upper wall; horizontal rim, flat on top and tapering slightly to rounded outside edge.

Slipped and painted but extremely worn: traces only of paint preserved on exterior, interior, and rim top.

Cf. **T24-4**, **T58-1**.

T118-8 (82.1091) **Fig. 174h**

RIM FR.; WM SKYPHOS

PH 0.040; D (rim) est. approx. 0.250

Single fr., affected by burning, preserving small portion of rim.
Clay probably local but with fewer than normal inclusions and a little fine silver and golden mica. Clay brown due to burning.
Vertical upper wall; gently flaring/outcurved rim, with rounded lip.
Slipped and painted, but worn, especially on exterior: paint, as preserved, dull, fairly thickly applied with a tendency to flake; fired dark reddish brown with a maroon tinge. Traces of paint on exterior; interior painted.
Cf. **T104-14**.

T118-9 (82.1092) **Fig. 174i**
RIM FR.; WM ONE-HANDLED CUP; LOCAL OR IMPORTED, UNCERTAIN PROVENANCE (appendix E)
PH 0.019; D (rim) est. 0.110
Single fr., much affected by burning, preserving small portion of rim.
Fabric looks imported, with only a few small white inclusions and a little surface mica only, but is probably local. Clay gray/brown due to burning.
Upper wall vertical; gently flaring/outcurved rim, with rounded lip. D (rim) too small for skyphos.
Slipped and painted, but poorly preserved: paint semilustrous, fired black. Preserved interior and exterior painted.
Cf. **T101-2**, **T101-3**, and parallels cited under **T117-14**. Fr. perhaps from the same vessel as **T118-10**.

T118-10 (82.1096) **Fig. 174j**
BASE FRR.; WM ONE-HANDLED CUP LOCAL OR IMPORTED, UNCERTAIN PROVENANCE
PH 0.020; D (base) 0.044
Two joining frr., much affected by burning, preserving portion of base.
Fabric as **T118-9**, but with a few more visible inclusions and a little more mica.
Small ring base with narrow resting surface; underside flat.
Slipped and painted: paint thinner and slightly duller than **T118-9**, fired black. Lower outside edge of base reserved. Upper portion of base and lower wall to break, painted. Interior painted.
Perhaps from the same vessel as **T118-9**, but with slight differences in details of fabric and paint noted. Shape and decoration, as well as fabric, particularly close to **T101-2**: cf. the parallels cited there. Cf. also Popham, Sackett, and Themelis 1979–80:293–294, and esp. pl. 98, S Tomb 19.1, and pl. 99, S Tomb 24.1.

T118-11 (82.1097) **Fig. 174k**
BODY AND LEG FRR.; HM TRIPOD CAULDRON
PH (including leg) 0.108
Five joining frr., at least partially affected by burning, preserving portion of body and upper part of one leg; in addition there are as many as nineteen very small nonjoining frr. of body (not inventoried).
Coarse local clay with a great many small to very large white and light-colored inclusions and much mica, exclusively golden. Most frr. blackened due to burning, clay close to brown 7.5YR 5/4 where less fire affected.
Rounded body; thick leg, oval in section, tapering slightly toward resting surface, which is not preserved.
Exterior burnished, with broad, shallow tooling marks tending horizontal on body, vertical on leg, producing a good, dull surface; interior burnished smooth.
Cf. **T123-2** and **T123-3**.

TOMB 119 (**FIG. 29C**; **PL. 238**; CONTENTS: **FIGS. 175A–C**)

TR 22 S.F.49
URN CREMATION; CREMATED REMAINS NONDIAGNOSTIC
Tomb located in the area of the later Classical walls TR 22 *a* and *c*, partly under the latter and much disturbed by it. It consisted of a shallow pit, the overall extent of which could not be determined, cut into bedrock to a preserved maximum depth of 0.11 m × ca. 0.50–0.60 m long; tomb encountered at a depth of 0.60 m below surface. Within the pit the base and lower body of the

wheelmade amphora **T119-1**, which served as ash-urn and was clearly in situ, was found upright and firmly set by at least two chocking stones. The entire upper part of the vessel was not preserved, and only a few joining fragments were recovered from the immediate vicinity. The area around the tomb, extending partly under wall *c*, consisted of loose-textured blackened earth representing remains of the pyre, which yielded a small quantity of burned and unburned Early Iron Age sherds, a selection of which is catalogued (**T119-2**, **T119-3**). A small quantity of carbonized wood also was recovered, as were a few fragments of cremated bone displaced from the ash-urn—which, as preserved, contained only a very small quantity (9 g) of bone. At least one seashell fragment was found inside the ash-urn (appendix C).

T119-1 (82.119) **Fig. 175a**
TR 22 S.F.49
FRAGMENTARY BASE AND LOWER BODY; WM AMPHORA
PH 0.177; D (base) 0.075
Reconstructed from many frr. preserving entire base and much of lower wall. Chipped and worn, especially at breaks, with little of the painted decoration preserved.
Local clay with many small white and light-colored inclusions and a great deal of mica, predominantly golden; occasional blow-outs. Clay evenly fired close to reddish yellow 5YR 6/6; slip lighter, approaching off-white where preserved.
Low ring base with rounded resting surface; underside flat; groove at junction of base and body on exterior. Lower wall rising steeply to point of max. D; preserved upper wall curving in. Wheelmarks prominent on interior.
Slipped and painted, but much worn: paint, as preserved, dull, rather thickly applied; fired red. Horizontal band at junction of base and body; broad horizontal band at midpoint. On one side there is preserved the lower termination onto body of the painted decoration of one of the handles (neither handle is preserved). Such terminations are more consistent with neck-handled amphorai: cf. for instance **T124-1** and **T74-1**.
Cf. also **T24-1**, **T42-1**, **75-1**.

PYRE DEBRIS

Recovered from the blackened fill associated with the tomb were a number of sherds, of which frr. of only two skyphoi (**T119-2**, **T119-3**) have been catalogued, both of which displayed no clear signs of having been burned. There were, in addition, several nonjoining frr. of these and possibly other skyphoi, some fire affected. Vessels represented among the sherds not catalogued include a HM tripod cauldron, frr. of at least three HM vessels, frr. of a WM amphora, as well as some twenty-four body sherds of other WM vessels, some, but not all, fire affected.

T119-2 (82.1117) **Fig. 175b**
RIM AND HANDLE FR.; WM SKYPHOS
PH 0.057; PL 0.048
Single fr. preserving small portion of rim and handle stump; chipped and much worn, but displaying no signs of having been burned.
Local clay with many small to medium white, light-colored, and occasional red inclusions as well as much mica, predominantly golden. Clay evenly fired close to pink 7.5YR 7/4.
Vertical upper wall; flaring/outcurved rim with rounded lip. Portion of one stump of horizontal handle preserved.
Slipped and painted, but much worn: paint evidently dull, fired black. Upper and outer faces of handle painted, with the decoration extending onto body; area above handle painted, reserved below handle arch. Faint traces of paint on interior.
Decoration consistent with "ugly sausage(s)": cf., among others, **T23-1**, **T101-7**, **T103-1**, **T105-1**, **T109-4**; cf. also **T119-3**, but clearly not from the same vessel.

T119-3 (82.1118) **Fig. 175c**
BODY AND HANDLE FR.; WM SKYPHOS
PH 0.057; PL 0.047
Single fr., broken on all sides, preserving small portion of body and handle stump; chipped and worn, but displaying no signs of having been burned.
Local clay with rather fewer than normal small inclusions and less mica, tending fine, silver

and golden. Clay evenly fired close to light reddish brown 5YR 6/4; slip closer to reddish yellow 7.5YR 7/6.

Vertical wall, slightly curved toward lower break; stump of horizontal handle, round in section, attached to upper wall.

Slipped and painted: paint dull, thickly applied; fired black on exterior, dark brown to red on interior. Horizontal band or area painted solid below handle attachment. Upper and outer faces of handle painted with the decoration extending onto body. Area above handle painted, reserved immediately below handle arch. Interior painted.

Decoration as **T119-2**.

TOMB 120 (**FIG. 29C**; **PL. 239**; CONTENTS: **FIG. 176**; **PL. 275**)

TR 22 S.F.53

URN CREMATION; SINGLE ADULT

Tomb partly located beneath TR 22 Classical wall *a* and clearly much disturbed by it. As preserved, the tomb consisted of a shallow pit, the overall extent of which was not defined, cut at least 0.08 m deep into bedrock, with a maximum preserved length of 0.28 m; tomb encountered at a depth of 0.68 m below surface. Within the pit was found the fragmentary wheelmade shoulder-handled amphora **T120-1**, which served as ash-urn, evidently on its side; whether this was its original position or the result of disturbance caused by the foundation of wall *a* could not be established. About one-half of the vessel lengthways was preserved, including the complete profile. All around the vessel and in the immediate vicinity of the tomb pit was a small quantity of blackened earth representing the remains of the pyre. This yielded a few fragments of cremated human bone, some small pieces of carbonized wood, and several seashell fragments (appendix C), but no associated sherds. One seashell fragment was found inside the ash-urn with the majority of the cremated human bone recovered from the tomb (appendix A).

T120-1 (82.160) **Fig. 176**; **pl. 275**

TR 22 S.F.53

WM SHOULDER-HANDLED AMPHORA

H 0.202; D (base) 0.065; D (rim) est. 0.104

Reconstructed from several frr. preserving about one-half of vessel with complete profile, including one handle; remainder of vessel restored.

Fabric probably local, but with fewer than normal small white, light-colored, and occasional darker inclusions and only the odd speck of golden mica. Clay abnormally light colored, fired close to light yellowish brown 10YR 6/4 and very pale brown 10YR 7/4; slip slightly lighter, in parts approaching pale yellow 2.5Y 7/4.

Flat disk base with lower outside edge partly chamfered. Body tending ovoid; vertical neck; flaring rim with rounded lip. Vertical and rather thick shoulder handle (only one preserved), with concave upper face, attached from point of max. D to shoulder below neck.

Slipped and painted: paint fairly thickly applied with a pronounced tendency to flake; fired black. Body decorated with six horizontal bands: three on lower wall; one, broader, at midpoint and two on shoulder, the uppermost defining junction with neck. Neck and handle unpainted.

Shape unique among the finds from the Terrace V cemetery; for the shape in Attic see Desborough 1952:37–40; 1972:148–149. For earlier, Mycenaean, predecessors see Furumark 1972a: Shape 62; cf. S. Immerwahr 1971:244, pl. 59, no. l (= Vermeule and Travlos 1966:72–73, pl. 24).

TOMB 121 (**FIG. 29C**; CONTENTS: **FIGS. 177A–B**)

TR 22 S.F.54

URN CREMATION(?) MUCH DISTURBED; CREMATED REMAINS NONDIAGNOSTIC

Tomb located beneath TR 22 Classical wall *a* and much disturbed by it (cf. Tomb 120). As preserved, it consisted of a shallow pit, the overall extent of which was not defined, cut ca. 0.13 m deep into bedrock, with a maximum preserved length of 0.60 m; tomb encountered at a depth of 0.80 m below surface. Within the pit were the scattered fragments of a wheelmade amphora **T121-1**, presumably the ash-urn, preserving only portion of the

rim and shoulder of the vessel, as well as fragments of a tripod cauldron **T121-2** and several other small sherds (not catalogued). A small quantity of cremated human bone (12 g) and one fragment of seashell (appendix C), all within an interleaving of loose blackened earth representing the possible remains of the pyre, were noted. The original position of **T121-1** and **T121-2** could not be determined.

T121-1 (82.161A–C) **Fig.177a**
TR 22 S.F.54
RIM AND SHOULDER FRR.; WM AMPHORA
Dimensions of illustrated frr.: PH 0.150; D (rim) est. 0.160
A total of fifteen joining and nonjoining frr. (labeled A–C) preserving portion of body, neck, and rim; chipped and worn.
Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden; occasional blowouts. Clay perhaps poorly fired, with clay core mostly fired light gray, elsewhere close to reddish yellow 5YR 6/6 and 7.5YR 6/6; slip slightly lighter.
Curved shoulder, offset from neck by small ridge. Tall vertical neck; thickened, everted rim, tapering slightly to rounded lip; small offset below rim on exterior. Shoulder considerably thicker than neck.
Slipped and painted: paint dull, with a tendency to flake where thickest; variously fired from red through dark brown, in parts approaching black. Horizontal band on lower neck immediately above small ridge; upper neck and exterior face of rim painted, continuing over rim onto interior as shown.
Shape and decoration consistent with neck-handled amphorai: cf. **T52-1**, **T73-1**, **T74-1**, and **T124-1**, although the slight offset below rim is a little unusual.

T121-2 (82.1147) **Fig. 177b**
BODY FRR.; HM TRIPOD CAULDRON
PH 0.062; PL 0.080
Three joining frr., broken on all sides, preserving small portion of body and neck. Frr. partially affected by burning (perhaps the result of normal household use and not necessarily of having been burned in the cremation process).
Coarse local clay with a great many small to large white and light-colored inclusions and much mica, exclusively golden. Surfaces blackened due to burning; where less fire-affected clay close to brown 7.5YR 5/4.
Body curved; lower neck, as preserved, becoming vertical.
Exterior burnished, with broad, shallow tooling marks running horizontally and producing a good surface with a slight sheen; interior less well finished.
Cf. **T99-3**, **T115-12**, **T123-2**.

ASSOCIATED SHERDS

In addition to **T121-1** and **T121-2**, there were only two associated sherds, a rim fr. and a body fr. of two different WM vessels, neither of which displayed any signs of having been burned. Both frr. may be intrusive.

TOMB 122 (**FIG. 23B**; **PLS. 240–241**; CONTENTS: **FIG. 178A–B**; **PLS. 284**, **365**)

TR 9 S.F.70 + 71
URN CREMATION; SINGLE ADULT (FEMALE?)
Tomb located along the north scarp of TR 9 and found in a poor state of preservation, almost certainly the result of disturbance caused by Classical building activity. As preserved, it consisted of a shallow circular to elliptical-shaped pit, 0.53 m long (max.), cut 0.10 m deep into bedrock; tomb encountered at a depth of 0.42 m below surface. Within the pit the wheelmade amphora **T122-1**, which served as ash-urn and containing a comparatively good quantity (356 g) of cremated human bone, was placed on its side. As neither the rim nor base of the vessel was preserved it was difficult to determine with certainty the orientation of the vessel in situ, but it was most probably east–west, with the rim to the east. Beside the ash-urn, to the NNE, the handmade jug **T122-2** was placed upright; the lower parts of both vessels were firmly set by compacted bedrock chips, their upper parts completely destroyed, with none of the missing fragments recovered. A small quantity of dark-colored earth was

noted in the general area, but the tomb was too poorly preserved to determine whether remains of the pyre were placed in the pit; there was neither associated sherd material nor any organic debris.

T122-1 (81.828) **Fig. 178a**; **pl. 284**

TR 9 S.F.70

FRAGMENTARY BODY; WM AMPHORA

PH 0.243; PL 0.256

Reconstructed from many frr. preserving about one-quarter of central and upper body of vessel, as well as small portion of lower neck. Base, rim, and handles not preserved; chipped and worn. Some of the frr. near midpoint were cracked and warped in such a way as to suggest that the vessel had split or exploded while being fired in the kiln; if so, it may well have been placed into the tomb in an incomplete state.

Local clay with many small to medium white and light-colored inclusions and much mica, predominantly silver. Clay fired close to light reddish brown 5YR 6/3–6/4; slip slightly lighter.

Preserved lower wall evidently rising steeply; shoulder more curved. Lower neck vertical, offset from body by small ridge.

Slipped and painted: paint dull, rather thickly applied; mostly fired dark brown to black, in parts lighter brown, approaching red. Preserved lower wall, below point of max. D, reserved. Three thin horizontal bands on lower shoulder, above which is a broader band from which springs a row of crosshatched triangles (two triangles completely and another two partially preserved). The apices of the triangles run into a thin band immediately below ridge at juncture of shoulder and neck. Thin horizontal band on lower neck above ridge, above which, but only partially preserved at break, is a small portion of an unidentified circular motif, as shown.

Shape and decoration consistent with amphorai with belly and shoulder handles: cf. **T56-1**, **T81-1**, **T82-1**, **T83-1**.

T122-2 (81.632) **Fig. 178b**; **pl. 365**

TR 9 S.F.71

BASE FRR.; HM JUG

PH 0.075; D (base) approx. 0.060; max. D (body) 0.128

Eight joining frr. preserving entire base and much of lower body, including point of max. D; chipped.

Local clay with many small white and light-colored inclusions and much silver and golden mica, tending fine. Clay and surfaces variously fired: clay body ranging from red to dark gray/brown, in parts light gray. Interior surface dark gray; exterior surface close to reddish yellow 5YR 6/6, in parts discolored gray/brown. Clay rather brittle.

Flattened base; thin-walled, rounded body.

Exterior burnished, with pronounced tooling marks running horizontally toward upper preserved body, diagonally opposed on lower wall, crisscrossing on underside, producing a good, dull surface.

Cf., among others, **T7-3**, **T43-2**, **T56-2**, **T70-2**, **T73-2**, **T77-2**, **T80-2**, **T114-3**.

TOMB 123 (**FIG. 23B**; **PL. 242**; CONTENTS: **FIGS. 179A–E**; **PLS. 299A–B**, **386**, **388–390**, **507A–B**)

TR 9 S.F.65 + 66

URN CREMATION; DOUBLE CREMATION IN ONE ASH-URN (ADULT FEMALE AND FOETUS/NEONATE)

Liston and Papadopoulos 2004 (mentioned)

Tomb pit, the edges of which were not very clear, with a maximum preserved length of 0.35 m, dug through deposit type 4 down to the level of bedrock to an overall depth of ca. 0.20 m; tomb encountered at a depth of 0.28 m below surface. Within the pit the wheelmade vertical-handled amphoriskos **T123-1**, which served as ash-urn, was placed on flat bedrock upright but tilted, with the mouth facing south. Although small in comparison to other ash-urns, **T123-1** contained more than 600 g of cremated bone (appendix A). Beside it to the west, and also partially covering it, were fragments of several broken handmade tripod cauldrons, **T123-2–T123-5**; one of the tripod fragments was found displaced some 0.30 m to the north. The arrangement of the tomb pots was similar to Tomb 99. A small quantity of blackened earth was noted in the immediate vicinity of the tomb but not within the actual

pit itself (the stones indicated on **fig. 23a** above the tomb are associated with the Classical building activity). One burned seashell fragment and a complete land-snail shell were encountered inside the ash-urn with the cremated human remains (appendix C). Two possible animal bone fragments noted by Dr. Musgrave as being among the cremated remains from the ash-urn (appendix A) were never subsequently located.

T123-1 (81.689) **Fig. 179a**; **pls. 299a–b**

TR 9 S.F.65

WM VERTICAL-HANDLED AMPHORISKOS

H 0.172; D (base) 0.060; D (rim) 0.096–0.101

Recovered almost complete except for most of one handle and parts of rim; reconstructed from frr. Chipped and much worn, surface powdery to touch, with little of the painted decoration preserved.

Local clay with many small to medium white and light-colored inclusions and much mica, golden tending to predominate. Clay fired close to reddish yellow 5YR 6/6 and light brown 7.5YR 6/4; slip, where preserved, slightly lighter.

Flat disk base slightly hollowed out on underside to create a small false ring base with rounded resting surface. Body almost biconical with point of max. D marked by faceting, almost forming a slight carination. Tall vertical neck, offset from shoulder by slight ridge much worn. Plain rim, only slightly flaring, tapering to rounded lip. Two vertical handles, thin in section with concave upper faces, attached from just above point of max. D to neck below rim; complete handle set slightly askew.

Slipped and painted, but very poorly preserved: paint evidently dull, mostly fired light red, approaching brown where thicker. Details of decoration not perfectly clear, drawing should be regarded as tentative. As preserved, at least three thin horizontal bands on upper part of lower wall; broad band at point of max. D, above which are three more thin bands, the uppermost extending over the slight ridge onto lower neck. Horizontal band on upper neck, above which is a zigzag; rim on interior and exterior painted. Concave upper faces of handles painted, with the decoration extending onto body as shown.

Cf. **T27-1**; also **T55-1**, **T69-1**, **T99-1**, **T107-1**.

TRIPOD CAULDRONS

Originally thought to represent a single vessel by the excavator and consequently labeled TR 9 S.F.66 in the field, the frr. proved to be of several tripods. There are at least two different vessels (**T123-2**, **T123-3**); **T123-4** is perhaps from the same vessel as **T123-2**, although this could not be established with certainty. The horizontal handle fr. **T123-5** as preserved could not be clearly matched with any of the other frr.

T123-2 (81.610A + B) **Fig. 179b**; **pl. 388**

TR 9 S.F.66

FRAGMENTARY HM TRIPOD CAULDRON

81.610A: PH 0.160; D (rim) est. 0.180

81.610B: PH 0.090; PL 0.102

81.610A comprises five joining frr. preserving portion of body, rim, one complete vertical handle, and upper portion of one leg. 81.610B comprises five more joining frr. preserving small portion of rim and body; plus several more nonjoining frr. All frr. chipped and slightly worn.

Coarse local clay with a great many small to large white and light-colored inclusions and much mica, exclusively golden. Clay fired close to brown 10YR 5/3; interior and exterior surfaces closer to light brown 7.5YR 6/4; lower body partially blackened.

Thick-walled, rounded body; vertical neck; flaring rim with rounded lip. Handle and leg forming continuous attachment; handle vertical, thick and round in section, with upper attachment directly to rim; upper leg thick, rectangular, almost square, in section.

Exterior surface and interior at neck and rim burnished, with broad, shallow tooling marks running mainly horizontally on body, vertically at handle and neck, producing a good surface with a slight sheen.

Cf. **T123-4**, which may be from the same vessel.

T123-3 (81.1162A + B) **Fig. 168c**; **pl. 386**
TR 9 S.F.66 bis
FRAGMENTARY HM TRIPOD CAULDRON
81.1162A: PH 0.177; D (rim) N/R
81.1162B: PH 0.175
81.1162A comprises single fr. preserving small portion of body, neck, rim, handle, and upper half of one leg. 81.1162B comprises five joining frr. preserving portion of body and one complete leg; plus several nonjoining frr. All frr. slightly chipped, with surface worn.
Coarse local clay with a great many small to large white and light-colored inclusions and much mica, exclusively golden. Clay and surfaces variously fired and discolored: ranging from red 2.5YR 5/6 and light red 2.5YR 6/6 to brown 7.5YR 5/4, in parts blackened.
Shape similar to **T123-2**, but thinner walled. Body rounded; vertical neck; offset with body more pronounced than **T123-2**. Gently flaring rim, which is slightly thickened; lip rounded, but with inner edge partly chamfered. Handle and leg on 81.1162A forming continuous attachment as **T123-2**, but with handle tending more oval in section and leg considerably thinner, rectangular in section. Leg tapers toward rounded resting surface. 81.1162B preserves leg but with no corresponding handle and as such the vessel would only have at least one and probably two handles.
Surface burnished but much worn, with tooling marks visible only at certain points.
For tripod with two vertical handles cf. Furumark 1972a:75, fig. 21, Shape 320; cf. Benzi 1975: pl. VII, no. 174. For related Early Iron Age tripod cauldrons from Sykia see Carington Smith 2000.

T123-4 (81.1163) **Fig. 179d**; **pl. 390**
TR 9 S.F.66 ter
BODY AND HANDLE FRR.; HM TRIPOD CAULDRON
PH 0.083; PL 0.098
Five joining frr. preserving small portion of body, lower neck, and stump of one handle; chipped and worn.
Coarse local clay with a great many small to large white and light-colored inclusions and much mica, exclusively golden. Clay and surfaces fired close to brown and strong brown 7.5YR 5/4–5/6; partially blackened under handle attachment.
Body and neck as **T123-2**; portion of horizontal handle, round to oval in section, attached to upper wall.
Burnishing as **T123-2**.
Perhaps from the same vessel as **T123-2**. Cf. **T47-4**, with horizontal handle.

T123-5 (81.1164) **Fig. 179e**; **pl. 389**
TR 9 S.F.66 quarte
BODY AND HANDLE FRR.; HM TRIPOD CAULDRON
PH 0.046; PL 0.120
Four joining frr. preserving complete handle and small portion of body; chipped and worn.
Coarse local clay with a great many small to large white and light-colored inclusions and much silver and golden mica, the latter predominating. Clay and surfaces mostly blackened, elsewhere close brown 7.5YR 5/4.
Thick horizontal handle, round in section, larger than **T123-4**.
Surface burnished, but much worn.
Cf. **T123-4**.

TOMB 124 (**FIGS. 23A–B**; **PLS. 243–244**; CONTENTS: **FIGS. 180A–C**; **PLS. 260A–C**, **321A–C**, **349A–B**, **467**, **508A–B**)

TR 9 S.F.63 + 64 + 67
URN CREMATION; PROBABLY ONE ADULT, CONCEIVABLY TWO
Circular pit 0.70 m in diameter, cut 0.43 m deep into bedrock; tomb encountered at a depth of 0.34 m below surface. Near the center of the pit the wheelmade neck-handled amphora **T124-1**, which served as ash-urn, was placed in an upright position; beside it, to the north and also upright, was the handmade jug **T124-2**. Both vessels were firmly set

in place by many small to medium size stones around their bases (**pls. 244a–b**); the smaller jug was also covered with stones. Over the mouth of the ash-urn the small lekanis **T124-3** was placed upside-down as lid/cover (**pl. 243**), with at least a few small stones and compacted bedrock chips set around it; no other tomb covering was encountered. The tomb pit fill mainly comprised the stones already noted, especially in the north and west parts, as well as compacted bedrock chips; the excavator also noted slight traces of blackened earth in the pit. There was no associated sherd material nor any scattered cremated bone. The ash-urn itself contained a comparatively very large quantity (1146 g) of cremated human bone), which probably represents one adult, though a possible duplication among a few of the bones may indicate two individuals (appendix A). Inside the ash-urn was a small unidentified fragment of bronze, **T124-4**, misshaped by burning, together with many fragments of sea urchin (appendix C) and several burned fragments of bone of a juvenile pig (appendix B). A variety of marine shells also were encountered in the immediate vicinity of the tomb (appendix C).

T124-1 (81.737) **Fig. 180a**; **pls. 260a–c**
TR 9 S.F.64
WM NECK-HANDLED AMPHORA
H 0.397; D (base) 0.113; D (rim) 0.139
Intact except for a few small frr. of rim and one handle, which were reconstructed. Condition good, although cracked in parts. Lower body marked by several largish blisters (or spalls) caused during firing, probably the result of larger inclusions.
Local clay with many small to medium white inclusions and much silver and golden mica, the former predominating. Clay fired something like light yellowish brown 10YR 6/4; slip lighter, approaching off-white.
Flat disk base slightly hollowed out on underside to create a false ring foot. Body ovoid; vertical neck, offset from shoulder by small ridge. Everted and slightly thickened rim, with rounded lip. Two vertical handles, with double concavity on upper faces, attached from upper shoulder to neck immediately below rim.
Slipped and painted: paint dull, evenly applied with a tendency to flake; fired black to dark brown. Broad horizontal band on lower wall. Area at and slightly above point of max. D decorated with seven bands, the central band being the broadest. Upper shoulder decorated on either side of vessel with three sets of mechanically drawn concentric circles, each set comprising four circles (with no central dot). Horizontal band on lower neck above small ridge. The outer circle of some sets runs over the band below, while in others, over the band above. Rim painted on exterior and interior. Upper faces of handles decorated with broad vertical stripe, extending onto neck and body as shown.
Cf. **T41-1**, **T52-1**, **T73-1**, **T74-1**. Also Kraiker and Kübler 1939: pl. 29, inv. 522; pl. 41, inv. 591, and esp. pl. 56, inv. 556; Kübler 1943: pl. 5, inv. 915; Brouskari 1980:20, pl. 3c, no. 5 (EPK 537).

T124-2 (81.373) **Fig. 180b**; **pls. 349a–b**
TR 9 S.F.67
HM JUG WITH CUTAWAY NECK
H 0.165; D (rim) max. 0.060
Intact.
Local clay with many small white, light-colored, and occasional darker inclusions and much mica, golden tending to predominate; occasional blowouts, some of which are quite large. Surface evenly fired close to reddish yellow 5YR 6/6–5/6.
Flattened base; rounded body, tending almost to biconical. Vertical neck, cut away, offset from shoulder by groove on exterior corresponding to angle formed on interior; rim chamfered. Vertical handle, round in section, attached to body by piercing, with projection of clay on interior.
Exterior burnished, with pronounced tooling marks running vertically on neck, horizontally on upper body and on underside, and diagonally opposed on lower wall, producing a good dull surface.
Cf., among others, **T70-2**.

T124-3 (81.612) **Fig. 180c**; **pls. 321a–c**
TR 9 S.F.63
WM LEKANIS, Type 1
H 0.096, D (base) 0.067; D (rim) 0.163

Reconstructed from frr. almost complete except for minor chipping. Extremely worn, especially on exterior, with decoration poorly preserved.

Local clay with many small white and light-colored inclusions and much mica, golden tending to predominate; occasional blow-outs. Clay fired close to reddish yellow 7.5YR 6/6; in parts closer to pale brown 10YR 6/3.

Tall flaring foot, almost conical, with lower outside edge chamfered. Shallow, curved lower wall; vertical upper wall. Small horizontal rim, flat on top and tapering slightly to rounded edge. Two horizontal ribbon handles, oval in section, attached directly below rim.

Slipped and painted, but much worn: paint dull, mostly rather dilute, slightly thicker toward rim; mostly fired brown, in parts reddish brown, approaching black where thickest. Foot exterior painted except for lower chamfered edge. Lower wall reserved; broad horizontal band on lower part of upper wall, above which is a reserved band decorated on either side of vessel with four tremulous lines. The uppermost of these, on both sides, is painted over the band above, while the lower tremulous line partly overlaps the band below. According to the thickness of paint, the tremulous lines are executed from left to right on one side of the vessel, right to left on the other. Horizontal band on upper wall below rim extends around the outer faces of both handles. Rim top decorated with four groups of opposed diagonals as shown. Interior painted solid.

Cf. especially **T47-3**, but slightly smaller; also the spouted lekanis **T51-3**.

T124-4 (81.1220) **Pl. 467**

TR 9 S.F.64 bis

UNIDENTIFIED BRONZE FR.

PL 0.026; TH 0.005

Single fr., misshaped beyond recognition by burning.

As preserved, fr. appears as a thin sheet of bronze rolled over to form tube.

Cf. generally **T18-2**, **T58-3**.

TOMB 125 (**FIG. 23B**; **PL. 245**; CONTENTS: **FIGS. 181A–C**)

TR 9 S.F.58

URN CREMATION; SINGLE ADULT

Shallow circular pit ca. 0.60 m in diameter, cut into bedrock only a few centimeters deep; tomb encountered at a depth of 0.33 m below surface. Within the center of the pit the wheelmade amphora **T125-1**, which served as ash-urn, was placed on its side; as nothing of the base of the vessel and only a very small portion of its rim was preserved, it was not possible to determine the exact orientation in situ—although it was probably east–west, rim to the west, as the rim fragments were found in the west. At least three stones were set around the ash-urn on the north and west sides to support it; the entire upper part of the tomb was completely destroyed. In the process of clearing the tomb the excavator came across the unburned fragments of a handmade jug, **T125-2**, which was probably a *kterisma*, much disturbed; the original position of the vessel could not be established, although it may have been similar to that of the jug **T124-2** in the nearby Tomb 124. Around the ash-urn, both within the tomb and in the immediate vicinity, was loose-textured blackened earth representing remains of the pyre. This deposit yielded a small quantity of fire-affected sherds, including fragments of the jug **T125-3** and a very small quantity of cremated human bone; the majority of the cremated bone was recovered from the ash-urn itself. It is likely that some of the burned sherd material recovered from the general area of the NE quarter of TR 9 (catalogued in chapter 2 as **12–22**) may have been displaced from this tomb. A few missing frr. of the ash-urn were also recovered in the immediate vicinity of the tomb. One large fragment of seashell (noted by Dr. Musgrave in appendix A), and an unburned astragalus of a sheep (appendix B), was found inside the ash-urn among the cremated human remains.

T125-1 (81.1135A–C) **Fig. 181a**

TR 9 S.F.58

FRAGMENTARY WM BELLY-AND-SHOULDER-HANDLED AMPHORA

PH 0.385; PL 0.210

Many joining and nonjoining frr., reconstructed as far as possible; 81.1135A preserves about one-quarter of the vessel lengthways, except for the base; 81.1135B preserves portion of shoulder, including one complete vertical handle; 81.1135C (not illustrated) preserves about one-half of one belly handle. All frr. chipped and worn.

Local clay with many small to medium, and a few larger, white and light-colored inclusions and much silver and golden mica; occasional blowouts, some of which are quite large. Clay core fired light gray only toward lower body, elsewhere evenly fired close to reddish yellow 5YR 6/6–7/6; slip closer to pink 7.5YR 7/4.

Lower wall thickens considerably toward base, rising steeply to point of max. D, which is set rather high; shoulder more curved. Tall vertical neck, offset from body by small ridge, much worn. Short thickened rim, flaring to everted, with inner edge obliquely cut and rounded outside edge; small offset below rim on exterior (cf. **T121-1**). Portion of one horizontal belly handle, round in section, preserved, but exact position on body could not be determined. One of two small vertical shoulder handles preserved, oval in section, attached to upper shoulder.

Slipped and painted, but rather worn: paint dull, evenly applied, with a slight tendency to flake; fired dark brown to black. Two horizontal bands on lower wall. Upper body decorated as shown: four thin horizontal bands, above which are two broader bands defining a reserved area decorated with two tremulous lines. Above this are five more thin bands, from the uppermost of which springs a row of mechanically drawn upright concentric semicircles. Portions of three sets are preserved, each set probably comprising seven arcs, with central arcs set very closely together. Neck, above small ridge, and rim exterior painted. Interior face of rim evidently reserved, but on one small nonjoining fr. are traces of possible barred decoration, very worn. Traces of paint on upper neck on interior (not illustrated). Upper face of shoulder handle decorated with vertical stripe that extends onto body, at least over the five thin bands below. Traces of paint on part of body indicating extension from the painted horizontal handle (not illustrated).

For shape cf. especially **T67-1**; cf. also **T81-1**, **T82-1**, **T83-1**.

T125-2 (81.1136) **Fig. 181b**

TR 9 S.F.58 bis

FRAGMENTARY HM JUG WITH CUTAWAY NECK

H (as reconstructed) 0.160; PH (body frr.) 0.109; PH (rim fr.) 0.035; D (base or rim) N/R

Many small joining and nonjoining frr. preserving small portion of base, about one-quarter of body lengthways including lower portion of handle, as well as nonjoining frr. of rim and neck; complete profile almost preserved. Chipped and worn.

Local clay with many small to medium, and occasional larger, white and light-colored inclusions and much mica, tending fine, predominantly golden. Clay and surfaces evenly fired close to light red 2.5YR 6/8 and reddish yellow 5YR 6/8.

Flattened base; rounded body, tending squat, with point of max. D set toward upper part of vessel. Vertical neck of undetermined height, offset from shoulder by groove on exterior corresponding to angle formed on interior; rim chamfered. Vertical handle, almost rectangular in section, attached to body by piercing with slight projection of clay on interior. Outer and upper face of handle diagonally grooved as shown. Two small preserved mastoi on body at point of max. D.

Exterior and upper neck on interior burnished, with pronounced tooling marks running vertically on neck exterior, horizontally on neck interior and on upper body on exterior, diagonally opposed on lower wall, producing a good surface with a slight sheen.

Cf. especially **T58-2**.

PYRE DEBRIS

Of the fire-affected sherd material clearly associated with the tomb, frr. of only one vessel, the jug **T125-3**, have been catalogued. The following frr.,

all affected by burning, were also recovered: at least twenty very small frr. of a WM skyphos with low ring base (Type 1), one rim fr. and a possible body fr. of a HM two-handled jar, one small handle fr. of a HM kantharos or cup/kyathos, and several frr. of a HM jug perhaps other than **T125-3**.

T125-3 (81.1137) **Fig. 181c**
RIM AND BODY FRR.; HM JUG WITH CUTAWAY NECK
PH 0.112; D (rim) est. 0.060
Seven joining and at least five nonjoining frr., all much affected by burning, preserving portion of shoulder, neck, and rim.
Local clay with some small white and light-colored inclusions and much mica, tending fine, predominantly silver. Clay discolored gray due to burning.
Shoulder curved, offset from neck by groove on exterior corresponding to angle formed on interior. Tall vertical neck, cut away; rim chamfered.
Exterior surface burnished but very poorly preserved, with vertical tooling marks evident on neck.
Cf. **T125-2**.

TOMB 126 (**FIG. 23B**; **PL. 246**; CONTENTS: **FIG. 182**)

TR 9 S.F.69
URN CREMATION; SINGLE CHILD(?)
As preserved, small and shallow circular pit 0.26 m in diameter, cut 0.06 m deep into bedrock; tomb encountered at a depth of 0.40 m below surface. Within the center of the pit the small handmade pitharion **T126-1**, which served as ash-urn, was placed upright, firmly set by a small quantity of compacted bedrock chips; only the base and portion of the lower body of the vessel were preserved, with the entire upper part of the tomb completely destroyed. In the immediate vicinity of the tomb a small quantity of blackened earth was noted, perhaps representing remains of a pyre; this deposit could not, however, be definitely associated with this tomb (note the burned sherds **12–22**).

T126-1 (81.634) **Fig. 182**
TR 9 S.F.69
FRAGMENTARY HM PITHARION
PH 0.092; D (base) 0.070–0.075
Three main joining frr., plus many chips, preserving entire base and about one-half of lower body; upper body to rim, not preserved. Condition extremely poor, clay fragile and perhaps poorly fired, tending to crumble on touch, with surface much pitted.
Coarse local clay with a great many small to very large white and light-colored inclusions and a great deal of mica, predominantly golden. Clay evenly fired something like yellowish red 5YR 5/6 and reddish yellow 5YR 5/4.
Base slightly flattened; body tending ovoid, rising steeply; thick walled.
Exterior surface too poorly preserved to determine exact nature of burnishing.
A smaller version of **T70-1**. Cf. especially **T31-1** and **T49-1**.

TOMB 127 (**FIGS. 14**, **23A–B**; **PLS. 247–248**; CONTENTS: **FIG. 183**; **PLS. 315A–C**, **509**)

TR 9 S.F.68
URN CREMATION; SINGLE ADULT, MIDDLE-AGED AT DEATH
Small circular pit 0.31 m in diameter, cut 0.15 m deep into bedrock; tomb encountered at a depth of 0.18 m below surface. Within the center of the pit the wheelmade skyphos **T127-1**, which served as ash-urn, was placed upright, firmly set by compacted bedrock chips and at least one small chocking stone. A small quantity of blackened earth, probably representing remains of the pyre, was encountered in the tomb pit but no burned sherds or any associated organic debris. A single cover stone placed directly over the ash-urn, which covered most of the tomb pit, sealed the tomb; a little more blackened earth was noted in the immediate vicinity (cf. Tomb 126).

T127-1 (81.624) **Fig. 183**; **pls. 315a–c**
TR 9 S.F.68
WM SKYPHOS; IMPORTED, PROBABLY EUBOIAN (appendix E)
H 0.153; D (base) 0.072; D (rim) 0.160–0.170
Reconstructed from many frr. almost complete except for minor chipping.

Imported fabric, fine and better levigated than local with only the occasional white impurity and no mica. Clay and slip evenly fired close to pink 5YR 7/3–7/4. Fabric and feel very similar to **T22-2** (also Euboian).

Good conical foot with narrow resting surface; groove at juncture of base and body on exterior. Shallow, curved lower wall; vertical upper wall; gently flaring/outcurved rim with rounded lip. Two horizontal handles, round in section, attached to upper wall.

Slipped and painted: good, semilustrous paint, with a tendency to streak; mostly fired black, but in parts brown and red. Base and lower wall reserved; the rest of the body, including handles, is painted solid except for reserved band at point of max. D and the area immediately under handle arches. Interior painted except for reserved band at rim.

Particularly close is a skyphos from Chalkis: Andreiomenou 1966:251–252, pl. XLVb, no. 3 (inv. 1344). For Euboian skyphoi generally: Popham, Sackett, and Themelis 1979–80: esp. 299; the general form of the base and body and especially the manner of decoration is closely matched by a number of one-handled cups at Lefkandi, notably Popham, Sackett, and Themelis 1979–80:294, fig. 7C; cf. further Catling and Lemos 1991: pls. 45–46, various examples (cups and skyphoi). For related Thessalian skyphoi cf., among others, Verdelis 1958:26–27, pl. 8, no. 51 (unknown provenance); Sipsie-Eschbach 1991: pl. 8, no. 4; pl. 21, no. 9 (Iolkos). For Attic versions cf. Desborough 1952:77–92, esp. 80, 89 (Desborough's type V), cf. Desborough 1972:152. Cf. also the local **T94-1**. See also Pfaff 1999:88, fig. 18, no. C-38-552.

TOMB 128 (**FIG. 23B**; **PLS. 249–250**; CONTENTS: **FIGS. 184A–E**)

TR 9 S.F.78 + 79

URN CREMATION; SINGLE ADULT

Small circular pit 0.44 m in diameter (max.), cut 0.14 m deep into bedrock; tomb encountered at a depth of 0.58 m below surface. Within the center of the pit the handmade two-handled jar **T128-1**, which served as ash-urn, was placed upright; only the base and part of the lower body of the vessel were preserved in situ, but enough fragments of the upper body and rim were found in the tomb pit to reconstruct a complete profile. The tomb pit fill comprised loose-textured blackened earth representing remains of the pyre, from which was recovered a small quantity of fire-affected sherds representing at least four different vessels (**T128-2–T128-5**); no tomb covering was preserved.

T128-1 (81.835A) **Fig. 184a**

TR 9 S.F.78

HM TWO-HANDLED JAR (BELLY-HANDLED)

H 0.142; D (base) approx. 0.090; D (rim) est. 0.076

Many joining frr., reconstructed as far as possible, preserving entire base, about two-thirds of body, including one handle; one nonjoining fr. preserves portion of neck and rim; complete profile preserved; chipped and worn.

Local clay with some small white, light-colored, and occasional red and darker inclusions; clay very micaceous, with silver mica tending to predominate. Clay and surfaces evenly fired close to reddish yellow 5YR 6/6 and 7.5YR 6/6. Rather hard fired, with a brittle feel.

Broad flattened base, with center of underside slightly pushed up. Comparatively wide and squat thin-walled body; vertical neck offset from shoulder by groove on exterior. Slightly flaring rim with chamfered lip. Preserved horizontal handle, almost square in section, attached immediately above point of max. D.

Exterior and neck on interior burnished, with tooling marks mainly running horizontally, producing a good, dull surface.

A squatter version of the common shape: cf. **T63-1**, **T100-1** (esp. for the handles), **T118-1**, **T130-1**.

PYRE DEBRIS

Recovered from the blackened tomb pit fill was a small quantity of fire-affected sherds, originally thought to be frr. of a possible displaced *kterisma*

and accordingly designated TR 9 S.F.79 in the field. The frr. represent at least four vessels, all WM and all much affected by burning, of which three are skyphoi (**T128-3–T128-5**) and one an amphora (**T128-2**). In addition there was one other burned sherd, a body fr. of an open vessel, and three body frr. of a large WM closed vessel displaying no signs of having been burned.

T128-2 (81.835B) **Fig. 184b**
RIM FR.; SMALL WM AMPHORA
PH 0.034; D (rim) est. 0.100
Single fr., much affected by burning, preserving small portion of rim.
Local clay with some small white and light-colored inclusions and much silver and golden mica, tending fine; occasional blow-outs. Clay discolored light gray due to burning.
Vertical neck; flaring rim, with rounded lip.
Slipped and painted, but poorly preserved: paint evidently fired black. Exterior and rim on interior painted.
Probably belly-handled amphora as **T20-1**, **T51-1**.

T128-3 (81.1158) **Fig. 184c**
RIM AND BODY FRR.; WM SKYPHOS
PH 0.044; D (rim) est. 0.210
Five joining and nonjoining frr., all much affected by burning, preserving small portion of rim and upper wall.
Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden. Clay discolored light gray/brown due to burning.
Vertical upper wall; gently flaring/outcurved rim with rounded lip.
Slipped and painted, but rather poorly preserved: paint dull, thicker on interior with a pronounced tendency to flake, rather more dilute on exterior. Exterior painted; reserved band at rim on interior and probably on upper rim on exterior; interior painted.
Although possible, it appears unlikely that the frr. are from the same vessel as **T128-4**.
Cf. **T104-14**, **T108-4**, **T113-3**.

T128-4 (81.1157B) **Fig. 184d**
BODY FRR.; WM SKYPHOS
PH 0.045
At least eleven joining and nonjoining frr., all much affected by burning, preserving small portion of body near base.
Local clay with many small white and light-colored inclusions and much mica, mainly fine, golden tending to predominate. Clay discolored light gray due to burning.
Thin walled; shallow lower wall.
Slipped and painted, but poorly preserved: paint dull, rather thickly applied with a tendency to flake; fired black on interior, dark red, as preserved, on exterior. Horizontal band on lower wall at bottom break; interior painted.
Cf. **T128-3**, **T117-9**.

T128-5 (81.1159) **Fig. 184e**
BASE FRR.; WM SKYPHOS, Type 1
PH 0.028; D (base) est. 0.090
Three nonjoining frr., all much affected by burning, preserving portion of base.
Local clay with many small to medium white and light-colored inclusions and some silver and golden mica, tending fine. Clay discolored light gray due to burning.
Low ring base, with lower outside edge chamfered; underside becoming flat. Lower body, as preserved, thick walled.
Slipped and painted, but with only very faint traces of paint preserved on interior.
Base clearly not from the same vessel as **T128-3** or **T128-4**.
For form of base cf. especially **T110-1**.

TOMB 129 (**FIG. 23B**; **PL. 251**; CONTENTS: **FIG. 185**; **PL. 291**)

TR 9 S.F.77
URN CREMATION; SINGLE ADULT(?)
Small circular pit 0.35 m in diameter, cut 0.15 m deep into bedrock; tomb encountered at a depth of 0.65 m below surface. Within the center of the pit the wheelmade amphora **T129-1**, which served as ash-urn, was placed upright and firmly set by compacted bedrock chips; only the base and lower

body of the vessel were preserved in situ, the entire upper part of the tomb having been destroyed.

T129-1 (81.834) **Fig. 185**; **pl. 291**
TR 9 S.F.77
FRAGMENTARY WM AMPHORA; VESSEL MENDED IN ANTIQUITY
PH 0.152; D (base) 0.110
Eleven joining frr. preserving entire base and large portion of lower wall; chipped and worn.
Local clay with many small to medium, and occasional larger, white and light-colored inclusions and much mica, predominantly golden. Clay core fired light gray where wall thickness is greatest, elsewhere evenly fired close to reddish yellow 5YR 6/6; slip closer to very pale brown 10YR 7/3–7/4.
Flat disk base slightly hollowed out on underside to create a small false ring foot with rounded resting surface. Shallow groove at junction of base and body on exterior; groove or turning mark on exterior face of foot. Lower wall rising steeply toward point of max. D; body clearly of rather ovoid form.
Slipped and painted, but worn: paint dull, rather dilute, variously fired red to black on lower wall, more consistently red on upper bands. Horizontal band on lower wall; three thin horizontal bands preserved near break at midpoint. On one side is preserved the painted decoration extending onto body from the outer face of handle (itself not preserved).
Vessel mended in antiquity with one preserved mending hole near top break, 0.055 m to the right of which is another hole, the latter only partially drilled.
Shape and decoration consistent with neck-handled amphorai: cf. especially **T124-1**; also **T52-1**, **T74-1**.

TOMB 130 (**FIGS. 23A–B**; **PLS. 252–254**; CONTENTS: **FIG. 186**; **PLS. 338**, **510**)

TR 9 S.F.72
URN CREMATION; SINGLE YOUNGER ADULT
Small circular pit 0.38 m in diameter, cut 0.30 m deep into bedrock; tomb encountered at a depth of 0.29 m below surface. Within the center of the pit the handmade two-handled jar **T130-1**, which served as ash-urn, was placed in an upright position and firmly set by compacted bedrock chips and a few small chocking stones; there was no black earth or any sherd material encountered in the tomb pit. The ash-urn, although cracked in situ, was recovered complete except for minor chipping to one handle and parts of the body. A single small stone, placed directly over the mouth of the ash-urn but not covering the tomb pit entirely, sealed the tomb (see **fig. 23a**; **pl. 252**; the rubble indicated just west of the tomb was part of a paving or walking surface of the Classical period). A very small quantity of blackened earth was noted in the immediate area of the cover stone, but this was probably displaced from the nearby Tomb 125 to the NE. Inside the ash-urn an unburned bone fragment of a bird of unidentified species (appendix B) was encountered along with the cremated remains of the deceased; a small fragment of marine shell noted by Dr. Musgrave (not in appendix C) was inside the ash-urn.

T130-1 (81.664) **Fig. 186**; **pl. 338**
TR 9 S.F.72
HM TWO-HANDLED JAR (BELLY-HANDLED)
H 0.230; D (base) 0.086; D (rim) 0.123
Reconstructed from many frr., but only partially restored; complete except for minor portion of one handle and chips from body; chipped and rather worn.
Local clay with rather fewer than normal small white and light-colored inclusions but much mica, mainly fine, golden tending to predominate; occasional pinprick blowouts. Clay and surfaces evenly fired close to red 2.5YR 5/6.
Flat base; rounded body with point of max. D toward upper part of vessel. Vertical neck offset from shoulder by slight groove on exterior corresponding to angle formed on interior. Flaring rim with chamfered lip. Two horizontal handles, round in section, with outer faces diagonally grooved, attached to upper wall.
Exterior and neck on interior burnished, but much worn, with preserved tooling marks

running horizontally on body and neck interior, vertically on neck exterior, producing a good, dull surface.

Cf. **T18-1**, **T63-1**, **T100-1**, **T118-1**.

TOMB 131 (**FIG. 23B**; **PL. 255**; CONTENTS: **FIG. 187**)

TR 9 S.F.73

URN CREMATION; VERY POORLY PRESERVED; CREMATED REMAINS NOT ENCOUNTERED

Poorly preserved tomb located 0.40 m south of Tomb 130, consisting of a small circular pit 0.34 m in diameter, cut ca. 0.10 m deep into bedrock, encountered at a depth of 0.42 m below surface. Within the pit the large fragment preserving about two-thirds of the base of the wheelmade amphora **T131-1**, which had the appearance of being in situ, was found upright and set by compacted bedrock chips. Although no cremated bone was encountered, the fragmentary base, which resembled the ash-urn of nearby Tomb 129 in shape, was presumably all that remained of the ash-urn. The damage caused to the tomb must have been the result of Classical building activity. In the SW quarter of the pit and partially overlying **T131-1** was a fragment of a large wheelmade vessel of undetermined shape and preserving no decoration (not catalogued); it was clearly displaced and may well have been of later date. There was neither blackened earth encountered in the tomb pit nor any other sherd material. At least one seashell fragment was found in the immediate vicinity of the tomb (appendix C).

T131-1 (81.663) **Fig. 187**

TR 9 S.F.73

BASE FR.; WM AMPHORA

PH 0.046; D (base) 0.118

Single fr. preserving about two-thirds of base and small portion of lower body; chipped and much worn.

Local clay with many small to medium white and light-colored inclusions and much mica, predominantly golden. Clay core fired light gray only where wall thickness is greatest, elsewhere more evenly fired close to reddish yellow 7.5YR 6/6; slip mostly worn.

Flat disk base slightly hollowed out on underside to create a small false ring foot with rounded resting surface; shallow groove at junction of base and body on exterior; groove or turning mark on exterior face of foot as **T129-1**; lower wall beginning to rise steeply.

No preserved decoration.

Details of shape, size, and fabric are particularly close to **T129-1**, which is compared to neck-handled amphorai.

TOMB 132 (**FIG. 23B**; **PL. 256**; CONTENTS: **FIG. 188**)

TR 9 S.F.74

PROBABLE URN CREMATION; MUCH DISTURBED: CREMATED REMAINS NOT ENCOUNTERED

Almost certainly an urn cremation located directly beneath, and much disturbed by, TR 9 Classical wall *b* near the point where it formed a corner with wall *a* (see **fig. 23a**). The presumed tomb consisted of a pit cut into bedrock, but because of its location neither the depth of the pit nor its overall extent could be accurately determined. As preserved, the pit—at least 0.30 m long and only several centimeters deep—was encountered at 0.65 m below surface. The preserved top of wall *b* was met at a depth of 0.17 m. Within the pit were the scattered fragments of the handmade two-handled jar **T132-1**, which was presumably the ash-urn, as well as a minor quantity of blackened earth representing the possible remains of the pyre, although more likely intrusive. No cremated bone, however, or any clearly associated sherd or other material was recovered.[40]

T132-1 (81.826) **Fig. 188**

TR 9 S.F.74

FRAGMENTARY HM TWO-HANDLED JAR (BELLY-HANDLED)

PH (as reconstructed) 0.225; D (neck) max. est. 0.115

Nine joining and nonjoining frr. preserving portion of body, including one almost complete handle, and portion of shoulder and neck. Base and rim not preserved; chipped and rather worn.

Local clay with many small to medium white, light-colored, and some red inclusions. Very micaceous, with both silver and golden mica, occasional blowouts. Clay and surfaces evenly fired close to reddish yellow 5YR 6/6.

As preserved, body rounded. Vertical neck, flaring slightly toward rim (not preserved) and offset from shoulder by broad shallow groove on exterior corresponding to slight angle formed on interior. Preserved horizontal handle almost triangular in section, tapering toward upper and outer edges, attached to belly at point of max. D.

Surfaces worn but clearly burnished smooth on exterior and neck on interior, with no visible tooling marks; surface dull.

For general form cf. **T18-1**, **T63-1**, **T100-1**, **T128-1**, **T130-1**, although the triangular handles are unusual and resemble the handles of Middle Helladic vessels.

TOMB 133 (**FIG. 23B**; **PL. 257**; CONTENTS: **FIG. 189**)

TR 9 S.F.25

URN CREMATION; SINGLE YOUNGER ADULT OR ADOLESCENT

Circular to elliptical-shaped pit 0.50 m long (max.), cut 0.15 m deep into bedrock; tomb encountered at a depth of 0.68 m below surface. Within the center of the pit the handmade two-handled jar **T133-1**, which served as ash-urn, was placed upright, firmly set around its base on the north and south sides by a few small chocking stones, and by compacted bedrock chips (**pl. 257**). No tomb covering was encountered, with the result that parts of the upper body of the vessel, including one handle, were not preserved; some, but not all, of the missing fragments were recovered from the immediate vicinity. Neither blackened earth nor any associated sherd material was encountered in the tomb pit. At least one fragment of seashell was found inside the ash-urn, and a variety of others were recovered from the immediate vicinity of the tomb (appendix C).

T133-1 (81.670) **Fig. 189**

TR 9 S.F.25

HM TWO-HANDLED JAR (BELLY-HANDLED)

H 0.182; D (base) 0.080; D (rim) est. 0.132

Condition rather poor, reconstructed from many frr. and chips preserving entire base and lower wall, much of upper body including one complete handle and scars for the other, but only portion of neck and rim; partially restored. Fabric fragile, tending to crumble on touch; chipped and much worn.

Clay probably local but somewhat atypical, not unlike that of **T13-2** and **T67-3**, containing many white, light-colored, and occasional darker inclusions. Rather less mica than normal, both silver and golden. Clay core fired dark brown/gray, elsewhere close to reddish yellow 5YR 6/6 and light red 2.5YR 6/6; exterior surface at certain points darker, closer to reddish brown 5YR 5/4.

Flat base; rounded body; vertical neck that defines a gentler curve with the shoulder, lacking the normal offset. Flaring rim with chamfered lip. Two horizontal handles (one complete, the other attested by scars), round in section, attached above point of max. D and tending to rise vertically.

Surfaces, although much worn, are clearly burnished smooth, with no visible tooling marks, and with a slight sheen where better preserved.

Although probably local, the vessel may represent an import from elsewhere in Macedonia. For shape cf. **T18-1**, **T63-1**, **T100-1**, **T118-1**, **T128-1**, **T130-1**, **T132-1**. For the shape elsewhere in Macedonia cf. Andronikos 1969:213–215, with figs. 53–54 ("two-handled open vessels"); Romiopoulou 1971b:355, fig. 3, pl. 61, no. 26 (Rymnion); Wardle 1980:257, fig. 16, no. 43 (with incised decoration); 258, fig. 17, no. 45 (Assiros).

TOMB 134 (**FIG. 23B**; **PL. 258**; CONTENTS: **FIG. 190**; **PLS. 274**, **511**)

TR 9 S.F.7

URN CREMATION; SINGLE ADULT, MIDDLE-AGED AT DEATH

Southernmost of all tombs excavated, it consisted of a circular pit 0.54 m in diameter, cut 0.17 m

deep into bedrock; tomb encountered at a depth of 0.52 m below surface. Within the center of the pit the small wheelmade belly-handled amphora **T134-1**, which served as ash-urn, was placed upright, firmly set by compacted bedrock chips and a number of chocking stones, of which two were set on edge in the west side of the pit and protruded slightly above the preserved level of the ash-urn (cf. Tomb 109). No tomb covering was preserved with the result that the upper parts of the ash-urn, including the rim and both handles, were not preserved. As was the case with the nearby Tomb 133, neither blackened earth nor any sherd material was encountered in the tomb pit. A number of seashells were recovered from the immediate vicinity of the tomb.

T134-1 (81.725) **Fig. 190**; **pl. 274**

TR 9 S.F.7

SMALL WM BELLY-HANDLED AMPHORA (APPROACHING AMPHORISKOS)

PH 0.197; D (base) 0.082; D (neck at break) 0.095

Condition rather poor, reconstructed from many frr., and partially restored, preserving entire base and body and most of lower neck; upper neck and rim not preserved; handles attested only by stumps. Fabric fragile, tending to crumble on touch; chipped and much worn, with little of the painted decoration preserved. Condition not unlike **T133-1**.

Local clay, rather gritty, with a great many small, medium, and some larger white and light-colored inclusions and much silver and golden mica; occasional blowouts, some quite large. Clay core fired light gray, elsewhere color ranges from reddish yellow 5YR 6/6 to brown 7.5YR 5/4; slip, where preserved, slightly lighter.

Flat disk base; body ovoid, with lower wall rising steeply to point of max. D, which is set toward upper part of vessel; shoulder more curved. Neck becoming vertical, offset from body by pronounced ridge. Two horizontal belly handles, attached at point of max. D.

Slipped and painted, but much worn, some details on drawing reconstructed: paint, as preserved, dull, in parts thickly applied with a tendency to flake. Variously fired, mostly red, in parts black. Four, and possibly more, thin horizontal bands on lower wall, arranged in two groups. Belly zone, vertically defined by the painted decoration extending onto body from the upper and outer handle faces, is decorated with two wavy lines, much worn (partially reconstructed on drawing). Three horizontal bands on shoulder; preserved neck, above ridge, painted solid; faint traces of paint on interior at neck.

Cf. **T20-1**, also the decoration on **T96-1**.

NOTES

1. The small quantity of human bone recovered was cranial and mostly adult, but it also included material attributed to a child aged 6+ years at death (appendix A). Some of the human remains may have been displaced from other disturbed inhumation tombs in the vicinity, especially from the poorly preserved Tomb 4, thought to be the grave of an adult female (see below). The adult cranial frr. recovered from the area of Tomb 1 may well have derived from Tomb 4 as no trace of the cranium of that tomb was encountered in situ. The animal remains noted in appendix A are not included in Bökönyi's study (appendix B) as they could not be directly associated with the tomb.
2. That the deceased was inhumed in a contracted position, although it cannot be altogether overlooked, is unlikely on the evidence of the position of the bones preserved in situ.
3. The recovered frr. were all very small and included one rim fr. WM open vessel; one base fr. WM closed vessel; one handle fr., probably of a WM skyphos; and six HM sherds (one handle fr. and five body frr. representing at least three, and possibly four, different vessels).
4. Although the damage may well have been caused either by the Classical building activity or by the later stone robbing, it is curious how neatly the upper vertebrae and lower jaw were preserved; moreover, there was no other conspicuous damage to the skeleton. Furthermore, the feet of the nearby skeleton of Tomb 8, which were perfectly articulated, were located only some 0.30 m from the missing cranium of

Tomb 7 and exactly at the same level. The latter clearly suffered no damage. The possibility of an intentionally severed or removed cranium is considered further in chapter 4.

5. Evidence for secondary burial during the Early Iron Age in Greece is negligible beyond the possible instance from Corinth noted by Williams (1970:15). The appearance of Tomb 9 was not unlike that of some of the cist tombs reported from ancient Elis: Leon 1961–63:33–58; Yalouris 1964:181; the Elis tombs are now more fully published in Eder 2001; see further chapter 4.
6. This material comprised the following uncatalogued fragments: ten small fragments of undetermined shape, but wheelmade and painted; five small body sherds of handmade ware; plus six other nondescript sherds.
7. Although complete, the poor state of preservation of individual bones did not allow for a more definite sex determination. Dr. Musgrave states the individual was a male on account of the robust glabellar and supraorbital regions of the skull; he cautions, however, that the right sciatic notch looks female. The excavator preferred a female identification on account of the *kterismata*.
8. Some of the displaced human bone encountered in the NE quarter of TR 25 may originally have belonged to this tomb: see TR 25 trench summary and **fig. 31a**.
9. The frr., all very small and rather poorly preserved, included frr. of at least two different handmade vessels, one of open form and one closed, the latter perhaps from the same vessel as the handle fr. **T11-3**. Also frr. of at least three wheelmade vessels judging by handle frr., which included a skyphos, a lekanis, and a third vessel, perhaps an amphora; the latter may have been from the same vessel as the catalogued fr. **T11-2**.
10. Once the frr. clearly belonging to Tombs 101 and 102 were separated, only a handful of Early Iron Age sherds remained, these include (a) one ribbon-handle fr. of a large wheelmade lekanis; (b) a lekanis rim fr., but clearly not from the same vessel as (a); (c) various small frr., including a rim and a handle fr. of a wheelmade skyphos, with no preserved decoration; and (d) one small rim fr. of a HM closed vessel.
11. The unit was designated TR 25 4#32 and 5#41. In addition to many frr. of nondiagnostic coarseware, there were some nine frr. of Classical black-gloss and related wares; at least eight roof-tile frr.; fourteen wheelmade and painted body frr., of which about one-half appeared to be Early Iron Age, the remainder Classical; and thirteen frr. representing at least three different handmade vessels clearly of Early Iron Age date.
12. The unit, designated 2#23, yielded the following diagnostic frr.: one rim fr. HM open vessel, one shoulder fr. with traces of concentric mechanically drawn circles, and twelve body frr. of a HM jug, all clearly Early Iron Age. There were, in addition, two small black-gloss frr., eight Classical coarseware frr., one post-Byzantine glazed pottery fr., one roof-tile fr., and three small pithos body frr.
13. The fragmentary condition of the jug **T26-3**, which was clearly in situ, could not be readily explained either by later disturbance, owing to the depth of the tomb pit, or by the sheer weight of earth, as many of the missing fragments were not recovered. Therefore, the vessel may have been placed into the tomb in a broken or damaged state. The fact that neither of the shoulder handles of the ash-urn were preserved would indicate it, too, may have been used in a damaged or broken state.
14. Unit designated 2#7 and 9. The later sherds, all small and very worn, included one fr. post-Byzantine glazed bowl, one rim fr. Late Roman fineware, nine frr. black-gloss and related ware, ten frr. Classical painted vessels, one fr. of a Chian chalice, and several frr. of Classical coarseware. The uncatalogued Early Iron Age material included one rim fr. of a spouted lekanis (cf. **T51-3**), one handle fr. of a WM open vessel, and eight smaller body frr. of various vessels. There was also one rim, one handle, and one body frr. of an amphora, perhaps of the same vessel as **T28-4**. The catalogued frr. **4** and **5** were encountered in topsoil nearby.
15. This concentration of sherds and cremated human bone (**fig. 25**) was designated TR 12 East Baulk S.F.3 and inventoried as 81.525; apart from the joining frr. of **T33-1**, the few sherds recovered were exclusively Classical. The cremated human bone (total WT: 8 g) was nondiagnostic for age and sex.
16. The Early Iron Age material included two handle frr., one base fr., and nine body frr. representing at least four different handmade vessels in addition to one wheelmade base and one body frr. This material was too poorly preserved to warrant cataloguing.

17. The north part of the tomb pit was located in TR 12 East Baulk, the west part mostly in TR 12; its south part (along with that of Tomb 35) was more clearly defined with the excavation of TR 60.
18. The pits of Tombs 34 and 35 may have slightly overlapped, although establishing which one cut into the other was impossible on account of the nature of the bedrock in the area, the fact that both were located so close to the modern surface, and the fragmentary state of both tombs.
19. Much of the damage to the tomb was no doubt caused by the modern plow. In addition to frr. of the ash-urn **T38-1**, topsoil in the immediate vicinity (designated TR 6 2#2 and 3) yielded the following Early Iron Age frr.: two frr. wheelmade skyphos, one fr. wheelmade closed vessel, one handmade handle fr., and several body frr. of other handmade vessels. In addition there were some thirteen frr. of Classical black-gloss and related wares, plus a few body frr. of Classical coarseware vessels.
20. A very brief note regarding the suspected human remains from this tomb appeared in Dr. Musgrave's original preliminary report, where it was noted they may have been of an adult (possibly female). An account of the tomb does not appear in his final report and a number of subsequent searches, by both me and Dr. Musgrave, failed to clarify the situation. It appears likely, however, that the bone referred to in the preliminary report was found near, but not directly associated with, Tomb 39.
21. Recovered from topsoil in the immediate vicinity of the tomb, in addition to frr. of **T52-1**, were two joining frr. of another Early Iron Age amphora as well as three small body frr. of one or more handmade vessel(s). There were also some eight frr. of black-gloss and related wares and several frr. of Classical coarseware vessels (unit designated TR 6 2#20).
22. Frr. of **T54-1** were encountered in TR 6 unit 2#24 and TR 6 East Baulk 2#4; the pottery from these units was otherwise exclusively Classical except for two frr. of a possible Early Iron Age handmade closed vessel.
23. Unit designated TR 43 1#333 and 334; it yielded, in addition to frr. of **T55-1**, twelve small body frr. of at least two and possibly three Early Iron Age wheelmade painted vessels, as well as a small quantity of Classical sherd material. **62** was encountered about 1.0 m west of the tomb.
24. Unit designated TR 13 2#16; in addition to frr. of the ash-urn, at least one joining fr. of **T56-2** was encountered along with one fr. black-gloss, six frr. Classical coarseware vessels, and a large number of roof-tile frr. Also encountered was an iron nail, a globular loomweight, and a fr. of lead, all Classical. The seashells could not be definitely associated with the tomb as they were found scattered over a larger area and were not confined to the immediate vicinity of the tomb; thus they are not included in appendix C.
25. About twenty-five frr. of cremated human bone (total WT: 23 g, mostly postcranial) were encountered in a lens of blackened earth in the area between Tombs 60, 61, and 62. Associated with this lens were the catalogued fragments **33–35**. Given the good state of preservation of the ash-urn of Tomb 60, the human bone encountered in this lens was probably displaced from Tomb 61 or 62. Of the latter, the more likely candidate is Tomb 61. A seashell was also recovered in the general vicinity of this tomb (appendix C), which the excavator thought may have derived from this tomb or from Tomb 63.
26. Topsoil in the immediate vicinity of the tomb (unit designated TR 13 2#25) yielded at least two joining frr. of a pithos, which the excavator suspected may have originally been part of a sherd covering for **T65-1**. The remainder of the diagnostic pottery was Classical.
27. Unit designated TR 46 1#97; it yielded six joining frr. of **T75-2**, a few frr. of **T75-3**, and one fr. of **T75-1** in addition to frr. of a HM pitharion similar to **T38-1** (not catalogued). The remainder of the material was Classical. In the process of examining the cremated remains from the tomb, Dr. Musgrave referred to three or four animal bones that may have been worked. Despite numerous searches by me and Prof. Bökönyi these bones were never subsequently located and are therefore not included in this report.
28. The material included two joining frr. of a small closed vessel, one small pithos body fr., and a body fr. of an unidentified HM vessel; all frr. were much worn and none displayed signs of burning. Although they may have been used as chocking sherds, they may equally be intrusive. None of the missing frr. of the ash-urn

were encountered in topsoil in the vicinity of the tomb, which only yielded a small quantity of Classical sherd material (unit designated TR 46 1#96).

29. The only Early Iron Age sherd encountered in topsoil in the vicinity of the tomb (unit designated TR 59 1#191) was the handle fr. **81**; the remainder of the material was Classical. A very small fr. of a tripod cauldron (not catalogued) as well as two or three nondiagnostic sherds were recovered from the south part of the tomb pit.
30. Topsoil in the immediate vicinity of the tomb yielded body frr. of a tripod cauldron of the Early Iron Age, which may have derived from this tomb although this could not be established with any certainty. The remainder of the diagnostic pottery was Classical.
31. Topsoil in the immediate vicinity was designated TR 12 unit 2#21–25. It yielded mainly frr. of worn Classical pottery, but also several frr. of the kantharoi **T82-4** and **T82-5**; a few small body frr. of **T82-1**; and a fragmentary horizontal belly handle, which may have been of this vessel. In addition there were small frr. of what appeared to be three different Early Iron Age skyphoi, including one base fr., one handle fr., and three rim frr., none of which, however, clearly belonged to **T82-2**.
32. Topsoil in the vicinity of this tomb, in the NE quarter of TR 26, designated TR 26 unit 1#308, yielded quite a few displaced frr. of tomb pots from Tombs 90 and 91 and at least eight frr. of the ash-urn of Tomb 93. Also encountered were fifteen small frr. of a HM kantharos (Type 1) and handle and body frr. of a HM jug (not catalogued), all Early Iron Age. Also noted were frr. of a pithos, including small portion of rim and base, of undetermined date (but clearly not from the same vessel as **T89-1**). Diagnostic material of Classical date comprised frr. of at least three different coarseware vessels.
33. Topsoil in the vicinity (unit designated TR 26 1#306) yielded, in addition to frr. of **T94-1**, one rim and one body fr. of an amphora, plus frr. of two handmade vessels of Early Iron Age date; the remainder of the material was Classical.
34. Topsoil in the vicinity (unit designated TR 40 3#220–221) yielded, in addition to frr. of **T95-1** and **T95-2**, small frr. of at least two handmade vessels of Early Iron Age date, one fr. of a post-Byzantine coarseware vessel, eight frr. of black-gloss, and frr. of at least five Classical coarseware vessels.
35. Recovered from deposit type 4 in the immediate vicinity of the tomb (unit designated TR 25 East Baulk 12#142) were several frr. of **T98-1**; eleven mostly small frr. of a pithos, some of which may have belonged to **T12-1**; and fifty tiny sherds, mostly Early Iron Age (but with a small quantity of Classical intrusive material), some of which were fire affected and most probably displaced from this tomb. The small quantity of cremated bone noted could not be definitely associated with this tomb.
36. Due to an unfortunate oversight, the cremated remains from this tomb were never studied.
37. A small portion of the tomb, on the east side, extended into TR 22 (under Classical wall *d*) where it was partially excavated in 1982 as TR 22 S.F.30. At that time only a few fire-affected sherds and a small quantity of blackened earth were encountered; these frr. all proved to join with the burned sherds recovered from the tomb pit of TR 25 East Baulk Pot 3 in 1984.
38. The vessel appeared to be complete, although nothing of the rim could be distinguished among the hundreds of small frr. and chips recovered. The fact that the vessel was covered by **T114-2** (**pl. 231**) indicates that if the rim was indeed not preserved, the vessel was placed into the tomb with the rim broken.
39. At least one full zembili of blackened earth was recovered from the tomb pit. It should be noted that the small quantity of cremated bone associated with **T118-4** may represent the same cremated remains as the bone in either **T118-1** or **T118-3** (which was not completely gathered at the end of the cremation process), rather than representing the remains of a third individual.
40. I could not locate any of the missing frr. of **T132-1** in TR 9 context pottery lots. The selected sherds **9–11** were encountered in deposit type 3 in the area defined by Classical walls *a* and *b*.

Appendix A
An anthropological assessment of the inhumations and cremations from the Early Iron Age cemetery at Torone

Jonathan H. Musgrave

The cremated remains from this cemetery, to which the bulk of this report is devoted, far outnumbered the inhumations. However, as the aim is to discuss all the human remains as an entity, the inhumations are not treated separately but are brought into the discussion of the cremations throughout with sections devoted to them where appropriate.

THE STUDY OF CREMATIONS

The study of ancient cremated remains can yield information useful to both archaeologists and anthropologists (Brothwell 1981). This is largely due to the examination and reporting techniques devised by many authors, among them Gejval (1947; 1951; 1969), Gejval and Sahlström (1948), Weiner (1951), Lisowski (1956a; 1956b; 1968), Wells (1960), Merbs (1967), Spence (1967a), and van Vark (1974; 1975). These early pioneers concentrated mainly on metrical and macroscopic methods of investigation. More recently the study of cremations has become increasingly experimental and laboratory based (Gralla 1964; 1965; Dokladal 1969; 1970; Herrmann 1972a; 1972b; 1976; 1977a; 1977b; Ramrakhiani, Pal, and Datta 1980; Wahl 1982; Grupe and Herrmann 1983; Shipman, Foster, and Schoeninger 1984; Holck 1986; Hummel and Schutkowski 1986; Chandler 1987; Grosskopf 1989).

The aim of these pioneers and their followers has been to convince archaeologists that cremated remains should not be ignored simply because to the untutored eye they resemble nothing more exciting than a bag of apparently uninformative, misshapen fragments. In fact, as most regions of the skeleton can often be identified, it is possible to coax this seemingly intractable material into telling us quite a lot about the sex, age, and pathology of each subject and, indirectly, cast some light on funerary practices and burial customs.

Before assessing the value to science of the Torone cremations it is helpful to place them in context by drawing attention to a selection of reports on some cremations, both ancient and modern, from Europe, America, and Australia, presented here as a starting point to which others may add:

- *Greece*

  Breitinger 1939
  Callaghan, Coldstream, and Musgrave 1981
  Gallis 1982
  Musgrave 1980; 1985; 1990a; 1990b
  Paidoussis and Sbarounis 1975; 1979
  Pitsios 1987
  Prag, Musgrave, and Neave 1984
  Robinson 1942
  Stampolidis 1990a
  Xirotiris 1982
  Xirotiris and Langenscheidt 1981

- *Holland, Luxembourg, Germany, and Central Europe*

  Chocol 1961
  Dokladal 1962; 1963; 1969; 1970
  Gladykowska-Rzeczycka 1971; 1974
  Grimm 1974; 1982; 1985; 1986
  Kühl 1980; 1981; 1982; 1983a; 1983b; 1983c; 1983d; 1983e; 1985; 1986; 1987a; 1987b; 1988

Kühl and Remagen 1986
Lange, Schutkowski, Hummel and Herrmann 1987
van Vark 1968; 1970; 1974; 1975

- *Scandinavia*

Gejval 1947; 1951; 1969
Gejval and Persson 1970
Gejval and Sahlström 1948
Holck 1986
Persson 1970

- *British Isles*

Birkett 1984
Denston 1965; 1966; 1968; 1969a; 1969b; 1969c; 1972a; 1972b; 1973a; 1973b; 1974a; 1974b; 1974c; 1974d; 1974e; 1974f; 1976; 1977a; 1977b; 1981a; 1981b; 1983
Hazzledine 1982
Lisowski 1956a; 1956b; 1959; 1962; 1963; 1968
Lisowski and Spence 1971
Lunt and Barnetson 1982
Lunt and Rees-Jones 1975
McKinley 1989a; 1989b; 1994a
Powers 1983
Spence 1964; 1965; 1966; 1967b; 1969
Weiner 1951
Wells 1960
Weyman 1980
Wilkinson 1980

- *America*

Baby 1954
Binford 1963
Haury 1945
Merbs 1967
Stewart 1979
Ubelaker 1984

- *Australia*

Hiatt 1969

- *Modern*

Dunlop 1978
Dunlop and Farr 1978
McKinley 1993

Aim

The aim of a student of cremations is exactly the same as that of the student of a complete inhumed skeleton. He or she wishes to discover the sex and age of each subject; the condition of the dentition; whether any pathological changes had taken place; how many individuals may be represented in any given collection; whether animal bones had also been buried with them; and whether the total assemblage can yield any information about mortuary practices.

Methods

Information was collected on

- Degree of cremation (color, texture, degree of warping, shrinkage, etc.)
- Postcranial fragment length
- Weight of bone recovered
- Number of individuals in each urn
- Sex
- Age at death
- Pathology
- Urn goods
- Animal and fish bones
- Shells, minerals, and organic remains

The methods of study used on this material were based largely on those suggested by Wells (1960), Spence (1967a), Gejval (1969), and Brothwell (1981), with modifications of my own.

THE TORONE CREMATIONS

This is a report on a particular collection of ancient Greek cremations, not a monograph on cremation, on which, as mentioned above, sufficient literature already exists. Rather my task is to describe and discuss the Torone cremations and to attempt to set them into some form of historical and geographical context. It is not the role of the human bone analyst to tackle the question of where cremation took place and whether the material should be classed as primary or secondary cremations, a problem I have discussed elsewhere

(Musgrave 1990a). I therefore confine myself to answering four questions: (1) Had the Toroneans mastered the art of cremating their dead efficiently? (2) How much care was taken over the collection of the "ashes"? (3) Is there any evidence the bones were ever deliberately reduced in size? (4) Is there any evidence of double or multiple burnings?

1. Had the Toroneans mastered the art of cremating their dead efficiently?

The Toroneans seem to have mastered cremation commendably. Any such assessment is based on comparisons with the products of modern commercial gas-fired, oil-fired, or electric crematoria, which can reduce a flesh-clad cadaver to an inorganic, calcined residue weighing between 1600 and 3750 g in 1–2 hours—sometimes less, sometimes more—when operating at ca. 900°C.[2] This residue comprises chunks of bone up to 250 mm long, which, depending on the degree of combustion, range in color from white (completely burned) through gray-blue to brown (very poorly burned: some organic content still present). Well-burned bones are also frequently distorted and shrunken, although still preserving many fine anatomical details (McKinley 1989a:66); classic cases of the preservation of fine detail are to be seen in the upper jaw of the occupant of the main chamber of Tomb II at Vergina (Prag, Musgrave, and Neave 1984; Musgrave 1985; 1990a). The degree of shrinkage depends on heat and region of the skeleton (van Vark 1970; Piontek 1976); a figure of 10 percent may not be unrealistic for many regions. Given the difference in construction and requirements for efficient performance between an enclosed furnace and an open pyre (Holck 1986:27–45), it is perhaps surprising that the end products of each are so similar in appearance, texture, and color.

What can be said about the Torone cremations? Study of the "DGCREM" (degree of cremation) section in the catalogue that completes this appendix confirms that, overall, the ancient Toroneans had mastered the art (see Gallis 1982 and Musgrave 1990a for a discussion of the history of cremation in Greece). Instead of using one of several grading systems available (e.g., Chocol 1961; Holck 1986:131–133), I settled for a less rigid approach and the use of a wider range of everyday epithets—for example, excellent, very good indeed, good, quite good, average, variable, fair, poor, etc. Ninety-six collections were classified thus:

Fair, poor	3	(3%)
Average; variable	7	(7%)
Quite good	10	(11%)
Good	56	(58%)
Very good; excellent	20	(21%)
Total	96	(100%)

Stated simply, 79 percent of all but the most insignificant collections contained enough white, well burned pieces for their overall degree of cremation to be classed as good or better.

Attention should perhaps be drawn to three cremations (from Tombs 29, 87, 130) classed as excellent, and to a further three (from Tombs 51, 96, 123) that had reached that vitreous, quasi-ceramic clinking state. A couple of other fragments are also worth mentioning. First, the intracranial surface of the occipital bone in the region of the internal occipital protuberance from Tomb 47 was white. The back of the skull is frequently black and poorly burned, as are the spinal column and pelvis, because it is difficult for the hottest gases to reach these parts of a supine body (for examples of this phenomenon at Lefkandi and Lower Gypsadhes Hill see Musgrave 1980:440; 1981:163). By contrast it is clear that the left elbow of the occupant of Tomb 101 poked out of the fire for much of the proceedings as it was very poorly burned (cf. Nea Mihaniona II and III, Derveni B, and Phoinikas 2 for parallels). At Spong Hill in Britain the bones of the hand, foot, and lower limb were poorly burned, perhaps for the same reason or because the pyre simply was not big enough (McKinley 1989b:246; see further Gladykowska-Rzeczycka 1974:113).

In due course it may be possible to adopt a more objective technique—electron spin resonance (ESR)—to determine the heat at which combustion of individual fragments took place (Robins 1983; Hillman, Robins, Oduwole, Sales, and McNeil 1985).

It would be interesting, too, to discover how long it took to consume each body, but that question is far less easy to answer. It would certainly have been longer than the hour or two taken by a modern cremation furnace. A figure of 7–8 hours has been proposed by McKinley (1989a:67). We do have some ethnographic evidence: in the eighteenth

and nineteenth centuries Australian and Tasmanian aborigines lit pyres one day, left them to burn out overnight, and returned to gather the bones the following morning (Hiatt 1969:105, 108). There is also experimental evidence: in Poland a complete human skeleton was reduced to "charred fragments" in "at least 10 hours" on a pyre 2.0 m long × 1.3 m wide × 1.8 m high (Piontek 1976:278).

The fracture patterns on the bones in the Torone cemetery suggest the cadavers were burned "green": that is, unexposed, unexcarnated, and with all the flesh on (see Stewart 1979:59–62; Birkett 1984:183; Ubelaker 1984:35–36; Holck 1986: 142–143).

Bone color reflecting degree of combustion should not be confused with stains that cremated bones pick up from a wide range of sources. Not infrequently bones are stained by earth, organic pyre debris, or sundry metal objects—usually of bronze or iron—that either had accompanied the body to the pyre or later been popped into the pot with the burned bones.[3] Until recently most of the older generation of students of cremation—I among them—have taken a simple stance: green = bronze; purple = cloth of Homeric hue and quality, a stance that empirically I am disinclined to abandon completely because it is still far from clear what stain is produced by which substance or agent. There is much contradiction in the literature. One authoritative student of ancient cremations has claimed the green stains were copper oxides (Kühl 1987b). This claim was contradicted by a community physician who wished to find the cause of stains seen on modern cremations. His investigation showed that a yellow stain was caused by contact with zinc, green by iron, and pink by copper (Dunlop 1978). Purple stains, as observed on burned bones from Tombs II and III at Vergina and Tomb B at Derveni, have been attributed to a purple cloth that covered them (Xirotiris and Langenscheidt 1981:144, 154, 156; Musgrave 1990a; 1990b). However, it is known from the crypt of Christ Church, Spitalfields that species of the yeast group of fungi can produce pink and purple stains on unburned bone (Molleson and Cox 1993). In a study of English medieval inhumed skeletal remains, Flinn (1989:56) showed that the black staining was "due to the slow anaerobic decomposition produced by sulphate-reducing bacteria, most likely *Desulfovibrio*." The only stains borne by bones from Torone were from pyre debris and grave earth.

2. How much care was taken over the collection of the "ashes"?

Evidence of care and thoroughness is to be found in (a) the weight of bone recovered from undisturbed, securely sealed containers; and (b) the quantity of very small objects such as tooth roots and finger phalanges.

Let us take weight first. Ancient cremations ranged from token offerings to almost complete skeletons. A token cremation cannot be defined precisely, but no one could claim that the mourners had gone to a lot of trouble in the case of those weighing less than 100 g. The largest ancient cremation known to me is the almost complete skeleton from the gold larnax in the main chamber of Tomb II at Vergina (Callaghan, Coldstream, and Musgrave 1981; Xirotiris and Langenscheidt 1981; Musgrave 1985; 1990a).

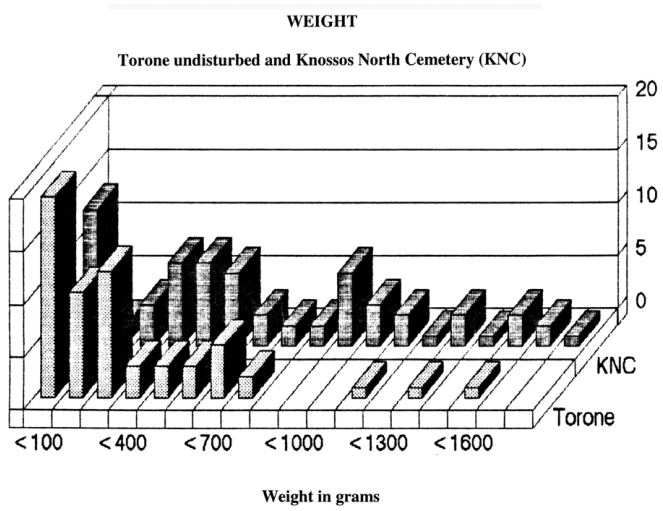
Where does Torone fit into any league table of weight? The data presented in table A.1 indicate that the Toroneans came next to the bottom of the league, before the Lefkandiotes. That they were content to collect considerably less than their approximate contemporaries at Knossos or the later Iron Age people from Reppentin in Mecklenberg is also confirmed by the weight distribution histograms on graphs A.1 and A.2.

It should not however be thought that the Toroneans and Lefkandiotes were in any way similar in this respect. Of the fifty-five cremations from Lefkandi forty-six (83.63 percent) weighed less than 100 g (this percentage differs slightly from the one published in my Lefkandi report [Musgrave 1980: 443] in that it takes into account the addition of three fine cremations from the Toumba cemetery (T50, T55, T58) that I studied at Eretria in September 1987). However, only nineteen of the sixty undisturbed cremations from Torone (31.67 percent) weighed less than 100 g, a proportion approximating that of a very mixed collection of ancient cremations from elsewhere plotted in Musgrave (1980:442, fig. b: 48 of 139 [34.53 percent]). Tombs 62 and 106 at Torone clearly contained token offerings. Nevertheless, I suspect the Torone cremations were on the light side.[4]

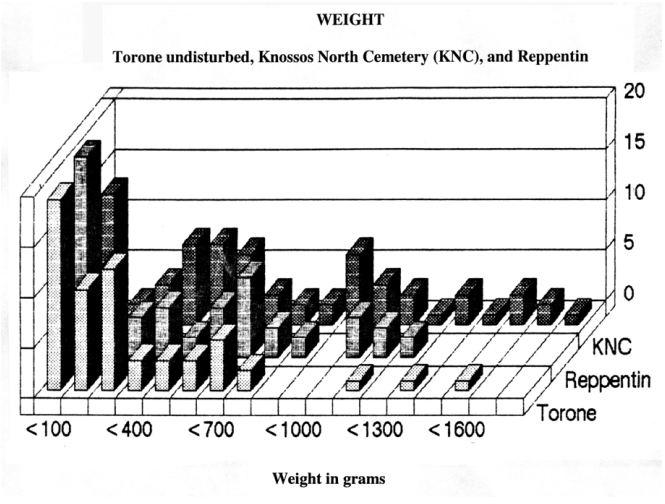
Table A.1 Weights (in grams) of individual urn burials

	Median	Mean	Standard deviation	Sample size	Range
Torone	204	301	319	60	9–1522
Lefkandi				55	1–2022
Gypsadhes	465	553	230	11	280–950
KNC	543	650	521	74	1–2324
Perati (Paidoussis and Sbarounis 1975)[a]	410	499	503	12	1–1741
Phoinikas	953	944	564	12	113–1838
Reppentin (Grimm 1984)[a]	350	406	382	67	0.6–1260
Vergina II: Female		1312		1	
Vergina III		615		1	
Nea Mihaniona II		1239		Double burial	
Nea Mihaniona III		1390		1	
Derveni B		1968		Double burial	

[a] Author's statistics



GRAPH A.1. Weight distribution of the undisturbed cremations from Torone, and from the Knossos North Cemetery (KNC)



GRAPH A.2. Weight distribution of the undisturbed cremations from Torone and from the Knossos North Cemetery (KNC), with data from Reppentin (Grimm 1984) added for comparison

The second criterion indicating thoroughness was inapplicable at Torone. No attention-catching collection of tooth root fragments or finger phalanges was observed, as was the case, for example, at a number of Aegean sites (Knossos: KNC T.107.7 [fifty-seven tooth root fragments]; KNC T.107.27 [eleven tooth root fragments and right side of mandible]; KNC T.107.29 [seven finger phalanges]; Lefkandi: Toumba T50 [jaw and tooth fragments and beautifully preserved hand bones]; Phoinikas: numerous examples of both).

Concerning the actual gathering of the bones for burial little can be said. The presence elsewhere of very small pieces does suggest that at some sites at least the whole residue was gathered up and either "combed" manually (Piontek 1976:278 found that "even the smallest parts of the skeleton were easy to retrieve" from his experimental pyre after 10 hours of burning), or subjected to some form of more mechanical sorting by means perhaps of flotation, winnowing, or sieving (McKinley 1989a:73). Equally we do not know when the gathering took place—while the bones were still hot and before the fire had gone out or been extinguished, or having cooled naturally overnight (cf. Hiatt 1969).

The absence of very small pieces and the generally low weight scores suggest that once the body had been burned what was left did not have much significance for the mourners, who did not feel obliged (with a few exceptions: Torone Tombs 58, 103, 124), to gather up more than a handful or so of the former for burial; for an example of a token offering at Torone see Tomb 117. As we do not know precisely where the cremation took place in every case, we cannot even say that each pyre site—if they were reused—was swept clean of past debris each time and that such debris was, perhaps, scattered on the land, as is suggested it may have been elsewhere (e.g., Gladykowska-Rzeczycka 1974:113 [Poland]). We certainly have no evidence for any bizarre practices, such as placing the body in a tree for a year or so and then burning it, minus the skull, which is deposited, unburned, elsewhere.[5]

3. Is there any evidence the bones were ever deliberately reduced in size?

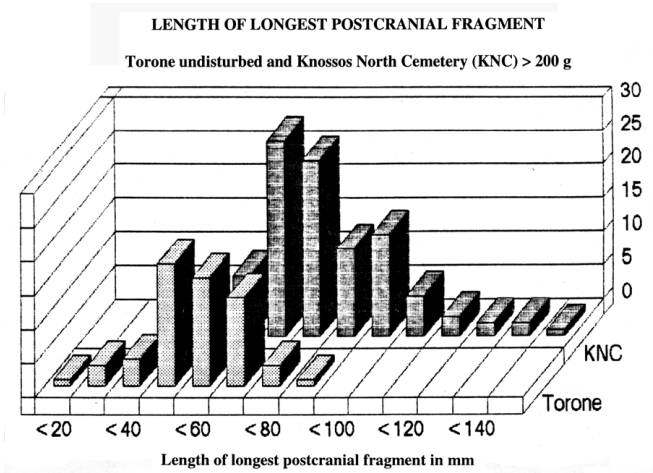
In nearly every cremation report there is a reference to "fragment size." That is perhaps because modern cremations are pounded to dust in a cremulator, a machine like a large centrifuge containing a number of cast-iron balls (McKinley 1989a:66). I suspect that students of ancient cremations are interested to know whether mourners in the past held any views about the need, for cultural (fastidiousness) or practical (neck diameter of urn [McKinley 1989a:72]) reasons, to reduce the pyre residue in size prior to burial. Since I discussed this problem briefly in my Lefkandi report (Musgrave 1980:443), the picture has not become much clearer. Some authors have drawn attention to the effects of the natural collapse of the pyre and of stoking by the mourners (Paidoussis and Sbarounis 1975:143; Iakovides 1980; McKinley 1989a: 72). Others speak of deliberate fractionation, crushing, and pounding following the cremation (Gladykowska-Rzeczycka 1974:112; Wilkinson 1980: 221; Hazzledine 1982:24, 26; Holck 1986: 44–45). The evidence for such treatment is the abundance of fragments 10–50 mm long (Kühl and Remagen 1986; Kühl 1988).

To help answer this question, most of us also record the length of the longest postcranial fragment (LOLPCF), a somewhat crude statistic, as, with few exceptions (e.g., Tomb 105), most fragments are considerably smaller than the largest.

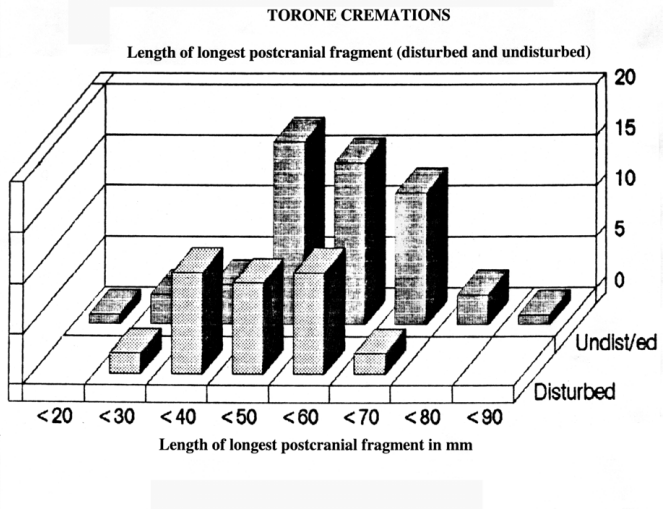
In the case of Torone there seems to be little doubt that, for whatever reason, limb bone fragment size was on the small side (see also the subjective assessment of reduction is size applied to the bones from Tombs 18, 26, 27, 30, 37, 45, 49, 54, 65, 69, 103, 104, 108, 123, 128, and 134). The comparative Greek data presented in table A.2 indicate as much, as do the histograms on graph A.3. The latter also suggest that limb bone fragment length approached normal distribution (as it did among the Anglo-Saxon remains from Loveden Hill, Lincolnshire [Wilkinson 1980:223, fig. 12.2]), and that the Torone and Knossos North Cemetery ranges did not overlap. That certainly is not true of the bones from the disturbed tombs at Torone. Their distribution when plotted alongside that of the undisturbed bones on graph A.4 can be seen to be nearly bimodal. That may perhaps reflect some secondary fractionation. In the light of a recent study, I feel less inclined to believe that the ancient Toroneans were preoccupied with secondary fractionation (McKinley 1994b).

Table A.2 Length (in mm) of the longest postcranial fragment

	Median	Mean	Standard deviation	Sample size	Range
Torone	54.7	52.7	14.0	58	13.0-85.0
Lefkandi	51.0	54.5	26.20	53	8.4–150.6
Gypsadhes	75.5	71.4	15.9	13	44.0–95.2
KNC	75.8	80.7	19.6	101	41.2-143.6
Phoinikas	123.0	127.7	63.7	12	46.6–261.0
Vergina II: Female		148.9		1	
Vergina III		118.8		1	
Nea Mihaniona II		107.0		Double burial	
Nea Mihaniona III		130.0		1	
Derveni B		128.8		Double burial	



GRAPH A.3. Fragment length distribution of the undisturbed cremations from Torone and from the Knossos North Cemetery (KNC)



GRAPH A.4. Fragment length distribution of both the disturbed and undisturbed cremations from Torone

4. Is there any evidence of double or multiple burials?

Number of individuals ranks alongside sex, age, and stature as one of the pieces of core information that any excavation director wishes to receive from the human bone analyst. First for reasons of tidiness: an inventory of finds from a particular grave can scarcely be said to be complete without a head count of the occupants. On an intellectual level such information is of interest to students of ritual

and mortuary practice (e.g., Kurtz and Boardman 1971; Snodgrass 1971; Dickinson 1983; Garland 1985; I. Morris 1987). I record them therefore in case there are enough to suggest a positive attitude on the part of a particular community or even family. However, we do not at present know whether the second or *n*th individual was popped inside ten or a hundred years after the previous one (both Gladykowska-Rzeczycka [1974] and Hazzledine [1982] have drawn attention to the near impossibility of deciding whether the double or multiple occupants of a single urn were cremated and interred simultaneously), and statistics on the prevalence of this practice are still scanty. Nevertheless, double burials need not be difficult to identify, and we have evidence of some spectacular ones, both archaeological and literary.[6]

At Torone there is reliable evidence for only two of 107 bone-bearing pots. Tomb 123 contained the bones of a mother and her newborn baby, a practice well documented elsewhere (at Lower Gypsadhes Hill, pot 89 [Musgrave 1981]; Nea Mihaniona II [Musgrave 1990b]; north Germany [Kühl 1981; 1983b]). The 1323 g of burned bone from Tomb 103 clearly belonged to two adults, of whom one was male. Evidence for two other double burials (from Tombs 83 and 84) is far from strong—small quantities of correspondingly small, thin, gracile fragments that look like the bones of children. The possibility that Tombs 58 and 124 also contained two individuals has been raised but is probably best rejected.

Given the abundance of pottery containers in any community one should perhaps not be surprised at the low frequency of double cremation burials at Torone. A few years earlier they were clearly not averse to interring more than one cadaver in one grave. Tomb 9 contained at least three and probably four.

Two possible cases were observed among the Knossos North Cemetery cremations. Of the eleven pots from Lower Gypsadhes Hill, two contained double burials (pot 1: two adults of unknown age; pot 89: a young adult female and her baby [Musgrave 1981]). At Lefkandi there was also evidence of two double burials (Musgrave 1980). At Perati, five of the twelve cremation are said to be double and one triple (Paidoussis and Sbarounis 1975).

At the Anglo-Saxon cemetery site of Spong Hill in Norfolk, where 2262 individuals were identified, 4.5 percent of the collection contained remains of two individuals in a wide range of permutations (McKinley 1989b:245). Among a Norwegian sample of ca. 1100 cremations, double (and a few triple) burials amounted to 4.4 percent (n = 48 [Holck 1986:164]). In the Bronze Age cremation cemeteries at Simons Ground, Dorset, nineteen of 119 urns (16 percent) contained the bones of two individuals, either an adult or young adult and a child (Hazzledine 1982). Of the seventy-two *kaiserzeitlichen* urns from Reppentin, Mecklenberg, five (7 percent) contained two individuals (Grimm 1985). Occasionally at other sites the bones of one individual were divided between two (McKinley 1989b) and even three containers (Gladykowska-Rzeczycka 1974:112, who has recorded a case of the bones of an adult male being divided among three urns containing female bones, and suggested that there was a custom in Poland at that time of wives being killed and burned with their husbands). Did the children's bones in Finds 45 and 46 in Tomb 112 belong to the same person?

Elsewhere in Europe, according to one authority, multiple cremations are "comparatively rare" (Lisowski 1968; Kühl 1983c). This is not a view shared by others (Petersen, Shepherd, and Tuckwell 1974), who have sought to demonstrate that "such deposits are relatively common occurrences at British Bronze Age burial sites." For further information on the occurrence of multiple cremations in Britain see Shepherd and Cowie (1977), Petersen (1981), and McKinley (1989a).

THE TORONE INHUMATIONS AND CREMATIONS

Sex distribution

Concerning the *cremated* remains I stick by what I wrote in my report on the Knossos North Cemetery cremations: "Because it is unwise to place too great reliance upon sex determinations made on fragmentary and incomplete material, no attempt has been made to estimate sex-ratios" (Musgrave 1996:680). Unreliable data are best not published.

Of the *inhumations* all that can be said, given their fragmentary condition, is that (a) seven possibly adult males were identified from Tombs 6, 9 North, 10, 11, 13, 14, and 15; and (b) five possibly

adult females were identified from Tombs 4, 5.1, 7, 9 West, and 9 East.

Age distribution

It was not possible to assemble any accurate tables on total life expectancy. This was because age assessments had to be derived from macroscopic examination of damaged and incomplete portions of diagnostically important regions. I had neither the time nor the facilities to attempt any histological techniques (described by Kerley 1965; 1970; Ahlquist and Damsten 1969; Ascenzi 1969; Singh and Gunberg 1970; Ubelaker 1974; 1984; 1986; Bouvier and Ubelaker 1977; Herrmann 1977a; Kerley and Ubelaker 1978; Uytterschaut 1985; Stout 1989). Their application to cremated remains is apparently still not widespread (see comments by Paidoussis and Sbarounis 1975; Herrmann 1977a; Hummel and Schutkowski 1986; McKinley 1989a).

Nevertheless it is clear that people of all ages were buried in the cemetery. At the lower end of the age range there is clear evidence for the cremation of babies and children, and for their burial alongside adults. Of the 107 bone-bearing pots, five contained babies less than a year old; three, or perhaps as many as seven, contained children between 1 and 10 years old and perhaps two adolescents aged between 12 and 17. These figures are tentative and should be used with great caution, as scrutiny of the entries for Tombs 21, 28, 29, 36, 43, 44, 57, 83, 87, 112 (ash-urns I and II), 123, 126, and 133 will confirm. Against these figures should be set the seven "young persons" among the seventy-four individuals represented among the Lefkandi Cemetery cremations. At Perati Iakovides (1990) found one 5-year-old child, two adolescents, and twelve adults (eleven males; one female).

A rather different picture emerged from my study of the Knossos North Cemetery (KNC) cremations. There not one of the seventy-four bone-bearing pots contained a baby or very young child. The youngest person represented there was a 9-10 year-old child. The only other young individuals from KNC were one perhaps slightly older child and four adolescents or young adults (the 9-10-year-old child came from 285, level 1, zembili 3017; 107.13 contained the patellae of another child; 13.3, 75.13, 107.59, and 285.33 contained remains of adolescents or young adults). Despite the apparent absence of babies and young children from KNC it is perhaps worth recording that a baby and an adolescent of ca. thirteen were present among the small collection of eleven cremations from a roughly contemporary tomb on Lower Gypsadhes Hill at Knossos (Musgrave 1981). The findings from KNC are strange, but not unique (infants [0–4 years] in general, and neonates in particular [$n = 2$], were also poorly represented among the 2262 individuals from the Anglo-Saxon cremation cemetery at Spong Hill, Norfolk [McKinley 1989b:242, 248, fig. 1]). The total volume of burned bone from this cemetery was very large—85 kg, contained in 363 separate bags. The complete absence of baby bones from such a heavy sample may indeed be significant and lend support to the theory that burial customs in Geometric times were far from uniform throughout Greece (from my reading of authorities on Early Iron Age mortuary practices [Styrenius 1967; Snodgrass 1971; I. Morris 1987] I gather that doubt still surrounds the final resting place of this category; see also Papadopoulos, this volume; see further Young 1951; Jordan and Rotroff 1999 for the custom in Archaic Athens).

What little can be said of adult life expectancy is perhaps best summarized as follows:

Babies, children, adolescents	15
Young adults (18–25)	5
"Not very old"	11
Middle aged (36–45+)	7
Adults of unknown age	56
Individuals of unknown age	18
Total	112

Thus it was possible to offer some form of age assessment, however imprecise, to 84 percent (94/112) of the individuals. At Spong Hill, Norfolk, matters were similar: "With the methodologies currently available, the writer has found it possible to age, within limits, about 95% of cremations examined, though this may in some instances be restricted to merely adult or subadult/adult, a figure generally in agreement with other workers" (McKinley 1989a:70). At Simons Ground, Dorset, 64 percent (94/138) could be attributed to the categories of children, young adults, and adults (Hazzledine 1982).

The age distribution of the inhumed skeletons—miscellaneous isolated jaw fragments excluded—

tells a similar story (the following list does not include the bones from Tombs 1, 4, 9 West, and miscellanea from Tomb 9, which could not be attributed to any age group):

Children under 10	2
Young adolescents (11–15)	2
Older adolescents (16–20)	3
Young adults (20–35)	6
Older adults (35+)	6

As ever, caveats are called for. Far-reaching conclusions should never be drawn from such scanty data. Moreover age had to be assessed from not very reliable features—sutural closure, tooth wear (in some cases uneven)—and supposedly degenerative changes to incomplete skeletons. Qualifications aside, however, it would appear that these limited figures reflect the prehistoric pattern of high mortality in "our" prime of life rather than in late old age, as happens today.[7]

Stature

No attempt was made to estimate adult stature from any of the *cremated* remains. It is claimed it can be calculated from the length of major limb bones, which, in turn, have been reconstructed from the diameters of their major articular surfaces. Because the inherent inaccuracy of such a technique is widely acknowledged, I have eschewed applying it to the few burned fragments at my disposal.[8]

However, it was possible to estimate the stature of the *inhumed* female occupant of Tomb 7 and of the male occupants of Tombs 11 and 15 from, respectively, a right radius, a left radius, and a right ulna: Tomb 7 = 159.21 + 4.24 cm (5′ 2 3/4″); Tomb 11 = 173.13 + 4.32 cm (5′ 8 1/4″); Tomb 15 = 178.76 + 4.32 (5′ 10 1/2″) (derived from regression equations computed by Trotter 1970). The comparative data reproduced in table A.3 suggest they were taller than might have been expected.

Consanguinity

The study of skeletal remains from large cemeteries, and especially from chambered tombs or long barrows, offers an opportunity to seek family relationships among the occupants (Brothwell 1981; Scarre l984). These are sought in metrical similarities and also in the presence or absence of a wide range of nonmetric traits in both the skull and postcranial skeleton (Berry and Berry 1967; 1972; Berry, Berry, and Ucko 1967; Rightmire 1972;

Table A.3. Stature in ancient and modern Greece

Sample	*n*	Mean
Torone Tomb 7 (female)	1	159.21 (5′ 2 3/4″)
Torone Tomb 11	1	173.1 (5′ 8 1/4″)
Torone Tomb 15	1	178.8 (5′ 10 1/2″)
Lerna (Middle Bronze Age) (Angel 1971)	65	166.6 (5′ 5 1/2″)
Mycenae Royal Graves (Angel 1971)	18	171.5 (5′ 7 1/2″)
Late Minoan Chania (Hallager and McGeorge 1992)		
• Males	4	164.5 (5′ 4 3/4″)
• Females	3	148.8 (4′ 10 1/2″)
Late Bronze Age (Angel 1971)	89	166.3 (5′ 5 1/2″)
Sindos (6th–5th century Macedonia) (Musgrave 1987)	24	170.2 (5′ 7″)
Classical–Hellenistic (Angel 1944b)	10	165.4 (5′ 5″)
Roman–Late Roman (Angel 1944b)	3	164.9 (5′ 5″)
Byzantine–Medieval (Angel 1944b)	5	165.6 (5′ 5 1/4″)
Living Greeks (Angel 1944b)	37	165.5 (5′ 5 1/4″)
Modern Chalkidike (Angel 1942)	24	169.4 (5′ 6 3/4″)
Modern Greek Macedonians (Hasluck and Morant 1929)	200	167.3 (5′ 5 3/4″)

Corrucini 1974; 1976; Sjovold 1975; 1976–77; Finnegan 1978; Trinkaus 1978; Berry 1979; Cheverud, Buikstra and Twichell 1979; Molto 1979; Perizonius 1979; Musgrave and Evans 1980; Brothwell 1981; Kaul and Pathak 1984; Rothammer, Quevedo, Cocilovo and Llop 1984; Czarnetzki 1985; and, especially, Powell 1989). In both the cremated and inhumed remains from Torone the search was hampered by the incompleteness and damaged condition of the material. It is scarcely surprising, therefore, that no example of possible consanguinity was observed.[9]

General pathology

ANEMIA

For many years anthropologists have been interested in the presence of anemia in ancient communities. Anemia can be either acquired or congenital. If acquired, its presence may offer some idea of standards of nutrition and hygiene prevalent in the community under examination. Among peoples occupying malarial areas the possibility that one of the congenital anemias—sickle-cell anemia or thalassaemia—was involved also has to be borne in mind. This is because it has been known for a long time that each of them can afford a degree of protection against the worse ravages of malaria as the plasmodial parasite is unable to prosper in the already damaged red blood cells of those suffering from milder forms of both these anemias (Moseley 1965; Angel 1967; Satinoff 1972; Steinbock 1976; Hillson 1980; Musgrave 1980; McGeorge 1983; Ortner and Putschar 1985; and, especially, Grmek 1989).

Whereas it would be interesting and useful to know whether the Toroneans were afflicted with malaria, it has to be admitted it is impossible to state confidently that they did because it is almost impossible to determine whether the anemia from which they may or may not have suffered was congenital or acquired. A few years ago, simply because Greece was known to be a malarial area in antiquity, it was assumed that congenital rather than acquired anemia was more prevalent. Recent work however suggests that acquired anemia, in particular iron-deficiency anemia, may have brought about more of the associated skeletal changes than the congenital form (for a discussion of recent thinking on congenital vs. acquired anemia see Carlson, Armelagos, and van Gerven 1974; Stuart-Macadam 1988; 1989).

The evidence for the suggestion that one of the anemias may have been endemic among these ancient Toroneans would be the presence among the bones recovered of (a) a number of cranial vault fragments more than 8.0 mm thick, (b) traces of osteoporosis on others, and (c) several orbital roof fragments displaying undoubted signs of cribra orbitalia.[10]

Whether any form of anemia was endemic at Torone is not easy to determine as the cremated and inhumed remains tell different stories. For example, among the cremated bones no instances of osteoporosis or cribra orbitalia were observed, and few cranial vault fragments showed signs of abnormal thickness. Indeed, only two tombs yielded vault fragments thicker than 8.0 mm: Tomb 76 (ca. 8.0 mm) and Tomb 70 (8.4, 8.5, 9.3 mm). Scores recorded on vault fragments from Tombs 22, 25, 30, 41, 42, 55?, 60, 75, 77, 86, 103, 104, 118 (ash-urn II), 122, 124, 128, and 130 ranged from 2.9–7.4 mm. That seventeen samples yielded relatively low scores leaves the impression that this community was not prone to conditions that led to thickening of the cranial vault. That may not be true of the occupants of the Knossos North Cemetery, where ten vault fragments were found to be thicker than 8.0 mm (range 8.0–11.0 mm) (Musgrave 1996). Nor does it seem to be true of the inhumed skeletons from Torone. Two such crania may have been quite thick (Tomb 10: 8.5 mm; Tomb 13: 8.2–8.4 mm). Moreover each of these skulls showed signs of cribra orbitalia.

However one should not forget that (a) the hemolytic anemias are not the only cause of thickening of the cranial diploe, and (b) diagnosing any disease on the evidence of signs on broken fragments from a restricted area of the skeleton is risky, to say the least. For example, it is not always clear on ancient vault fragments whether the thickening was the result of (a) thickening of the diploe and thinning of the outer table (porotic hyperostosis), as seen in the anemias (Steinbock 1976); or (b) thickening of both outer and inner tables at the expense of the diploe, as seen in Paget's disease (a gross oversimplification: see Ortner and Putschar 1985:309–315 for a detailed description of the signs of Paget's disease).

Even in healthy individuals skull thickness is "extremely variable" (Krogman 1962:211). At Helgö in Sweden mean cranial thickness was only 4.21 mm for males and 3.68 mm for females (Gejval and Persson 1970). Those of the Minoan male and female skeletons from Ailias Hill, Knossos, were 5.7 mm and 5.1 mm thick, respectively (Tina McGeorge, personal communication). At Loveden Hill, Lincolnshire, maximum thickness was less than 8.0 mm and the mean very much lower than that (Wilkinson 1980). Very low scores (2.2–3.4 mm and 2.6–3.8 mm) have been recorded for two mature cremated Iron Age males from north Germany (Kühl and Remagen 1986; Kühl 1987a). The cranium of a third individual, a mature female, from that region was rather thicker: 6.9–7.0 mm (Kühl 1983a). Scores of up to 6.7 and 7.0 mm have also been recorded on two other north German adult crania (Kühl 1983e:76–78). Elsewhere in Germany other seemingly low scores for skull thickness in cremated crania have also been recorded, with few cases exceeding 8 mm (Grimm 1974: table 1a; 1985: table 2). There are, however, grounds for believing that the cranial vault bones of the so-called Queen of Lefkandi were pathologically thick: frontals 9–10 mm and parietals 9.5–10.5 mm (Musgrave 1982). At the top end of the scale Angel (1967:379) recorded "Neolithic pre-Greek adults with vaults up to 19 mm thick" (see further Todd 1924; Twiesselman 1941; Roche 1953; Vallois 1958; Getz 1960).

The final word on skull thickness should perhaps come from some other illustrious cremated Macedonians: Vergina Tomb II Antechamber (thin: 4–6 mm); Vergina Tomb III (thin: 3–4 mm); Derveni Tomb B (male: 4.3–7.1 mm; female: 2.9–5.2 mm); Nea Mihaniona II (8.2 mm); Nea Mihaniona III ("bones generally thin" [Musgrave 1990a; 1990b]).

ARTHROPATHIES

Traditionally anthropologists record signs of arthropathies (for descriptions of arthropathies on cremated bone see Kühl 1983a; 1983c; 1983e; 1985; 1988; Kühl and Remagen 1986). Not long ago most of us tended to apply the blanket term "arthritis" to every manifestation of change, whether to the articular surface or to the periarticular bone. As interest in paleopathology grew among practicing rheumatologists, it became clear that the range of joint pathology manifested in ancient bones was as wide as it is in the living, but much more difficult to diagnose precisely for very obvious reasons. Nonclinical anthropologists such as I then recognized this problem and adopted less specific terms such as "degenerative joint disease" (DJD). Even this cautious approach is not entirely satisfactory as nondegenerative conditions can be mistaken for degenerative on dry, ancient bone. In due course we may be well advised to refer to undiagnosable pathological changes to joints as "nonspecific articular/periarticular arthropathies." This is likely to apply to cremations in particular where few individual bones, let alone the whole skeleton, are complete. As Rogers, Waldron, Dieppe, and Watt (1987:179) have explained: "It is important to consider the skeleton in its entirety, and a valid classification cannot be made from the examination of single sets of joints or single elements of the skeleton."

Notwithstanding these comments, and aware that perhaps I should not, I classified the limited amount of arthropathy I observed on bones from eleven tombs (27, 37, 38, 45, 46, 47, 58, 100, 105, 124, 134) as DJD. I did so because in most cases all it amounted to was slight lipping. In a few cases it was observed on more than one bone (Tombs 47, 100, 134) and might therefore have been more accurately diagnosed, especially as each of these individuals bore signs of other pathological lesions. Tomb 47 had a tooth root abscess, Tomb 134 may have lost a number of teeth before death, and the vertebrae of Tomb 100 bore holes that might have been pathological cysts (pseudopathological cysts in spongy tissue are illustrated in Kühl 1985:10–13, pl. VIII). In addition, one of the larger vertebral bodies in Tomb 58 was slightly wedged, but this too may have been caused by burning (Kühl 1986).

It should not be thought that hemoglobinopathies and arthropathies, despite what has been written above, are the only conditions that leave their marks on cremated bone. Many inflammatory conditions and neoplasms do, but the chances of observing them on burned bones are understandably reduced, although not to zero, as Ingrid Kühl has demonstrated in many lavishly illustrated papers (Kühl 1983e; 1985; 1988; Kühl and Remagen 1986).

THE INHUMATIONS

The limited data on the inhumations, summarized below, also indicate that the ancient Toroneans had to endure many aches and pains.

Tomb 6: Hole in his cranial vaul; at least one fractured rib, possibly two; some vertebral lipping; signs of wear and tear on his left scapula; a hole in his left capitate; and a pathological interphalangeal joint on his right thumb. *Plus* two teeth lost before death, ten carious teeth, and two root abscesses

Tomb 7: Small, beaky lip on the head of her right thumb metacarpal. Three carious teeth.

Tomb 8: Hole in the distal end of his/her right femur.

Tomb 9 *North*: Three holes in his cranial vault; five teeth lost before death, one carious tooth, and four root abscesses.

Tomb 10: Thick cranial vault and perhaps cribra orbitalia; massive holes in the body of his atlas vertebra and another unidentified cervical vertebra; and DJD on his vertebral column, shoulder girdle, and sacroiliac joint; eleven teeth lost before death and two root abscesses.

Tomb 11: Displayed only oral pathology (e.g., six carious teeth, one root abscess); marked alveolar resorption.

Tomb 13: Thick cranial vault and perhaps cribra orbitalia, a fractured rib, and lips round many articular surfaces; four carious teeth.

Tomb 14: Marked and widespread lipping, and some pitting of subchondral bone.

Tomb 15: Healed fracture on the metacarpal of his right middle finger; one carious tooth and one root abscess

Tomb 16: Skeleton 1 had slight lipping on an ulna and at least three, and probably many more, carious teeth.

Oral pathology

Cremated teeth are obviously less informative than unburned ones simply because the surrounding coat of enamel nearly always flies off during burning, laying bare the dentine skeleton underneath. Although fragments of enamel are occasionally recovered,[11] the only pathological lesions likely to be seen on cremated teeth are carious cavities severe enough to have penetrated into the underlying dentine. Even then some doubt may remain about the accuracy of the diagnosis, as the dentine core may also have been damaged during burning. This may account for the fact that I recorded only one tooth with a carious lesion among the extensive remains from Knossos North Cemetery (on a wisdom? tooth from Tomb 14.2) and not one from Torone.

As the sockets that housed them are frequently better preserved than the teeth, signs of ante mortem tooth loss and root abscesses are almost bound to be observed from time to time. At Torone, for example, I observed evidence of ante mortem tooth loss in jaws from Tombs 27, 46, 52, 97, 113, and 134, and of abscesses in those from Tomb 47 and, perhaps, Tomb 78. It is of course impossible to analyze such meager figures statistically. Even the more extensive remains from Knossos North Cemetery yielded only seven jaw fragments bearing traces of abscesses (apical abscesses have been recorded and illustrated by Grimm 1985 and Kühl 1983a; 1983e; 1988b).

Not surprisingly the inhumed skeletons were much more informative, and suggested that standards of oral hygiene were not high at Torone. For example, ante mortem tooth loss was observed in jaws from Tombs 5.1, 9 North, 9 Fragment 5, and—extensively—Tomb 10. Carious lesions were present on teeth from Tombs 6, 7, 9 North, 9 Fragments 5 and 7, 11, 13, 15, and 16. Root abscesses afflicted jaws from Tombs 6, 9 North, 10, 11, and 15.

A glance at tables A.4 to A.6 will confirm that the frequencies of these afflictions, in an admittedly small sample, were comparable with those available for other groups of ancient Greeks. The very low prevalence among the aristocratic occupants of the shaft graves at Mycenae should be noted, as should the high scores (for ante mortem tooth loss and caries) recorded among the more recent inhabitants of the country.

Of the juvenile dentitions from Tombs 2, 3, 5.3, and 12 it can be said that (a) none of fifty-six juvenile teeth was carious, (b) none of thirty-six juvenile sockets was abscessed, (c) not one tooth from these thirty-six sockets had been lost ante mortem, but (d) enamel hypoplasia and calculus were observed, especially the former.

These meager statistics compare very favorably with figures available from the Lefkandi Settlement where two of sixty-two deciduous teeth (3.2 percent) were found to be carious (Musgrave and Popham 1991). This compares with a prevalence of 11.5 percent (22/192) among a group of medieval English children (studied by James and Miller 1970).

Urn goods

This term should be reserved for the small finds—beads, knife handles, knife blades, finger rings, even tiny figurines—that were buried with the bones inside the urn.[12] Needless to say, both they and the associated grave goods found outside the urn have received close attention from archaeologists eager to discover whether their properties of shape, size, function, material, decoration, etc., may offer clues to their interpretation according to current socioeconomic or cultural theories (cf. Richards 1989:108–110). What seems certain, in England and Germany at least, is that "cremation grave goods do not appear to be directly correlated with either age or sex groupings" (Richards 1989:109; Gebuhr 1983; McKinley 1989a; 1989b). It would however be difficult to derive any far-reaching cultural hypotheses from the following handful of small finds recovered from inside the Torone ash urns:

Tomb	Find
18	Three minute bronze fragments
38	An animal bone fragment with a metal core: remains of a knife handle? Plus four other animal bone fragments that are probably associated
56	A lump of rusty, slag-encrusted iron
69	Five fragments of a thin bronze ring
96	An animal bone fragment
103	Two pieces of animal bone
109	A minute fragment of what might be (pink) glass
124	Portion of rolled up bronze sheet

Table A.4 Prevalence of ante mortem tooth loss in ancient and modern Greece

	Total number of sockets	Teeth lost ante mortem	
		n	%
Torone inhumations	258	22	8.5
Neolithic	570	62	10.9
Middle Bronze Age	848	70	8.5
Middle Minoan	1352	185	13.7
Myrtos Pyrgos	781	167	21.4
Late Minoan Chania	282	37	13.1
Mycenaean	807	116	14.4
Mycenae Shaft Graves	556	10	1.8
Early Iron Age	1098	179	16.3
Classical	1351	157	11.6
Roman	656	46	7.0
Early Christian Cretans	455	53	11.7
Byzantine	697	86	12.3
Turkish (recent)	4830	1029	21.3
Modern males (Central Greece)	1160	228	19.7
Modern males (Chalkidike)	768	192	25.0

Sources: Comparative data taken from Angel 1944a; 1971; Carr 1960; Musgrave 1976 (and unpublished data on Myrtos Pyrgos); Hallager and McGeorge 1992.

Table A.5. Prevalence of dental caries in ancient and modern Greece

	Actual number examined	Carious teeth	
		n	%
Torone inhumations	240	36	15.0
Neolithic	267	32	12.0
Middle Bronze Age	601	34	5.7
Middle Minoan	1498	135	9.0
Myrtos Pyrgos	434	45	10.4
Late Minoan Chania	206	76	36.9
Subminoan Knossos	74	8	10.8
Mycenaean	356	22	6.2
Mycenae Shaft Graves	556	16	2.9
Lefkandi Settlement	113	11	9.7
Early Iron Age	724	40	5.5
Classical	724	36	5.0
Roman	363	29	8.0
Early Christian Cretans	282	14	5.0
Byzantine	419	26	6.2
Turkish (recent)	3801	1008	26.5
Modern males (Central Greece)	932	148	15.9
Modern males (Chalkidike)	676	146	21.6

Sources: Comparative data taken from Angel 1944a; 1971; Carr 1960; Musgrave 1976; 1996 (and unpublished data on Myrtos Pyrgos); Musgrave and Popham 1991; Hallager and McGeorge 1992.[13]

Table A.6. Prevalence of tooth root abscesses in ancient and modern Greece

	Total number of sockets	Number of abscessed sockets	
		n	%
Torone inhumations			
• Option 1	236	10	4.2
• Option 2	258	10	3.0
• Option 3	258	32	12.4
Neolithic	570	20	3.5
Middle Bronze Age	848	20	2.4
Middle Minoan	1400	68	4.9
Myrtos Pyrgos	781	25	3.2
Armenoi	4048	102	2.5
Mycenaean	807	19	2.4
Mycenae Shaft Graves	556	4	0.7
Early Iron Age	1098	42	3.8
Classical	1351	43	3.2
Roman	656	26	4.1
Early Christian Cretans	455	4	0.9
Byzantine	697	22	3.3

Sources: Comparative data taken from Angel 1944a; 1971; Carr 1960; Musgrave 1976 (and unpublished data on Myrtos Pyrgos); McGeorge 1983.[14]

A modest collection of potsherds (from Tombs 18, 23, 24, 25, 28, 58, 77, 89, 107, 113, 122, 125) was equally uninformative as most of them probably came from their own or adjacent pots.

Animal bones and shells

Not infrequently—but not invariably—cremations are accompanied by animal bones, bird bones, fish bones, and shells.[15] Not all of them formed part of a funeral feast or committal sacrifice. Such objects as bear claws (Kühl 1981; Kühl and Remagen 1986; McKinley 1989b), a perforated bird's sternum and a perforated dog's canine tooth (Kühl 1981), and a pair of boar tusks (Kühl 1988) had originally kept their owners warm or adorned them. However, it is reasonable to argue that sheep fore- and hindlimbs (Kühl 1983a; 1988) were the residue of funeral feasts and/or sacrifices.

In Early Iron Age Greece the picture was similar. A respectable range of animal, fish, and shell remains were found commingled with the human bones from the Knossos North Cemetery (Musgrave 1996). At Lefkandi (Musgrave 1980) the animal bones were as scanty as most of the human, although the archaeological evidence—krater, plates, amphora fragments, and stone slabs—suggests "that a ritual libation and perhaps feast took place in the cemetery area at the funeral" (Popham, Sackett, and Themelis 1980:215).

The animal bones from Torone seem unremarkable and fall into three categories: (a) burned and perhaps worked (Tombs 75, 96, 103), (b) burned and unworked (Tombs 24, 36[?], 47[?], 52, 68, 88, 104, 123[?], 124, 125), and (c) unburned and unworked (Tombs 18, 62, 77, 104, 118 [ash-urn I][?], 130).

The presence of both burned and unburned animal bones may be explained pragmatically. It is not unreasonable to suggest that some animals were sacrificed and/or eaten both during and after the funeral. Bones of those consumed during the proceedings were more likely to be thrown on the pyre and burned. The recovery of burned astragali—(ankle bones)—from Tombs 88, 124, and 125 bears out this suggestion.[16] What was not observed at Torone was any instance of "animal accessories," that is, "adjacent, contemporary vessels, one containing mostly human bones with a little animal, the other mostly animal bones with a small human element," each of the same animal/human (McKinley 1989b:244–245). The animal bone remains are discussed in appendix B.

If anything, the marine remains tell a more interesting story, which is not surprising given the closeness of the cemetery to the sea. The marine remains, including a variety of seashells and urchin spines and fragments, are discussed in appendix C.

Conclusions

Of the Torone cremations it can be said that all ages and both sexes were cremated and burned together; that the bodies were generally well burned; that probably little attempt was made to reduce the bones in size; that the amount of bone collected from the pyre was adequate rather than lavish; and that the urn goods were homely rather than valuable—sea urchins and bronze rings rather than the quartz beads and terracotta figurines found at Knossos. In some hypothetical prehistoric league table I should place them in the lower half, with all but a handful of the Lefkandi cremations right at the bottom. Slightly above them would be Perati, with Knossos (the Knossos North Cemetery and Lower Gypsadhes) in first place. The great fourth-century B.C. Macedonian cremations from Vergina, Derveni, Nea Mihaniona, and Phoinikas are in a league of their own, culturally and temporally.

No one in England would compare current mortuary practices with those in force at the time of the Black Death. What Alexander Cambitoglou and John Papadopoulos kindly asked me to examine were members of a Early Iron Age rural community with robust views about both funerary ritual and the possibilities of overseas trade offered by their broad and welcoming bay. The fewer and earlier inhumations tell much the same story of worn, shed, carious teeth and abscessed sockets; a broken bone or two; signs of wear and tear; and a relatively short life expectancy.

A report on the inhumations and cremations from the Early Iron Age cemetery at Torone

Abbreviations and contractions are explained on pages 308–309.

TOMB 1

Considered an inhumation, but no bones preserved in situ. The bone described below was encountered in topsoil directly above the tomb and may well have been displaced from it.

Miscellaneous points of interest

Handful of mixed human (mainly cranial and adult) and animal bones (all UB). However, included among them was the crown of an enormous 26, all 3 roots snapped off at neck. Marked COC. WE. Completely UW. Only recently erupted. Could have belonged to a child aged 6+. MDCD 11.9 mm; buccopalatal crown diameter 12.9 mm.

The animal bones included a sheep/goat hoof, and a limb bone with a deliberately drilled hole.

TOMB 2

BAGLAB	Skeleton 2. 4.14 m NS × 1.44 m EW
SEX	NK
AGE	DA 13 1/2–14
STATURE	ITD
PATHOL	Widespread EH and calculus on teeth, some also chipped

List of remains

Cran.	Half a scoop of generally NVIF cran. frr., mainly CVFs. 1 parietal? fr. 6.5 mm thick on a suture line. R and L pet. temps preserved. No evidence of thickened cran. diploe or increased trabeculation.
Maxilla	Apparently not recovered
Mandible	Confined to 1 small fr. of L mand. body

Dental chart

(with teeth charted according to the Fédération Dentaire Internationale [FDI] notation; see also p. 310)

Generic key to dental chart

- • tooth present in socket
- \ socket present but tooth missing
- / tooth and socket missing
- [ ] area of bone missing
- – tooth present but socket missing;a loose tooth
- X tooth lost before death
- ( ) tooth not erupted: congenitally absent?
- e tooth probably erupting
- u developing tooth present but unerupted
- a abscessed socket
- c carious lesion present on tooth
- s tooth represented only by a dentine root stump
- | break passes through socket for this tooth

MAXILLA

RIGHT																LEFT
[																]
u																u
–	–	–	–	–	–	–	–	–	–	/	/	–	–	–	–	
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28	
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38	
–	–	–	–	–	–	/	–	–	/	–	•	•	•	•	•	
u																u
[										]|					| []
RIGHT																LEFT

MANDIBLE

Comments on individual teeth

Upper right

18 TPSM; UCR; crown nearly fully developed?
17 TPSM; VGC; UW; WSBR 1; roots damaged
16 TPSM; VGC; SW; WSBR 2 to 2+; pal. and distobuccal roots complete; calculus all round tooth; no COC; slightly chipped bucc.
15 TPSM; VGC; UW; EH; roots damaged
14 TPSM; VGC; UW; EH; root damaged; apparently single rooted
13 TPSM; VGC; UW; EH; root slightly damaged; interesting additional cusp mes.
12 TPSM; VGC; UW; EH?; calculus lab.; root damaged; ID questionable, could be a 32
11 TPSM; GC; slight wear on OS; also chipped mes. and dist.?; EH?; root damaged; not shoveled; MDCD 8.2 mm

Upper left

28 TPSM; UCR; crown nearly fully developed?
27 TPSM; VGC; UW; WSBR 1; roots damaged
26 TPSM; VGC; SW; WSBR 2 to 2+; roots damaged; calculus bucc. and interprox. dist. (slight); slightly chipped bucc.?; no COC
25 TPSM; VGC; UW; EH bucc. and pal.; roots damaged; calculus bucc.
24 TASM
23 TASM

22 TPSM; VGC; SLW on OS; EH; calculus lab.; root slightly damaged
21 TPSM; GC; slight wear on OS; chipped mes.?; EH; root damaged; not shovelled; MDCD 8.4 mm

Lower left
38 TPSM; UCR; crown nearly fully developed
37 TASP; VGC; SW; WSBR 1 to 2-; EH?; calculus mes.-ling.; both roots visible; RD incomplete
36 TASP; VGC; NVW; WSBR 2+ to 3-; chipped mes. and dist. ling.; calculus ling
35 TASP; VGC; UW; EH; RD incomplete
34 TASP; VGC; UW; EH; RD; almost complete
33 TPSM; GC; SLW on tip; incipient DE; EH lab.; calculus mes.-ling.; RD almost complete; slightly shoveled
32 TASM
31 TPSM; GC; SLW on OS; DE; calculus lab. and obscuring EH?; RD complete

Lower right
48 TPSM; UCR; crown nearly fully developed
47 TPSM; VGC; UW; WSBR 1; EH?; roots damaged
46 TPSM; GC; NVW; WSBR 3!; EH?; calculus ling.; chipped ling.; roots damaged
45 TPSM; VGC; UW; EH; RD incomplete
44 TPSM; VGC; UW; EH; calculus bucc.; root slightly damaged but RD almost complete
43 TPSM; GC; SLW on tip; some DE; EH lab.; calculus lab.; RD almost complete; slightly shoveled
42 TASM
41 TPSM; GC; SLW on OS; DE; calculus lab. and obscuring EH?; RD complete

AU

DA 13 1/2–14
17, 27, 37, 47 all erupted
37 both roots incomplete
35, 45 roots incomplete
34, 44 roots approaching completeness
33, 43 roots almost complete

Rest of remains
Handful of UIF PCFs; mainly LBSFs; 1 or 2 VEFs

TOMB 3

BAGLAB	Bones of unburned burial. Skeleton 1.
SEX	NK
AGE	ca. 7. Derived from comparative state of eruption of 31, 32, and 41, and crown development of 33 and 34.
STATURE	ITD
PATHOL	EH on 31, 32, and 41

List of remains

Cran.	V. small quantity of frr.
Maxilla	Apparently not recovered
Mandible	2 small frr.

Dental chart

83	42	41	31	32	73	74
•	\	•	•	•	\	\
					s	
					33	34
					u	u
RIGHT						LEFT

MANDIBLE

Comments on individual teeth

Lower left
34 TASP; UCR; virtually no RF; crown in VGC; fits crypt snugly
33 TASP; UCR; virtually no RF. ID questionable: a large tooth—MDCD 7.4 mm; could almost be 13, but fits crypt for 33 v. snugly
74 TAB; TLAD; healthy ES
73 TAB; crown snapped off; ARS only in socket
32 Not fully erupted; OS 2 mm below that of 31 and 41
31 TASP; fully erupted; UW; some EH

Lower right
83 TASP; GC; QW; DE on OS
42 TAB; TLAD; healthy EDS
41 TASP; fully erupted; UW; some EH

Plus: The fully developed but rootless crown of a 34, recorded from this tomb separately on another occasion.

Rest of remains
2 bags of R and L rib frr. 2 forearm frr. Hand: 2 R phal. frr.; 1 L metac. fr.; 5 L phal. frr.; 1 to 2 UID hand phal. frr. 2 largish fem. SFs, 1 joining a head & neck fr. Plus 1 bag of misc. LBSFs. Not a v. interesting colln.

TOMB 4

BAGLAB	Skeleton 3
SEX	F?
AGE	Adult of unknown age
STATURE	ITD

List of remains
The bones from this tomb comprise a modest colln of LBSFs. Most, if not all, apparently came from the tib.

and fib. 1 tib. SF is platycnemic. The longest fr. is a gracile tib. SF 160 mm long. Gracile enough to be F?

Miscellaneous points of interest

With them, in a separate bag, is a small fr. I identified as animal on an earlier visit to Torone. I can see no reason to change my mind.

TOMB 5

Triple inhumation burial.

As can be appreciated from the plan of this tomb, the bones of its occupants were in VPC and not easy to disentangle. Tentatively, I suggest the tomb contained the remains of (a) a woman aged 20–25, (b) an adolescent of unknown sex aged ca. 17, and (c) a child of unknown sex aged between 10 and 12.

When I studied them the bones were housed in 39 numbered paper bags, with a further 4 labeled simply "Bone frags." In this text I refer to them as 40, 41, 42, 43.

Because of the condition of each skeleton it has not been possible to prepare neat lists of what was preserved. Some idea of overall paucity can be obtained if the bones of each skeleton are compared with their representation in the paper bags.

Bone type	Bag no.	
Skeleton 1	Cranium	1, 4, 42
	Teeth	22, 25
	Maxilla	25
	Mandible	25
	Ribs	3, 6, 9, 20, 23
	Clavicles	3, 40?
	Scapulae	40?
	Humeri	5, 8, 28
	Radii	11, 38
	Ulnae	11?, 17
	"Forearm"	11, 30?
	Hand	42
	Innominates	13, 18
	Femora	7, 26, 29, 39
	Patellae	3
	Tibiae	2, 7, 10, 14, 24, 34, 39
	Fibulae	3, 35
	Foot	15, 43
Skeletons 2 and 3	Cranium	21 (L pet.temp. and mastoid proc. of a child) 40 (R pet.temp. and mastoid proc. of a child?)
	Teeth	12 (adolescent) 22 and 41 (child)
	Maxilla	22 (child)
	Mandible	12 (adolescent) 22 (child)
	Vertebral column	30 (child?) 40 (child?)
	Ribs	43 (1 unattributable fr.)
	Humeri	27 (child; R)
	Radii	16 (child; R) 42 (child's unfused prox. ep.)
	Ulnae	19 (child; L)
	"Forearm"	42 (child?)
	Hand	40, 41, 42 (child)
	Innominates	33 (unattributable; R)
	Femora	31 (child; L) 32 (child; R) 40 (child, US ep.)
	Tibiae	37 (child?; L)

It should be noted that the quantity of bone contained in each bag was not abundant and that no individual bone, large or small, was recovered sufficiently intact to make accurate identifications and diagnoses possible. This was especially true of Skeletons 2 and 3.

DETAILED DISCUSSION

Skeleton 1

SEX Assessing sex from fragmentary remains is not easy. All I can say about this skeleton is that the nasion and glabella region of the skull and each mastoid process were gracile. As were many of the PCFs—clavicle, humerus, forearm; patella, tibia, fibula. Also, the shape of the chin was female.

AGE Again we have not much to go on—an incomplete dentition and the degree of sutural closure. Cranial sutures are known to vary greatly in their time and rate of closure. The evidence we have from these is that closure had started, but not progressed far. The degree of wear on such molar teeth as have been recovered seems to tell much the same story. An estimate of 20–30 yrs—perhaps early to mid-20s—may not be too wide of the mark.

STATURE ITD

PATHOL None seen, but the bones were very fragmentary. No signs of any increased trabeculation or thickened cran. diploe on the vault bones. Indeed her skull

seems to have been of normal thickness. Some random measurements of CVT: 5.3, 5.8, 6.1, 6.9, 7.0 mm. Some EH. 2 teeth lost a.m.

List of remains

It will be seen from the Bag list above that most regions of the skeleton were rpd, albeit not abundantly.

J&T Only a small fragment of L maxilla recovered. The mandible was almost complete, although many teeth damaged or missing.

Dental chart

MAXILLA

RIGHT																LEFT
[												]				[ ]
	/	/	/	–	–	/	/	–	/	/	–	/	–	•	•	/
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28	
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38	
X	•	•	\	•	\	\	\	\	\	•	•	\	X	•	•	
					s	s		s	s							
RIGHT																LEFT

MANDIBLE

Comments on individual teeth

Upper right

18 TASM
17 TASM
16 TASM
15 TPSM; VGC; UW; enamel etched
14 TPSM; VGC; UW; enamel etched
13 TASM
12 TASM
11 TPSM?; tooth found in Bag 41

Upper left

28 TASM
27 TASP; QGC; enamel etched; WSBR 2+ to 3-
26 TASP; QGC; enamel etched; WSBR 3+ to 4
25 TPSM; VGC; UW; enamel etched
24 TASM
23 TPSM?; tooth found in Bag 22
22 TASM
21 TASM

Lower left

38 TASP; UW; enamel etched; WSBR 2?
37 TASP; SW; enamel etched; WSBR 2+
36 TAB; TLBD?; trace of a healing socket?
35 TAB; TLAD; EDS
34 TASP; QGC; SW; modest DE on tip
33 TASP; QGC; OS worn to a slope; DE; EH
32 TAB; crown lost; not clear when; ARS
31 TAB; crown lost; not clear when; ARS

Lower right

48 TAB; TLBD?; trace of healing; socket cribriform
47 TASP; enamel etched; accretions; WSBR 3?
46 TASP; enamel etched; WSBR 3+
45 TAB; TLAD
44 TASP; enamel etched; SLW on tip; crown inclined distally
43 TAB; crown lost; not clear when; recently?; would have inclined distally; ARS
42 TAB; crown lost; not clear when; ARS
41 TAB; TLAD; healthy ES

Skeleton 2

SEX	NK
AGE	ca. 17: 28 and 38 about to erupt
STATURE	ITD
PATHOL	Some EH, but otherwise nothing seen. Not surprising. Skeleton VPR.

List of remains

It will be seen from the list above that this skeleton was v. VPR. Its existence relies almost entirely on the J&T frr. found in Bag 12.

J&T 7 loose permanent upper teeth and the almost complete left half of a mandible

Dental chart

MAXILLA

RIGHT																LEFT
[																]
																e
	/	–	–	/	/	/	/	–	–	–	–	–	/	–	–	–
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28	
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38	
	/	/	/	/	–	/	–	/	–	•	•	•	•	•	•	•
																e
[									]							
RIGHT																LEFT

MANDIBLE

Comments on individual teeth

Upper right

18 TASM
17 TPSM; GC; enamel etched; WSBR 2+
16 TPSM; QGC; enamel etched; chipped mes.; no COC; WSBR 3 to 3+
15 TASM
14 TASM
13 TASM
12 TASM
11 TPSM; tooth found in Bag 41

Upper left

28 TPSM; erupting?; some root formation; enamel etched; WSBR 1?
27 TPSM; EH; chipped mes.; enamel etched; WSBR 2
26 TPSM; enamel etched; WSBR 3 to 3+
25 TASM
24 TPSM; GC; SW; enamel etched
23 TPSM; SLW on tip; enamel etched
22 TPSM; tooth found in Bag 41
21 TPSM; tooth found in Bag 41

Lower left

38 TASP; about to erupt (crypt damaged, open, and contents visible); some root formation; enamel etched; WSBR 1
37 TASP; GC; EH?; WSBR 2 to 2+
36 TASP; QGC; some enamel etching; WSBR 3 to 3+
35 TASP; QGC; SLW on tip of bucc. cusp; some enamel etching; EH bucc.
34 TASP; GC; SLW on tip; some EH
33 TASP; QGC; QW on tip; enamel etched; DE
32 TASP?; tooth found in Bag 41
31 TPSM?; tooth found in Bag 41

Lower right

48 TASM
47 TASM
46 TASM
45 TASM
44 TPSM?; tooth found in Bag 41
43 TASM
42 TPSM?; tooth found in Bag 41
41 TASM

Skeleton 3

SEX NK
AGE 10–12, very problematical. 37 and 47 erupted, while at least 8 deciduous teeth were still unshed.
STATURE ITD
PATHOL Some EH. Some deciduous teeth heavily worn, but otherwise nothing seen. Not surprising; skeleton far from complete.

List of remains

It will be seen from the Bag list above that most regions of the skeleton were rpd, albeit largely by NVIF frr.

J&T Very problematical. Bag 22 contained an extensive colln of J&T frr. belonging to a child. They comprise 2 maxill. and 2 mand. frr., and 5 LTs, not all of which belong.

Dental chart

MAXILLA

RIGHT																LEFT
			u	u	u					u						
			•	•	•					•						
[	]		15	14	13	![			]	23				e	[]	
/	/	•	•	•	\	•?	–	–	–	•	•	•	•	•	/	
18	17	16	55	54	53	12	11	21	22	63	64	65	26	27	28	
48	47	46	85	84	83	42	41	31	32	73	74	75	36	37	38	
u	•	•	•	•	[–	/	–	/	/	–	/	/]	•	•	u	
			45	44	43					33	34	35				
			u	\	/					/	/	/				
RIGHT																LEFT

MANDIBLE

Comments on individual teeth

Upper right

18 TASM
17 TASM
16 TASP; VGC; SW
15 TASP; UDCR
55 TASP; quite HW; WSBR 3+ to 4
14 TASP; UDCR
54 TASP; VHW; no enamel left on concave OS
13 TASP; UDCR
53 TAB; TLAD; healthy ES
12 TPR?; dist. half of socket only; tooth found in Bag 41
11 TPSM?; tooth found in Bag 41

Upper left

28 TASM
27 TASP; tooth probably about to erupt
26 TASP; SW?; enamel etched

65 TASP; not as worn as R; extensive DE pal
64 TASP; not as worn as R; extensive DE pal
23 TASP; UDCR
63 TASP; DE on tip
22 TPSM; tooth found in Bag 22
21 TPSM; tooth found in Bag 22

Lower left
38 TASP; UDCR visible in damaged crypt
37 TASP; fully erupted; VGC; UW
36 TASP; VGC; WSBR 2+
35 TASM
75 TASM
34 TASM
74 TASM
33 TASM
73 TPSM?; tooth found in Bag 41
32 TASM
31 TASM

Lower right
48 TASP; UDCR visible in crypt
47 TASP; fully erupted; VGC; UW
46 TASP; VGC; WSBR 2+
45 TASP; UDCR visible in crypt
85 TASP; heavy accretions on crown but looks worn
44 TAB; TLAD; empty crypt
84 TASP; QW, esp. bucc.
43 TASM
83 TPSM?; tooth found in Bag 40
42 TASM
41 TPSM; UW; EH; root damaged; tooth found in Bag 22

Also found in Bag 22 was what was originally identified as a 53. Unfortunately it does not fit the available portion of the socket for 53. Perhaps it was misidentified and should supplant the 83 from Bag 40 or the 73 from Bag 41.

TOMB 6

BAGLAB S.W. Skeleton 1
SEX M: robust glabellar and suporb. regions of skull; mastoid proc., SMCs, and EOP
AGE ca. 40: DA and SC
STATURE ITD
PATHOL a.Hole on R parietal just above squamous portion of R temporal bone. It looks like a crater with a raised edge, the latter presumably evidence of reorganization. Site of an old wound or localized infection?
b. 1 rib showing signs of a poorly healed fracture; and perhaps another (R) fractured rib.
c. Pathological interphalangeal joint of R thumb. The ulnar side of the head of the PP has been destroyed so that the DP articulated obliquely and points out toward the ulnar side.
d. The l capitate has a cystlike hole in its palmar surface on the radial side.
e. Wear and tear. The skeleton was too poorly preserved to permit a comprehensive study of joint surfaces. All one can say is that on a few bones—glenoid cavity of L scapula and some hand bones—rims or lips were developing as they do on us all from middle age onward.
f. Some appalling oral pathology described below: 2 teeth lost a.m.; 10 CLs; 2 RAs

List of remains

Cran. Rpd by a large number of well-preserved VFs and some less well-preserved face frr. Much of maxilla and mand. preserved. Described below. CVFs not thick. Some thicknesses:

Frontal near bregma	5.8 mm
R occipital*	5.4 mm
L occipital*	5.6 mm

*Superoanterior to lambdoid suture

J&T Preserved in 4 maxill. frr., 2 mand. frr., and 3 mand. LTs

Dental chart

MAXILLA

RIGHT																LEFT
	a			a								s				
c	c	l		c				c	c	c	c	c				
•	•	X	•	•	•	•	•	•	•	•	•	•	X[	/	/]	
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28	
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38	
•	•	•	•	|	[/	/	–	–	–]	•	•	•	•	•	•	
	c													c		
RIGHT																LEFT

MANDIBLE

Comments on individual teeth

Upper right

18 TASP; VPC; WSBR 4; CL on neck
17 TASP; appalling condn; all but mes. wall destroyed by caries; what remains lacks enamel; 1 root (mes. pal.) has perforated into maxill. sinus; beautiful circular hole (halo of reorganized bone) around tip of root, with tip framed therein; visible because outer table of bone lost; classic RA
16 TAB; TLBD; socket well healed
15 TASP; HW; much DE; v. little enamel left on crown; no cusps; OS worn flat/ concave
14 TASP; VPC; more worn than 15; mes. bucc. quadrant destroyed by caries; tip of root exposed in its abscess hole; reorganization visible
13 TASP; HW; much DE; chipped mes. lab.
12 TASP; HW; much DE
11 TASP; VHW; only enamel left is that covering the lab. surface of crown

Upper left

28 TAB; TASM
27 TAB; TASM; it is possible the region of 27 and 28 is rpd by a small fr. thought to be maxill.
26 TAB; TLBD; socket healed, but perhaps not v. well?
25 TASP; VPC; rpd by a couple of dentine stumps; destroyed by caries; NRS
24 TASP; VHW; much DE; both cusps worn flat/ concave; classic case of OS being rpd by a ring of enamel surrounding a concave dentine depression; caries on neck mes. and dist.; EH
23 TASP; VPC; VHW; CL on neck dist.; EH; description of 24 applies
22 TASP; HW; much DE; CL on neck mes.
21 TASP; VHW; similar to 11 but not as heavily worn; more enamel preserved; CL on neck dist.

Lower left

38 TASP; HW; WSBR 4
37 TASP; HW; WSBR 3+; CL on neck bucc.
36 TASP; VHW; WSBR 5; chipped
35 TASP; VHW, esp. mes. bucc.; much DE; cusps worn flat; EH
34 TASP; HW, esp. bucc.; outline of ling. cusp preserved; EH
33 TPR; socket damaged; much DE; tip worn to a slope; EH bucc
32 TPSM; worn; DE
31 TPSM; worn; DE

Lower right

48 TASP; VHW; WSBR 5; chipped
47 TASP; VHW; WSBR 5; CL on neck bucc.; chipped
46 TASP; VHW; WSBR 5; chipped mes.
45 TPR, but both tooth and socket damaged; crown broken off after death
44 TAB; TLAD; dist. 1/2 only of socket preserved
43 TASM
42 TASM
41 TPSM; HW; much DE

Rest of remains

Vert.col. VPR by a small handful of thoracic VEFs; too damaged to be informative
Sacrum Not recovered
Ribs R: Rpd by a modest colln of PPR frr., incl. 1 that shows signs of a poorly healed fracture
L: Rpd by even more modest colln of extremely PPR frr., which includes a large portion of a first rib. Separate bag (21) contained the head, neck, tubs., and a small part of the shaft of an unnumbered R rib. Its neck looks disproportionately thin, perhaps because the bone had been fractured just lat. to its articular facet for its vert. transverse proc.
Sternum Not recovered
Clavicle R: Not recovered
L: Large part recovered, but v. PPR. Each end damaged. TDTM. Robust.
Scapula R: frgcon; rpd by only a handful of frr., mainly of blade and acromion
L: Mixed colln of small frr. and 1 larger one of lat. border, part of spine, and glenoid cavity. Glenoid has a wd lip running round it but AS itself looks healthy. WM muscle attachments along lat. border
Humerus R: Rpd by distal 3/4 of shaft with damaged distal end. No trace of head. Robust. TDTM.
L: Slightly more complete. Frr. of head recovered. But, as ever, shaft complete; prox. and dist. ends broken. TDTM. Robust. WM deltoid tuberosity and lat. cond. ridge. ASs, such as they are, look healthy
Radius R: Each WR by SFs, but prox. and dist. ends and ulnafragmented. TDTM.

L: Each slightly better preserved than R. Prox. end of ulna and dist. end of radius almost complete. ASs look healthy. Each robust, esp. ulna. TDTM.

Hand R: Carpus lacks only pisiform. ASs look healthy. Metacs: dist. 3/4 I; prox. 3/4 II and III; SF of V? PPs: I complete but path. (see above); frr. of II–V. MPs: 3 almost complete, 1 less so. DPs: I path. (see above); one other healthy finger DP.

L: Carpus lacks triquetral and pisiform. Capitate has cystlike hole (see above). Metacs: I and II virtually complete; III almost so; IV missing; shaft of V. PPs: I–III complete; IV and V lack bases. MPs: 3 complete ones. DPs: only DP I preserved. General comments: ASs look healthy, but rims developing round some of them. Modest beak ant. lat. on head of L metac. I. Not path.? But see Tomb 7. L thumb perfectly normal. Large powerful hands?

Innominate R&L: In appalling condn. rpd by only a couple of scoopsful of frr. Too many landmarks missing to offer any useful or accurate information about sex or age

Femur R: Much of prox. 2/3 shaft preserved. Robust. WM linea aspera. Prox. and dist. ends broken; frr. of distal. TDTM.

L: Shaft almost complete. Robust. WM linea aspera. Prox. and dist. ends broken. TDTM.

Patella R: Identifiable but TDTM

L: Apparently recovered but missing from bag

Tibia R: Almost complete but prox. and dist. ends v. damaged. Robust. TDTM.

L: More damaged than R. Large chunk of shaft complete. Ends missing. Robust.

Fibula R: Lacks only prox. end

L: More damaged than R. Prox. end also missing.

Foot R: Handful of CUI frr. of talus and calcaneus? Handful of 8 US metat. frr. 7 toe PP frr., incl. a complete PP I.

L: Rpd by a package containing frr. of tarsus, incl. talus, calcaneus, navicular, and 3 cuneiforms

TOMB 7

SEX F: TW of C1; R hum. bicond. br.; R&L rad. TW

AGE ca. 30? (DA [Brothwell] = 25–35)

STATURE 159.21 ± 4.24 cm (5′ 2 3/4″) determined from length of a R radius. A R ulna yielded a score of 160.03 ± 4.30 cm (5′ 3″ ± 1 3/4″). As neither bone was measured under laboratory conditions, the closeness of these estimates increases their reliability.

PATHOL Small beaky lip on head of R metac. I ant. lat. 3 CLs

List of remains

Cran. Not recovered

Maxilla Not recovered

Mandible Almost complete; dist. part of R body and R ramus missing

Dental chart

48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
[ ]	\	•	•	•	•	•	•	•	•	•	•	•	•	•	•
													C	C	C
															S

RIGHT LEFT

MANDIBLE

Comments on individual teeth

Lower left

38 TASP; no enamel left; tooth reduced to a NRS by caries

37 TASP; incipient caries interprox. mes.; see 36; WSBR 3

36 TASP; massive CL dist. down to neck; spreading to 37?; WSBR 3+

35 TASP; NVW; some DE bucc.; some EH

34 TASP; VGC; SW; EH

33 TPR; socket damaged; VGC; SW dist.; marked slope; some DE on tip; EH

32 TASP; VGC; SW; slight DE on OS; slight calculus

31 TASP; VGC; slight DE on OS; slight calculus

Lower right

48 TAB; TASM

47 TAB; TLAD; healthy EDS

46 TPR; socket damaged bucc.; WSBR 4

45 TASP; NVW; some DE bucc.
44 TASP; VGC; SW; EH
43 TASP; VGC; SW dist.; marked slope; some DE on tip; EH
42 TASP; VGC; SW; slight DE on OS; slight calculus
41 TASP; VGC; slight DE on OS; slightly more worn than 32

Comments

1. Resorption: slight
2. Calculus: slight. Some mandibular measurements (for definitions see Harrower 1928; Morant 1936; Brothwell 1981)

Cond. length (cyl)	19.4 mm
Minimum rameal breadth (rb')	33.5 mm (L)
Coronoid height (crh)	59.5 mm (L)
Cond. height (cyh)	48.0 mm (L)
Incisura height	42.0 mm (L)

Rest of remains

Vert.col.	VWR throughout. C1 and C virtually complete. TWs (in mm): C1 69.3; C2 51.2. No DJD. No signs of severing. Root or fungal activity visible on facet for L occipital cond. on C1.
Sacrum	A few UIF frr.
Ribs	Each side VWR, but v. damaged
Sternum	Not recovered
Clavicle	R&L virtually complete. Sternal eps of each well fused. Length: R 132.0 mm; L 134.3 mm
Scapula	Each not VWR and v. damaged
Humerus	Each v. similar and almost complete but lacks its head. Septal foramen present on each. Bicond. br.: R 53.3 mm; L damaged.
Radius	R: complete. Length 220.0 mm. NMULC. L lacks prox. 1/4 TW of dist. end: R 31.0 mm; L 31.0 mm
Ulna	R: complete. Length 239.5 mm. L: slightly damaged
Hand	Each VWR and looks healthy. Small beaky lip present on head of R metac. I anterolaterally. See Tomb 6.
Innominate	Each WR but fragmentary
Femur	Shaft of each preserved. Prox. and dist. ends v. damaged.
Patella	Each preserved but damaged: Vertical height R 38.2 mm [damaged] L 39.4 mm Transverse width R 39.7 mm L 38.9 mm
Tibia	R: Distal 3/4 well preserved. Prox. 1/4 fragmentary. Small squatting facet present lat. L: Shaft only
Fibula	Each present but damaged
Foot	Each WR, esp. in tarsal region. Hole present in upper med. facet on R calcaneus. Does not look path.
Misc.	145 g of CUI unburned bones and 1 shell fr.

TOMB 8

BAGLAB	Inhumation 3. Left foot, etc.
SEX	NK
AGE	18–20? Trace of distal ep. line on L fib. fr. See below.
STATURE	ITD
PATHOL	Holes (poss. path.) in cancellous tissue of a R fem. dist. end fr.

List of remains

These scanty remains are confined to the lower half of the lower limbs of their owner, as follows:

Femur	R: Poss. distal end fr. with poss. path. holes in cancellous tissue L: Not recovered
Tibia	R: Extensive shaft frr. No head. L: Extensive shaft frr. No head.
Fibula	R: Extensive shaft frr. No head. L: Extensive shaft frr. No head. Distal end preserved and shows trace of an ep. line indicating recent fusion to lower end of shaft; visible above talar facet medially.
Foot	R: Almost complete calcaneus; damaged talus; several other tarsal frr.; frr. of outer 4 metats; several phal. frr. L: Fragmentary talus and calcaneus; one or two other poss. tarsal frr. CUI

TOMB 9

Contained (a) the skeletons of three adults; (b) a few pieces of a fourth, immature individual; and (c) a handful of unassociated adult jaw frr. PCRs were too fragmentary and damaged to permit detailed examination. On the other hand the skulls, jaws, and teeth of the adults were better preserved, and yielded a few clues as to age and some useful information about their appalling oral hygiene.

Skulls, jaws, and teeth of the adults

A. West skull

SEX F?: from glabella region only; suporb. ridges only faintly delineated

AGE AD: some SC internally

List of remains

Cranium vault only. No face, base, jaws, or teeth. Some SC internally.

B. East skull

SEX F?: smooth glabellar and suporb. regions

AGE DA no more than 35?

List of remains

Cran. Remains mainly from cranial vault; rest of base and face poorly rpd

Maxilla 1 small maxill. fr.

Mandible Perhaps rpd among unassociated mand. frr. described below

Dental chart

RIGHT

•	•	•	•	•	\	\
18	17	16	15	14	13	12

Comments on individual teeth

Upper right

18 TASP; GC; SW; WSBR 2

17 TASP; GC; smaller than 18; SW; WSBR 2+ to 3-

16 TASP; GC; SW; WSBR 3-

15 TASP; GC; SW

14 TASP; GC; SW

13 TAB; TLAD

12 TAB; TLAD; EDS

11 TASM

C. North skull

SEX M?: cranial vault and EOP quite rugged

AGE DA 35+. Probably not senescent in view of some redeeming features of anterior teeth.

PATHOL

Undiagnosed holes in 2 CVFs. 5 teeth lost a.m.; 1 CL; 4 RAs

List of remains

Cran. All regions rpd (vault, face, base, mandible) but too PPR to make restoration possible. Vault not v. thick; but quite rugged: EOP M? Some interesting features:

a.L EAM has a hole in floor: patent foramen of Huschke?

b.1 CVF has two interesting holes: one practically on lambda; the other on L parietal ca. 55 mm inf.-lat. to the first c.A second fr. of ?temporal/?sphenoid from region of temporal fossa has a much smaller hole (D: <2 mm) with sharp inner and outer rims. Cause NK, but cf. abscesses in upper and lower jaws, and an unassociated thumb PP with a massive hole on its palmar surface.

Maxilla Dentally almost complete

Mandible Dentally complete

Dental chart

MAXILLA

RIGHT LEFT

												a	a			
													c			
[/	–	–	–]	X	•	•	•	•	•	•	•	X	•	•	•	
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28	
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38	
•	•	•	•	•	•	•	•	•	•	•	•	•	X	X	X	
														a	a	

RIGHT LEFT

MANDIBLE

Comments on individual teeth

Upper right

18 TASM

17 TPSM; VW; WSBR 5++; much more worn than 27

16 TPSM; VW; WSBR 5++; much more worn than 26

15 TPSM

14 TAB; TLBD; SHD

13 TASP; QGC; NVW

12 TASP; moderately worn; DE but QGC

11 TASP; VHW; DE widespread

Upper left

28 TASP; QGC; WSBR 2+

27 TASP; coated with calculus but otherwise GC; WSBR no more than 3

26 TASP; appalling condn; WSBR 5+; massive CL involving crown and neck mes.; trace of abscess both pal. and bucc.; but bone in poor condn

25 TAB; TLBD?; unhealthy ES; clear indications of abscess involvement pal. and bucc.; one root stump could belong

24 TASP; well worn; DE widespread

23 TASP; QGC; not VHW
22 TASP; moderately worn; DE; but QGC
21 TASP; VHW; DE widespread

Lower left

38 TAB; TLBD; SHD; abscess hole ling. inf.?
37 TAB; TLBD; SHD; abscess hole ling. inf.?
36 TAB; healthy ES; tooth either clinging on by a thread, or lost shortly a.m.; charted as TLBD
35 tasp; VHW, esp. mes.-bucc.; DE
34 TASP; HW; DE; chipped mes.-ling.
33 TASP; HW; DE widespread
32 TASP; HW; DE widespread

Lower right

48 TASP; not VHW; WSBR prob. <3+
47 TASP; HW; WSBR 5
46 TASP; HW; WSBR 5+
45 TASP; worn, but less so than 35
44 TASP; worn, but less so than 34
43 TASP; HW; DE widespread
42 TASP; HW; DE widespread
41 TASP; HW; DE widespread
31 TASP; HW; DE widespread

Comments

1. Maxilla appalling: calculus widespread; 2 abscesses
2. Mandible appalling: evidence of path. holes—abscesses?—ling. under 37 and 38, and in region of L mental foramen

D. Immature individual

SEX NK
AGE c. 18: ep. fusion
STATURE ITD

List of remains

Upper part of vert. col.: annular body eps (upper and lower) not fused
Prox. _ of R hum.: capital ep. not fully fused
Distal end R rad.: ep. fusing
Almost complete L rad. and ulna: distal eps not fully fused
R ilium fr.: iliac crest not fully fused
Distal end L? fibula: ep. recently fused; ep. line visible

MISCELLANEOUS UNASSOCIATED JAW FRAGMENTS

1. L maxill. fr. with 25, 26, and 27 in situ. 25 UW; 26 WSBR 3; 27 WSBR 2+. May perhaps be attributed to the East Skull on the grounds that this 27 was small, as was the socketed 17 of this skull (see above).
2. Two L mand. body frr., with worn molars (goes with fr. 3 below).
3. R mand. body fr., with 47 and 46 in situ: VHW. Not enough to go on for oral path. analysis.
4. R mand. body fr.

Dental chart

47	46	45	44	43	42	41	31	32	33
\	•	\	\	\	\	\	\	\	\

RIGHT LEFT

Comment 46 poorly preserved, but whole piece CUI

5. R mand. body fr.

Dental chart

46	45	44	43	42	41
X	X	•	•	•	\
		c	c		

RIGHT LEFT

Comments Interprox. halves of 44 and 43 greatly affected by CLs
Genial tubs. pronounced

6. L mand. cond.: cyl 17.2 mm
7. 12: SW; minute mes.-pal. occ. CL

Rest of skeletal remains

List of remains

Large quantity of poorly preserved bones from all regions of the skeletons of all three adults. Too PPR to study in detail.

PATHOL A thumb PP with a massive hole on its palmar surface: path.?

TOMB 10 (**PLS. 476A-B**)

SEX M: robust glabellar and suporb. regions of skull, but R SN looks F!
AGE Precise estimate not possible. The combined evidence of (a) DJD on vert.col., shoulder girdle, R hum., sacroiliac joint, and R foot; (b) widespread a.m. tooth loss; (c) uneven wear; and (d) sharp inf. margin of some ribs suggests an age of at least 45
STATURE ITD
PATHOL DJD on vert.col., shoulder girdle, and sacroiliac joint. Cribra orbitalia? Skull quite thick: 8.5 mm near frontal boss. Some cerv. verts v. path.: massive holes in body of C2 and an UID cerv. vert.

pointing into lower body articular facet and posterior 11 teeth lost a.m.; 2 RAs

List of remains

Cran. All regions rpd, but frr. too damaged and distorted to make restoration possible. V. robust, esp. in glabellar and suporb. regions. Cribra orbitalia? Skull quite thick: 8.5 mm near frontal boss. Frontal sinus well pneumatized.

Maxilla Dentally almost complete

Mandible Dentally complete

Dental chart

MAXILLA

RIGHT																LEFT
							a	a								
					c	c			c	c						
					s	s			s	s						
[/]	•	•	•	X	•	•	\	•	•	•	•	•	•	•	•	
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28	
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38	
X	X	X	X	•	•	•	•	•	•	X	X	X	X	X	X	
				s												
				c												
RIGHT																LEFT

MANDIBLE

Comments on individual teeth

Upper right

18 TAB; TASM
17 TASP; VGC; WSBR 2; WE
16 TASP; WSBR 3 to 3+
15 TASP; QW; DE on both cusps
14 TAB; TLBD
13 TASP; VW; tooth merely a large NRS, destroyed by caries?
12 TASP; VW; tooth merely a large NRS, destroyed by caries?; apical abscess pointing pal.
11 TAB; TLAD?; porotic condn of socket suggests tooth was a dentine stump about to be shed at death; apical abscess pointing pal. along same track as 12's

Upper left

28 TASP; VGC; WSBR 2 to 2+; WE
27 TASP; VGC; WSBR 2 to 2+
26 TASP; GC; WSBR 3+ to 4
25 TASP; VHW; extensive DE, esp. pal.
24 TASP; VHW; extensive DE, esp. pal.
23 TASP; VHW; extensive DE, esp. pal.
22 TASP; VW; tooth merely a large NRS, destroyed by caries?; wear more extensive pal.; root canal exposed
21 TASP; tooth merely a large NRS, destroyed by caries?

Lower left

38 TAB; TLBD; SHD
37 TAB; TLBD; SHD
36 TAB; TLBD; SHD
35 TAB; TLBD; SHD
34 TAB; TLBD; SHD
33 TAB; TLBD; lost shortly a.m.; socket still healing
32 TASP
31 TASP

Lower right

48 TAB; TLBD; SHD
47 TAB; TLBD; SHD
46 TAB; TLBD; SHD
45 TAB; TLBD; SHD
44 TASP; v. little enamel, tooth virtually a large NRS, destroyed by caries?
43 TASP
42 TASP
41 TASP

Comments

1. Resorption more marked on R than L. R mental foramen almost, but not quite, on level with alveolar margin.
2. Clearly a case where all the lower molars were lost early in life, thus preventing the upper molars from becoming worn at all. The wear state on the upper molars suggest an age of no more than 35. The almost edentulous mand. tells a completely different story:

Bimental breadth (zz)	46.5 mm
Cond. length (cyl)	21.6 mm (L)
Coronoid height (crh)	66.0 mm (L)

Vert.col. Not VWR, but enough bodies present to indicate DJD had set in. Modest amount of osteophytic lipping on some VBFs; extensive on 1 lumbar VBF. Some cerv. verts v. path.: massive holes in body of C2 and an UID cerv. vert. pointing into lower body articular facet and posteriorly.

Sacrum VPC. Some lipping on auricular area.

Ribs R: Better preserved than L, but still in VPC. Sharp inf. margin in some cases quite pronounced: sign of age?

	L:	Handful of v. PPR, gracile frr. too broken for detailed study
Sternum		Not recovered
Clavicle	R:	Too incomplete for detailed study
	L:	Medial end, showing traces of DJD
Scapula	R:	Scarcely recognisable as such
	L:	V. frgcon; trace of lipping round glenoid cavity margin
Humerus	R:	Too fragmentary for detailed study; trace of DJD round head; much of rest of shaft preserved
	L:	Shaft nearly complete, but prox. and dist. ends too fragmentary for PTMBR detailed study; shaft robust; lat. cond. ridge pronounced
Radius	R:	VPR by a few frr. too incomplete for detailed study
	L:	Prox. part of shaft of each present, but too damaged for detailed study
Ulna	R:	VPR by a few frr. too incomplete for detailed study
	L:	Prox. part of shaft of each present, but too damaged for detailed study
Hand		Each rpd. Part of carpus and metacarpus of R preserved. 1 hand MP has a hole in dorsum of shaft: work of a rodent?
Innominate		V. poor condn. Fr. R ilium with SN: F? Some lipping round auricular area.
Femur	R:	Appalling condn, detailed study impossible
	L:	Much of shaft preserved, but in frr. Neither head nor dist. end preserved. Shaft looks robust and flattened in upper portion.
Patella	R:	TW 44.3 mm
Tibia	R:	Much of shaft preserved; prox. and dist. ends v. badly damaged
	L:	Much of shaft preserved, but in VPC; too damaged for detailed study
Fibula	R:	Much of shaft preserved; prox. and dist. ends v. badly damaged
	L:	Scarcely recognizable
Foot	R:	Calcaneus present and PPR; cannot be measured but looks large; some lipping on upper articular margin of sustentaculum tali; lipping also present around superior facet for talus. Rest of foot PPR and in VPC.
	L:	All regions rpd, but too PPR for detailed study

TOMB 11 (**PLS. 477A-B**)

SEX	M: EOP, mastoid proc., mand., SN
AGE	DA probably no more than 35, but attrition uneven in this case and notoriously unreliable in general
STATURE	173.13 ± 4.32 cm (5′ 8 1/4″ ± 1 3/4″), determined from L rad.
PATHOL	Oral only: marked alveolar resorption around 37 and 38; abscess involving roots of 47 and 48 on ling. side; and 6 CLs
ANIMALS	1 UID animal ?calcaneus
SHELLS	1 cockleshell

List of remains

Cran.	Preserved intact but crushed. Much of L malar[17] bone; minimum cheek height 22.2 mm
Maxilla	Poorly rpd by a portion of R side and 3 LTs from L
Mandible	Complete

Dental chart

MAXILLA

RIGHT																LEFT
				s										c	c	
•	•	•	•	\	\	[/	/	/	/	/	/	/	–	–	–]	
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28	
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38	
•	•	•	•	•	•	•	•	•	\	•	•	•	•	•	•	
c	c								s					c	c	
a																
RIGHT																LEFT

MANDIBLE

Comments on individual teeth

Upper right

18 TASP; UW; WSBR 2
17 TASP; WSBR 3 to 3+
16 TASP; WSBR 5 to 5+; massive DE pal.
15 TASP; worn; DE on both cusps; markedly on bucc., following removal of a large chip
14 TAB; crown lost p.m.; ARS
13 TAB; TLAD; socket v. deep
12 TASM
11 TASM

Upper left

28 TPSM; UW; WSBR 2; cerv. CL
27 TPSM; SW; WSBR 2+ to 3-; cerv. CL dist.; MDCD 9.7 mm

26 TPSM; damaged; WSBR at least 4+
25 TASM
24 TASM
23 TASM
22 TASM
21 TASM

Lower left

38 TASP; UW; WSBR 2; cerv. CL developing mes.
37 TASP; WSBR 3; large chip mes.-ling.; cerv. CL developing dist.
36 TASP; VW; WSBR 5+; chips all round crown
35 TASP; GC; NVW
34 TASP; SW
33 TASP; SW; cusp still pointed
32 TAB; crown snapped off p.m.; ARS
31 TASP; QW; marked DE on crown

Lower right

48 TASP; UW; WSBR 2; advanced cerv. CL; abscess; U-shaped notch, with signs of healing around edge, now exists on alveolar margin ling.; both roots of 48 and dist. one of 47 exposed as a result of abscess
47 TASP; WSBR 3; chip mes.-ling.; cerv. CL developing dist.
46 TASP; VW; WSBR 5+; chips all round crown
45 TASP; GC; NVW
44 TASP; SW
43 TASP; SW; cusp still pointed
42 TASP; but crown partly destroyed p.m.; clearly NVW
41 TASP; QW; marked DE on crown

Comments

1. An interesting mandible with a mixture of worn molars and unworn anterior teeth, suggesting an age of no more than 35 yrs?
2. Oral hygiene v. poor. Note marked alveolar resorption around 37 and 38; and abscess involving roots of 47 and 48 on ling. side. Calculus deposits only modest.
3. Note strong male traits—squared-off chin; flared mand. angles with roughened masseteric attachments

Some mandibular measurements:

Bicondylar breadth (w1)	116.0 mm
Bigonial breadth (gogo)	108.0 mm
Bimental breadth (zz)	48.1 mm
Cond. length (cyl)	19.6 mm (L)
Minimum rameal breadth (rb')	28.1 mm (L)
Molar-premolar chord (m2p1)	29.9 mm (R)
	29.9 mm (L)
Symphyseal height (h1)	31.0 mm
Ectomolare height (m2h)	28.0 mm (R)
Coronoid height (crh)	70.0 mm (R)
Cond. height (cyh)	58.0 mm (R)
	63.0 mm (L)
Incisura height (ih)	50.0 mm (R)
	?53.0 mm (L)

Vert.col.	Moderately WR, esp. in lower half. Lumbar verts look v. healthy. No trace of DJD.
Sacrum	WR, but in frgcon
Ribs	Both sides WR, but in frgcon. Middle to lower on each side robust.
Sternum	Not recovered
Scapula	Each recovered, but in frgcon. Muscle markings on lat. border pronounced. No DJD on glenoid cavities
Humerus	R: V. nearly complete, but head detached; length unmeasurable; lat. cond. ridge v. well developed, v. v. slightly better so than L. Bicond. br. 65.3 mm (M).
	L: Lacks only head and upper part of shaft. Bicond. br. 64.1 mm (M).
Radius	R: Present as longish SFs: incomplete
	L: Complete; length 24.9 cm
Ulna	R: Present as longish SFs: incomplete
	L: Prox. 1/2 only of shaft preserved
Hand	R: Not as WR as L. Some metac. lengths: I: 47.3 mm; II: 70.5 mm
	L: All regions WR. Some metac. lengths: I: 46.1 mm; II: 69.0 mm; III: 68.1 mm; IV: 60.8 mm; V: 56.8 mm
Innominates	WR, but in frgcon. M SN.
Femur	R: Less WR than L; robust
	L: Almost complete but prox. and dist. ends too damaged to make measurement of maximum length poss.; robust
Patella	Neither recovered
Tibia	None apparently recovered
Fibula	None apparently recovered
Foot	None apparently recovered

TOMB 12

SEX	NK
AGE	ca. 6–7

Dental chart

46	85	84	83	82	81	71	72	73	74	75	36
\	•	•	•	•	•	\	\	\	[/	/]	•
						s	s				e
				42	41						
				•	•						
					e						

RIGHT LEFT

MANDIBLE

Comments

1. Crowns of 71 and 72 snapped off: roots in situ; ARSs
2. Mandible broken across midline: developing crowns of 41 and 42 visible; eruption of 41 imminent.

TOMB 13

SEX M: cran. PC skeleton less so.

AGE DA and SC: 25–35. Incipient lipping on many bones, and incipient fusion of the manubriosternal joint, may support the higher estimate.

STATURE ITD accurately

PATHOL Clear signs of cribra orbitalia on L. R orbit more damaged and so traces less clear. Skull thickness: 8.2–8.4 mm on parietal. Modest dental caries. Lips or rims—in many cases slight—round many ASs, among them: C2 dens, L4, some R ribs, manubrium, each clavicle, each scapula, each hum., L radius, R ulna, L ilium, and R met/met I. In addition L5 was wedged and 1 L rib revealed a healed fracture. 4 CLs.

List of remains

Cran. Complete but warping following gradual (or perhaps sudden?) breaking of bones has made it impossible to repair the whole cranium. Every bone, whether broken in antiquity or recently, joins but with huge gaps between the ancient breaks. A conservational compromise was reached: the face, maxilla, and mandible were restored completely in order to make a "mask." SC: sutures generally serrated almost throughout full depth: some closure internally. Sagittal suture: patent and serrated externally; closing on internal surface. Skull thickness: 8.2–8.4 mm on parietal.

Some cranial measurements (for definitions see Howells 1973; Brothwell 1981)

6	XFB	?>119.0 mm	
7	STB	119.0 mm	
13	NPH	59.5 mm	
14	NLH	45.6 mm (R)	45.1 mm (L)
15	OBH	31.0 mm (R)	32.3 mm (L)
16	OBB	?38.0 mm (R)	?38.0 mm (L)
17	JUB	109.0 mm	
18	NLB	25.5 mm	
19	MAB	60.6 mm	
21	MDB	10.5 mm (R)	11.9 mm (L)
22	ZMB	91.2 mm (WWH: ant.)	
		91.6 mm (DRB: inf.)	
23	SSS	22.0 mm	
24	FMB	98.3 mm	
25	NAS	15.0 mm	
26	EKB	96.0 mm	
27	DKS	?11.0 mm	
28	DKB	?23.0 mm	
35	WMH	18.5 mm (R)	18.3 mm (L)
36	SOS	6.0 mm	
37	GLS	?2–3.0 mm	
Minimum frontal br. (b')		97.0 mm	
Palate br. int. (G2)		39.0 mm	
Total face height		102.0 mm	

Maxilla Complete
Mandible Complete

Dental chart

MAXILLA

RIGHT																LEFT
c	c															
•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28	
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38	
•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
c															c	
RIGHT																LEFT

MANDIBLE

Comments on individual teeth

Upper right

18 TASP; larger than 28; WSBR 2; cerv. CL mes.
17 TASP; WSBR 3- to 3; cerv. CL dist.
16 TASP; WSBR 4; chipped
15 TASP; chipped; DE
14 TASP; DE, but cusp pattern v. clear
13 TASP; DE

12 TASP; DE QM; chipped
11 TASP; DE QM; chipped

Upper left
28 TASP; WSBR 2 to 2+
27 TASP; WSBR 3 to 3+; chipped
26 TASP; WSBR 4; chipped?
25 TASP; chipped; DE
24 TASP; DE, but cusp pattern v. clear
23 TASP; DE
22 TASP; DE QM; chipped
21 TASP; DE QM; chipped

Lower left
38 TASP; WSBR 2+ to 3-; quite large occ. CL, larger than CL on 48
37 TASP; WSBR 4; chipped
36 TASP; WSBR 5; chipped
35 TASP; DE
34 TASP; DE, but cusp pattern v. clear
33 TASP; DE
32 TASP; DE QM
31 TASP; DE QM

Lower right
48 TASP; WSBR 2+; quite large occ. CL
47 TASP; WSBR 4; chipped
46 TASP; WSBR 5; chipped
45 TASP; DE
44 TASP; DE, but cusp pattern v. clear
43 TASP; DE; chipped; more worn than any other canine
42 TASP; DE QM; chipped
41 TASP; DE QM

Comments
1. Condition: generally VG
2. Calculus: widespread, but not severe

Some mandibular measurements

Bicondylar breadth (w1)	121.2 mm
Bigonial breadth (gogo)	96.2 mm
Coronial breadth (crcr)	99.0 mm
Bimental breadth (zz)	43.8 mm
Condyle length (cyl)	18.4 mm (R)
	18.4 mm (L)
Minimum rameal breadth (rb′)	30.6 mm (R)
	30.8 mm (L)
Molar-premolar chord (m2p1)	26.5 mm (R)
	26.7 mm (L)
Symphyseal height (h1)	?30.0 mm
Ectomolare height (m2h)	25.3 mm (R)
	24.2 mm (L)
Coronoid height (crh)	56.0 mm (R)
	55.0 mm (L)
Incisura height (ih)	39.0 mm (R)
	37.0 mm (L)
Condyle height (cyh)	47.0 mm (R)
	44.0 mm (L)

Rest of remains

Vert.col.
Cerv. All 7 preserved. C1 broken. The rest were fused together with earth and were not separated. Body articulations look healthy. No lipping round C7. Dens and adjoining body facets on C2 also appear free of DJD. But slight lip developing round dens ant.
Thoracic At least 10 preserved. Overall condn looks healthy. No DJD observed.
Lumbar All 5 preserved. L1–3 look healthy. No Schmorl's nodes on L4–5. But a lip is developing ant. sup. on L4. Not v. marked. L5 interesting: asymmetrical; wedged transversely, as these measurements show. Body height: R 26.1 mm; L 23.6 mm.
Sacrum Recovered but fragmented and NVIF
Ribs R: VWR but in frgcn. 1 sternal/chondral end fr. preserved that retains a youthful appearance. Vert. ASs look healthy; only slight rims.
L: VWR but too damaged to be interesting. Sternal/chondral ends missing. First rib preserved pretty well intact. Manubrial end far from ragged. Another rib showed a healed fracture ca. 17 mm from its sternal end. From what one can see that too was not ragged.
Sternum Manubrium only slightly damaged. Lip forming round lower border AS. This could be confirmed because also preserved was a small fr. of adjoining body indicating fusion of the manubriosternal joint was taking place.
Clavicle R: Almost complete. Acromial end damaged. TDTM. Slight lip forming round sternal end but AS looks healthy
L: Complete. Length 136.0 mm. WM lip forming round sternal AS, which is slightly rough.
Scapula R: Rpd by lat. border, glenoid, acromion, and cor.proc. Glenoid damaged. Has a rim, but not a true lip, developing round its AS.
L: Confined to lat. border, glenoid, acromion, coracoid proc. (cf. R), and a few

blade frr. AS of glenoid healthy with marked rim. Glenoid height 36.0 mm.

Humerus R: Virtually complete. Dist. end damaged. Length measurement—274 mm—probably affected. Vertical D of head: 43.0 mm. Lip forming round head AS. Deltoid WD. Lat. supracond. ridge also WD. General impression robust.

L: Complete. Length 268 mm (NMULC); vertical D of head 41.9 mm; bicond. br. 52.4 mm. Lip forming round head AS. Deltoid tub. WD. Lat. supracond. ridge WD. General impression: robust prox.; less so dist.

Radius R: Complete. Some pitting deep in concavity of prox. AS looks path., but p.m. damage to ROS extensive; not always easy to distinguish. Dist. AS healthy. Length 212 mm (NMULC); TW dist. end 30.0 mm.

L: Virtually complete. Incipient lip perhaps developing round dist. AS. Length 208 mm (NMULC); TW dist. end 31.0 mm.

Ulna R: Almost complete but olecranon too damaged to make accurate measurement poss. ASs look healthy; lip perhaps developing dist.

Hand R: Lacks only 2 finger DPs. Otherwise complete. Better rpd than L. Carpus looks small and healthy. Lips perhaps beginning to develop round ASs generally. ASs of metac. I look healthy but slight beak developing ant. lat. on head.

L: All regions VWR but PPR. Detailed study not poss. Carpus looks small and healthy, as does metac. I.

Innominate

R: All regions rpd. Iliac blade, auricular area, and SN present. F: wide SN and WM PAS. 2 frr. of mature ischium. Pubis present, but pubic symphysis obliterated. Age estimation not poss.

L: Ilium and ischium almost complete but in several pieces. F: wide SN and WM PAS. QM lip round auricular articulation. Pubis fragmentary. Pubic symphysis obliterated. Age estimation not poss.

Femur R: Almost complete. Head broken off. Shaft snapped. Head interesting: "burrowings" into the AS—the activity of some unknown creature of the grave? Consult the taphonomists. TDTM. Gracile.

L: Virtually complete. Head and dist. end broken off, shaft snapped. Same burrowings into head, as on R.

Patella R: Almost complete but TDTM. Has a vastus notch and fossa.

L: Only slightly damaged but enough to make measurement impossible

Tibia R: Virtually complete. Dist. end damaged. Lat. squatting facet. Gracile.

L: Almost complete. Prox. and dist. ends damaged. Gracile.

Fibula R: Virtually complete in 3 frr. Prox. end damaged. Trace of lipping round prox. end med. Gracile.

Foot R: Lacks only 1 MP. Otherwise complete. Talus: nothing spectacular; no evidence of extensions to upper, tibial AS. Metat. I: length 56.1 mm; ASs look healthy but well delineated with incipient lips.

L: All regions rpd but less well so than R. Talus and calcaneus damaged, as are other tarsals. Metat. I: length 55.4 mm; ASs healthy but borders well delineated.

TOMB 14

BAGLAB Skeleton 4 (except head)

SEX M?: robusticity of lumbar VBFs, ribs, R clavicle, L scapula, each hum. Plus: TW of distal end of R radius.

AGE 45+: marked lipping on lumbar VBFs and dist. end of R radius. An imprecise estimate based on incomplete and fragmentary evidence.

STATURE ITD

PATHOL Marked lipping on lumbar VBFs; perceptible lip round dist. AS of radius; some lipping round sternal end AS of R clavicle, with pitting of subchondral bone.

List of remains

Restricted to what was recovered

Vert.col. Handful of lumbar VBFs showing advanced, v. marked osteophytic lipping around rim

Ribs R: Large handful of PPR, CUI rib frr. said to be R

L: Small handful of NVIF frr. Said to be L. One or two of them large (i.e., belonged to a large person).

Sternum Small handful of CUI frr. said to be of the sternum

Clavicle R: Sternal 1/2 preserved. Enormous. Some lipping round AS. AS itself pitted. Subchondral bone affected. In keeping with large humeral and lumbar VBFs.

Scapula R: Handful of frr. said to be of the R scapula

L: much of lat. border, with robust muscular markings

Humerus R: 2 large frr. of shaft, with pronounced lat. cond. ridge: belonged to a large man?

L: Large, robust LBSF said to be of a L hum. If so, it belonged to a large man.

Radius R: 2 frr. making an almost complete bone. Only head missing. Dist. end knobbly, with a perceptible lip round AS. TW dist. end 37.5 mm.

Hand R: 2 metac. SFs, incl. prox. 1/2 of IV

Innominate

R: Handful of CUI R iliac blade frr.

L: Handful of CUI frr. said to be of L innominate

TOMB 15 (**PLS. 478A–F**)

SEX M: glabella; suporb. region; chin; general robusticity of skeleton

AGE DA and SC: 25-30; upper limit of 35

STATURE 178.76 ± 4.32 cm (5′10 1/2″ ± 1 3/4″), determined from R ulna

PATHOL Healed fracture of R metac. III just below head. Massive apical abscess above 13 pointing into both oral cavity and maxillary sinus. 1 CL.

List of remains

Cran. Almost complete. Vault in many pieces. Too damaged to restore completely. Bones distorted too much in antiquity. However enough remained to make it possible to state that:

a. Glabellar and suporb. regions were v. well developed.
b. Metopic suture had never closed.
c. Cran. sutures generally were open externally with signs of closure internally.
d. Left styloid process was long and preserved intact.

Some cranial measurements:

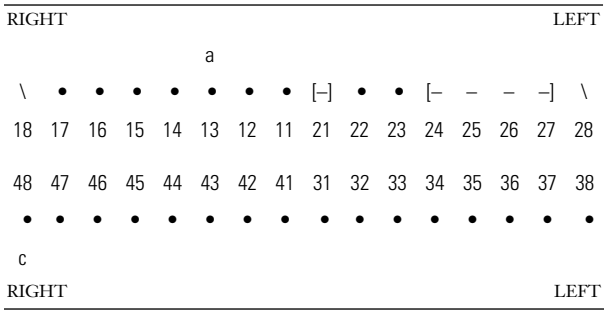
21	MDB	15.0 mm (R)
		16.3 mm (L)
24	FMB	100.0 mm
36	SOS	5.0 mm
39	FRC	110.0 mm
40	FRS	27.0 mm
41	FRF	45.0 mm
42	PAC	123.0 mm
43	PAS	27.0 mm
44	PAF	62.0 mm
Minimum frontal br. (b′)		103.0 mm

Maxilla Less well preserved than mand. Evidence of massive abscess above root of 13 that pointed both into the oral cavity via the hard palate and into the maxillary sinus. No signs of healing. 12 not involved, but soon would have been.

Mandible Very well preserved. Lacks only conds. Body damaged in antiquity.

Dental chart

MAXILLA



MANDIBLE

Comments on individual teeth

Upper right

18 TAB; EDS; TLAD
17 TASP; GC; WSBR 2+ to 3-; chipped dist.-pal. and mes.
16 TASP; QGC; WSBR 3 to 3+; chipped mes. bucc.
15 TASP; GC; NVW; 2 chips bucc.
14 TASP; GC; DE on bucc. cusp; chipped bucc.
13 TASP; apparently GC; modest DE on tip; small chip bucc.; massive apical abscess; tooth loose in socket
12 TASP; moderately GC; some DE
11 TASP; QM worn; extensive DE on OS; EH?

Upper left

28 TAB; TLAD
27 TPSM; GC; WSBR 2+

26 TPSM; GC; WSBR 3– to 3
25 TPSM; SW
24 TPSM; SW
23 TASP; GC; NVW; some DE on tip
22 TASP; GC; NVW; some DE on tip
21 TPSM; QM worn; extensive DE on OS

Lower left

38 TASP; VGC; WSBR 1 to 2; much less worn than 48; WE, but no CL apparent
37 TASP; GC; slightly less worn than 47; WSBR 2+; chipped dist. ling. in exactly the same place as on R
36 TASP; GC; slightly less worn than 46; WSBR 3
35 TASP; VGC; SW
34 TASP; VGC; VSW; v. slightly rotated anticlockwise
33 TASP; VGC; VSW; but much less so than 43; some DE
32 TASP; GC; QW; moderate DE; less so than 42
31 TASP; GC; almost a mirror image of 41; slightly less worn

Lower right

48 TASP; VGC; SW; WSBR 2 to 2+; WE; small carious hole developing on OS dist. bucc.
47 TASP; GC; WSBR 2+ to 3–; largish chip dist. ling.
46 TASP; GC; WSBR 3 to 3+
45 TASP; GC; SW; v. slight DE bucc.; chipped ling.
44 TASP; GC; more worn than 45; slightly rotated clockwise
43 TASP; GC; OS flat; quite marked DE
42 TASP; GC; QW; DE
41 TASP; GC; more worn than 31; more DE

Comments

1. Although the teeth are, in general, in GC, their enamel looks congenitally poor
2. Wear on all teeth, upper and lower, greater on the R side. Did he habitually chew more on the R, and only cease to do so when the abscess involving 13 developed v. rapidly?
3. Traces of path. disorder along alveolar margin of 37 ling. and also in the retromolar fossa behind 38
4. Modest amount of calculus deposited on 31, 32, 33, and 41, 42, 43 ling. and lab.
5. Left cor.proc. flares much more upward and outward than the right
6. Typical male chin profile: squared off
7. Age: Bearing in mind that with a poor mouth he may have felt disinclined to chew on either side, and that all the molars may be underworn for their age, it would not be unreasonable to suggest an age of 25–30 yrs, with an upper limit of 35.

Some manibles measurements

Bigonial breadth (gogo)	104.0 mm
Coronial breadth (crcr)	107.0 mm
Bimental breadth (zz)	46.2 mm
Minimum rameal breadth (rb′)	35.1 mm (R)
	34.8 mm (L)
Molar-premolar chord (m2p1)	30.5 mm (R)
Symphyseal height (h1)	28.0 mm
Ectomolare height (m2h)	25.4 mm (R)
Coronoid height (crh)	75.0 mm (R)
	73.0 mm (L)
Incisura height (ih)	52.0 mm (R)
	51.0 mm (L)

Rest of remains

Vert.col. VPR. V. fragile. Few bodies. Pedicles apparently snapped throughout length of spine. Breaks look ancient. C1 and C2 better preserved than rest. Bodies better preserved in cerv. region. Tip of spinous process of 1 (but not all) lower thoracic vert. deviated markedly to left.

Ribs R: Less WR than L; damaged before and during excavation. Mid to lower ribs markedly robust.
L: WR. V. fragile. No obvious signs of trauma. Generally robust.

Shoulder girdle
R: Scapula PPR, but well developed. Outer half of L? clav. v. well developed.

Humerus R: Distal 2/3 of shaft only; unfortunately lat. side of distal end broken; bicond. br. impossible to measure; lat. cond. ridge v. marked indeed

Radius R: Shaft virtually intact
L: Prox. 1/2 almost intact, distal fragmentary; frr. robust

Ulna R: Complete, restored from 2 frr.; markedly robust; total length 28.3 cm
L: Prox. 1/2 almost intact; distal fragmentary; frr. robust

Hand R: Better preserved than L. No carpus, but metacs, PPs, and MPs WR; DP I preserved; other finger DPs not. R metac. III undoubtedly fractured during life; the head looks as if it has been pushed back (i.e., prox.) into the shaft;

pronounced exostosis on palmar surface a few mm prox. to head.
L: Not particularly WR; much of carpus and metacs I, II, and III preserved intact

Pelvis V. PPR indeed
Femur R&L: Shafts only; markedly robust
Patella L only: Recovered in many pieces
Tibia R: Bag of frr.
L: shaft only; robust
Fibula R: Bag of frr.
L: shaft only; robust, with pronounced muscular markings
Foot R&L: almost complete; R in poorer condition than L. Stout L calcaneus: max. length 85.7 mm. Each foot coated with fine black dust.

TOMB 16

BAGLAB 20 bags labelled simply "Bone" or "Bones from Skeletons 1 and 2"
SEX Skeleton 1: M?: R&L mastoid procs and SMCs
Skeleton 2: F?: face, esp. brow region, gracile, and v. female in appearance. But her chin was square and male!
AGE Skeleton 1: ca. 35? DA only. Probably older: 12 worn LTs.
Skeleton 2: 20–35? DA only.
These assessments of sex and age are imprecise because they are based on incomplete and fragmentary evidence.
STATURE ITD in either case
PATHOL Skeleton 1: Some impressive oral pathology. Some lipping was also seen on the distal end of an ulna. Because Skeleton 1 was clearly older (on dental evidence) than Skeleton 2 it is reasonable to attribute this ulnar fragment to him.
Skeleton 2: Nothing recorded

List of remains

Skeleton 1

Cran. Handful of CVFs. CVT up to 7.5 mm. Fr. L squam./tymp. temp. with mastoid proc. (M), EAM, and SMC. R mastoid proc. (M) and SMC.
Maxilla Bone not recovered. Many teeth were, but too worn to identify (see below). Some carious.
Mandible Incomplete. 3 frr. recovered

Tentative dental chart

MAXILLA

RIGHT															LEFT
[															]
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
[–]	•	•	\	\	•	•	•	\	[/	–	/	/]	\	•	•
c	c													c	
														s	
RIGHT															LEFT

MANDIBLE

Comments on individual teeth

Lower left

38 TASP; QGC; WSBR 2+
37 TASP; appalling condn; NRS
36 TAB; TLAD; unhealthy EDS
35 TASM
34 TASM
33 TPSM
32 TASM
31 TAB; TLAD

Lower right

48 TPSM; CL? on neck mes. bucc.; WSBR 2 to 2+
47 TASP; QGC: incipient caries? on neck mes. bucc.; WSBR 3-
46 TASP; WSBR 4
45 TAB; TLAD
44 TAB; TLAD
43, 42, 41
All TASP and in QGC. Quite extensive DE on OS but nowhere worn flat.

General comments

1. Also recovered were 12 LTs thought to be mostly maxillary. Too worn to ID accurately. Much DE on OS. Cusp patterns of premolars obliterated; some carious.
2. Thus we have a male skull with not VHW molars, canines, and incisors but quite HW, carious premolars.

Cond. length (cyl) 21.4 mm (R)
20.5 mm (L)

Skeleton 2

Cran. Well-preserved skull that has been left in its earth matrix deliberately. Past experience has indicated it would have disintegrated into a large number of individual fragments. Attempting to reassemble them

rarely repays the time and effort involved because the fragments have also usually been distorted by the pressure of earth.

Maxilla Present but not readily chartable

Mandible Complete and charted

Dental chart

MAXILLA

RIGHT															LEFT
[															]
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
( )	•	•	•	•	•	•	•	•	•	•	•	•	•	•	( )
RIGHT															LEFT

MANDIBLE

Comments on individual teeth

Lower right

48 TAB; congenitally absent?
47 TASP; VGC; WSBR 2 to 2+
46 TASP; VGC; WSBR 3–
45 TASP; VGC; UW
44 TASP; VGC; UW
43 TASP; VGC; SW
42 TASP; VGC; VSW
41 TASP; VGC; trace of DE on OS

Lower left

38 TAB; congenitally absent?
37 TASP; VGC; deep fissure on OS; WSBR 2
36 TASP; VGC; WSBR 3–
35 TASP; VGC; UW
34 TASP; VGC; UW
33 TASP; VGC; UW
32 TASP; VGC; VSW
31 TASP; VGC; less worn than R; modest sized chunk of calculus adherent to neck lab.

Rest of remains

Bones of both skeletons were collected into 20 bags labeled simply "Bone" or "Bones from Skeletons 1 and 2." A glance at the plan of Tomb 16 will confirm that the human remains—apart from the skull of Skeleton 2—were scanty and perhaps already commingled. They were also in very poor condition, which made the task of assigning any of them to one or other skeleton virtually impossible.

Vert.col.	Modest colln of CUI NAFs and VBFs
Ribs	Modest colln of CUI frr.
Clavicle	Middle 1/3 of a US clav.? fr.; plus another US clav.? fr.
Scapula	R: Handful of frr., incl. spine/root of acromion
	L: Handful of frr., incl. spine/root of acromion
Humerus	R: Distal 3/4 of shaft; distal 1/2 of shaft of a second
	L: a distal end fr.
Radius	2 SFs of a L? rad., representing the whole of the shaft. Rad. frr. are almost certainly rpd elsewhere in the colln.
Ulna	Prox. end of a L; 2 US distal end frr., 1 showing lipping. Ulnar frr. almost certainly rpd elsewhere in the colln.
Hand	1 metac. I (R) and a few finger phals.
Femur	Prox. 1/2 of shaft of a R fem., plus a quantity of CUI misc. fem. frr.
Tibia	Modest colln of US and NVIF SFs
Fibula	At least 6 US and CUI SFs
Foot	Prox. end of a US metat. I, and a few foot phals.
Misc.	The usual colln of upper and lower LBSFs and other UID PCFs encountered in any poorly preserved double burial.

TOMB 17

No cremated bone recovered from tomb pit

TOMB 18

BONDIS	Upper portion of ash-urn not preserved. It is possible some bone was displaced, but probably not much (cf. Tomb 19).
DGCREM	Average: quite a lot of gray on CFs
LLPCF	44.0 mm
TOTWT	343.0 g
WTCRAN	60.0 g
WTJ&T	2.0 g
WTH&F	1.0 g
WTROS	280.0 g
NOINDS	1: NOAD
SEX	NK
AGE	AD
URNGDS	3 minute bronze frr. and 1 potsherd
ANIMAL	Colln of UB animal bones, incl. a worn herbivore cheek tooth. At least 2 of the burned frr. look animal.
SHELLS	1 small cockleshell fr.

Miscellaneous points of interest

Cran. Frr. small, thin, and not particularly WB: lot of gray on inside. SSAP. CFs confined to vault. No face or pet.temps.

J&T	4 v. small frr., incl. 3 that have remains of at least 1 socket. Fourth fr. is R cor.proc.
H&F	1 v. small fr.
ROS	Colln too RIS to be v. informative

TOMB 19

BONDIS	Upper part of ash-urn not preserved; some cremated bone may be missing. As the base and lower body of the vessel were recovered complete, it is probable most of the bone was recovered.
DGCREM	Not too bad, but quite a lot of gray. Many frr. v. warped. Mand. frr. poorly burned.
LLPCF	57.1 mm
TOTWT	143.0 g
WTCRAN	38.0 g
WTJ&T	5.0 g
WTROS	100.0 g
NOINDS	1: NOAD
SEX	F?
AGE	YA?

Miscellaneous points of interest

Cran.	Frr. small, generally WB and v. thin. SSAP. Was this the skull of a young adult female? Much accretion.
J&T	2 mand. frr. Broken R cond. (gray). Fr. from chin region. No maxill. frr. or TRFs. Small shell in a tooth socket.

Tentative dental chart

44	43	42	41	31	32
\	\	\	\	\	\
RIGHT					LEFT

MANDIBLE

H&F	None seen
ROS	A few cancellous frr., but the majority of the PCFs are medium to short LBSFs

TOMB 20

BONDIS	Ash-urn recovered intact, complete with lid. No possibility any bone could have been displaced.
DGCREM	QG. Most bones WB and warped.
LLPCF	61.0 mm
TOTWT	286.0 g
WTCRAN	65.0 g
WTJ&T	4.0 g
WTH&F	2.0 g
WTROS	215.0 g
NOINDS	1: R pet.temp.; NOAD
SEX	NK
AGE	YA?
SHELLS	2 v. small frr. of marine shell

Miscellaneous points of interest

Cran.	Frr. smallish, thin, and WB: some SIOT. SSAP: youngish adult? L mand. fossa.
J&T	3 small maxill. frr., broken sockets in one look healthy. 2 mand. frr., one with some broken, healthy, sockets. Inner and outer tables separated. 2 RFs. 1 tooth crown fr.
H&F	1 fr. metat. I. 2 frr. met/met heads.
ROS	Small fr. distal end L hum.; small fr. prox. end L ulna: articulate? Misc. colln of cancellous frr.: verts and limb bone joint ends. Dens of C2?: isolated fr. and in isolation not v. easy to be sure of identification.

TOMB 21 (**PL. 479**)

BONDIS	Ash-urn recovered intact, complete with lid. No possibility any bone could have been displaced.
DGCREM	VG
LLPCF	39.5 mm
TOTWT	78.0 g
WTCRAN	49.0 g
WTJ&T	2.0 g
WTROS	27.0 g
NOINDS	1: R&L pet.temps
SEX	NK
AGE	7–8 months: J&T

Miscellaneous points of interest

Cran.	Frr. numerous and on the whole well cremated, except for 1 largish VF that is black on outside. R&L pet.temps. Occipital: squamobasilar fusion not complete.
J&T	1 maxill. fr. with several empty sockets for erupted and erupting teeth. Impossible to chart. One other maxill. fr. MDCD of 63? = 7.1 mm. Plus frr. of 2 molars; roots quite WD. Is the age estimate given above too low?
ROS	Whole skeleton seems to be rpd, but few easily identifiable frr.

TOMB 22

BONDIS	Upper part of ash-urn and of other pot placed in tomb pit slightly damaged. Highly unlikely much, if any, bone could have been displaced.
DGCREM	Average; quite a lot of black visible esp. on large PCFs
LLPCF	49.5 mm
TOTWT	188.0 g
WTCRAN	27.0 g

WTJ&T	1.0 g
WTROS	160.0 g
NOINDS	Prob. 1: NOAD
SEX	NK
AGE	AD: NVO?

Miscellaneous points of interest

Cran.	Frr. neither large in size or number. 1 fr. looks thicker than average (6.5 mm). Some SIOT. 1 fr. has a sharply serrated suture (SSAP) suggesting this subject was not of v. great age.
J&T	1 v. small mand.? fr. with remains of 3 sockets. 1 other possible mand.? fr.: v. small.
H&F	No clearly identifiable pieces seen.
ROS	Most regions apparently rpd, but frr. generally too small to be informative.

TOMB 23

BONDIS	Tomb complete and sealed. No possibility any bone could have been displaced.
DGCREM	Good
LLPCF	45.3 mm
TOTWT	78.0 g
WTCRAN	16.0 g
WTROS	62.0 g
NOINDS	1: NOAD
SEX	NK
AGE	AD
URNGDS	1 potsherd

Miscellaneous points of interest

Cran.	Only ca. 12 small frr. Some SIOT.
J&T	None seen
H&F	None seen
ROS	30–40 small LBSFs

TOMB 24 (**PL. 480**)

BONDIS	Only v. minor damage to rim of ash-urn. Highly unlikely any bone could have been displaced.
DGCREM	Variable. Some frr. extremely WB: white and warped. Others, incl. 1 large CVF gray on outside and black within.
LLPCF	47.1 mm
TOTWT	169.0 g
WTCRAN	30.0 g
WTJ&T	1.0 g
WTH&F	1.0 g
WTROS	137.0 g
NOINDS	1: NOAD
SEX	F?: small mastoid proc.; gracile bones
AGE	AD, but not too old: degree of SC
URNGDS	Handful of potsherds
ANIMAL	4. All v. PB, but burned nevertheless

Miscellaneous points of interest

Cran.	Frr. generally small. Widespread SIOT; SSAP. 1 large fr. (48.9 × 34.4 × 6.5 mm): v. PB indeed. Small, unsided, mastoid proc.
J&T	An almost complete enamelless incisor
H&F	1 small metac.? head fr.
ROS	Mainly short LBFs. Some UID cancellous material. 1 recognizable PCF: prox. end of a rad. 39.1 mm long.

Burial pit "extraordinarily full of black earth," "sweepings," not a pyre site. Carbon/charred wood present in pit: cf. Trench 22, Find 7, and some of the burials in Trench 9. Funeral pyre not far away?

TOMB 25 (**PL. 481**)

BONDIS	Ash-urn complete. Tomb sealed. No possibility any bone could have been displaced, though mention is made that cremated bone was recovered from the tomb pit.
DGCREM	Patchy, some LBFs well burned, but black apparent in many others, in cancellous pieces, and in a number of CFs—esp. the latter.
LLPCF	69.5 mm
TOTWT	252.0 g
WTCRAN	53.0 g
WTH&F	3.0 g
WTROS	196.0 g
NOINDS	1: Uniform appearance of bones
SEX	M: Suprameatal crest
AGE	AD
PATHOL	Increased trabeculation?: 1 fr. 7.4 mm thick
URNGDS	1 potsherd

Miscellaneous points of interest

Cran.	Frr. comprise a modest colln of medium-sized VFs. No face; no pet.temps. VFs thicker than in most cases, up to 7.4 in 1 fr. Some SIOT, but on most frr. only partial. Sutures: not many preserved but from 3 specimens it is clear that while they were SSAP on the outside, some closure had taken place on the inner surface.
J&T	None seen
H&F	4 medium-sized met/met shaft and head frr.

ROS An interesting colln comprising a few cancellous pieces (none easily identifiable) and a large one of LBSFs. The striking feature is that there seemed to be more chunky LBSFs than small ones.

TOMB 26 (**PLS. 482A–B**)

BONDIS Only minor damage to upper parts of ash-urn. Highly unlikely any bone could have been displaced.
DGCREM Generally good. Usual mixture of gray and white, but not much of latter.
LLPCF 44.8 mm
TOTWT 692.0 g
WTCRAN 83.0 g
WTJ&T 6.0 g
WTH&F 3.0 g
WTROS 600.0 g
NOINDS 1: NOAD, but no particularly diagnostic pieces seen
SEX NK: Diagnostic pieces not observed; frr. v. small
AGE AD: V. few tooth sockets observed, all look healthy
SHELLS 2 sea urchin spines
MINERALS 105.0 g of grit from inside of pot

Miscellaneous points of interest

Cran. VFs small and thin: SSAP; some SIOT. Region around foramen caecum white. Frr. generally small.
J&T 6–7 poss. jaw frr. incl. R? mand. cond. (cyl = slightly >12.6 mm). Region around 34, 35, 36? Preserved with mental foramen visible. 6 or so TRFs. Included with CFs is a R maxill. fr. with nasolacrimal duct and part of maxill. sinus.
H&F Lunate and scaphoid frr.? 2 met/met frr. 1 phal. fr. All v. small. ID of all frr. in doubt.
ROS 2 cancellous frr. with either ep. or Harris's lines visible. Small patellar fr. Frr. small and mainly LBSFs. RIS?

TOMB 27

BONDIS Some, but minor, damage to upper part of ash-urn. Probably little possibility any bone could have been displaced.
DGCREM Generally good
LLPCF 49.6 mm
TOTWT 220.0 g
WTCRAN 55.0 g
WTJ&T 5.0 g
WTROS 160.0 g
NOINDS 1: R&L malar frr.; NOAD
SEX NK. Could be F: frr. gracile but evidence not strong enough on its own.
AGE AD or MA?
PATHOL Trace of DJD ant. laterally on R? mand. cond.

Miscellaneous points of interest

Cran. Generally WB. VFs small; thin; SSAP; some SIOT. No whole pet. temps, but 2 small frr. from that region. Bone in region of foramen caecum white.
J&T 5 jaw frr., incl. fr. of R? mand. cond.: trace of DJD ant. lat. Also fr. of mand. body near midline in region of 42, 41, 31, 32, 33. Labial surface missing but genial tubs. clearly visible ling. Sockets for 31 and 32 do not look v. healthy. It is possible that 32 had been lost shortly before death and its socket was healing: shallow and cribriform. Other sockets look healthy. 3 to 4 RFs.
H&F None seen
ROS All regions apparently rpd, but mainly LBSFs. Small patellar fr. Bones RIS?

TOMB 28

BONDIS Ash-urn recovered intact, covered by multiple lids. No possibility any bone could have been displaced.
LLPCF 28.0 mm
TOTWT 41.0 g
NOINDS 1: NOAD
SEX NK
AGE CD?
URNGDS 3 potsherds

Miscellaneous points of interest

37 g of CUI burned CFs and PCFs, incl. a small fr. of a pet.temp. and a tympanic ring. CVFs v. thin indeed and with v. finely serrated sutures: SSAP.

TOMB 29 (**PL. 483**)

BONDIS Upper body of ash-urn not preserved; probably destroyed by plowing. Possible some bone may have been displaced, but perhaps not a great quantity.
DGCREM Excellent
LLPCF 13.0 mm
TOTWT 10.0 g
WTCRAN 4.0 g
WTJ&T 2.0 g
WTROS 4.0 g

NOINDS	1: NOAD
SEX	NK
AGE	Probably <2 1/2 yrs

Miscellaneous points of interest

Cran.	15–20 v. small VFs; most of them <1.8 mm thick
J&T	Crucial evidence but difficult to interpret. Comprise complete but enamelless crowns of the following tentatively identified permanent molars: 16: MDCD 10.5 mm 26: MDCD 9.9 mm 36: MDCD 10.7 mm According to Van Beek (1983), the crowns of these teeth are completely developed between 2 1/2 and 3 yrs of age.
H&F	None seen
ROS	Ca. 20 minute frr.; mainly LBFs. CUI.

TOMB 30

BONDIS	Minor damage only to uppermost part of ash-urn. Highly unlikely any bone could have been displaced.
DGCREM	Good, though 2 thick frr. from back of skull rather poorly burned and CFs have remained quite thick
LLPCF	44.5 mm
TOTWT	201.0 g
WTCRAN	44.0 g
WTH&F	2.0 g
WTROS	155.0 g
NOINDS	1: NOAD
SEX	NK
AGE	AD

Miscellaneous points of interest

Cran.	A small quantity of CVFs: one parietal fr. 5.3 mm thick. No face frr. recovered.
J&T	None apparently recovered
H&F	L? lunate. 2 met/met head frr.
ROS	Mainly LBSFs. Distal end of an ulna. Patellar fr. v. eroded. Some vert. and UID cancellous material. All RIS? See patellar fr.

TOMB 31

BONDIS	Half of ash-urn destroyed (lengthways) by plow. Very likely some bone may have been displaced.
DGCREM	Good
LLPCF	58.5 mm
TOTWT	423.0 g
WTCRAN	51.0 g
WTJ&T	1.0 g
WTH&F	1.0 g
WTROS	370.0 g
NOINDS	1: dens of C2
SEX	NK
AGE	AD

Miscellaneous points of interest

Cran.	Frr. extremely small, thin, and generally WB. No face frr.; all from vault.
J&T	1 minute fr. that might show traces of a socket
H&F	2 tiny frr.: one of a PP; the other may come from the head of a metac. ID of both v. doubtful.
ROS	Mainly LBFs of modest size; some cancellous tissue present. Quite clear all had been RIS.

TOMB 32

No cremated bone encountered

TOMB 33

BONDIS	Almost certain this bone, found slightly to the north of Tomb 33, was displaced from Tomb 33, which otherwise had no cremated bone preserved in it.
DGCREM	Good
NOFRR	5
LLPCF	29.9 mm
TOTWT	8.0 g

Miscellaneous points of interest

8 g of CUI LBFs

TOMB 34

BONDIS	Tomb very poorly preserved. Most of bone displaced.
NOFRR	8 minute scraps
TOTWT	2.0 g

Miscellaneous points of interest

2 g of CUI minute frr.

TOMB 35

BONDIS	Upper part of ash-urn not preserved. Possible some bone may have been displaced.
DGCREM	Good
LLPCF	48.5 mm
TOTWT	255.0
WTCRAN	34.0 g
WTJ&T	1.0 g
WTROS	220.0 g

NOINDS	1: NOAD
SEX	NK
AGE	AD

Miscellaneous points of interest

Cran.	Handful of v. small, thin VFs. SSAP but no SIOT
J&T	2 small mand. frr., 1 of R ramus with lingula down to distal margin of 48. Plus L cor.proc.
H&F	No easily identifiable pieces seen
ROS	Usual small colln of cancellous pieces and a larger one of LBSFs. Prox. end of a rad.

TOMB 36

BONDIS	Upper part of tomb much disturbed. Very likely some bone may have been displaced.
DGCREM	Good
LLPCF	39.3 mm
TOTWT	67.0 g
WTCRAN	7.0 g
WTROS	60.0 g
NOINDS	1: NOAD
SEX	NK
AGE	CD or AT?

Miscellaneous points of interest

Cran.	10–15 frr. VFs v. small and thin: some only 2–3 mm thick.
J&T	None seen
H&F	None seen
ROS	Handful of UIF LBSFs, the longest not v. WB. Some unanswered questions: Could the cortical thickness of any child LBSF be as high as 6.5 mm? Was the longest PCF (WT: 5 g) an animal bone?

TOMB 37 (**PL. 484**)

BONDIS	Ash-urn complete. Tomb sealed. No possibility any bone could have been displaced.
DGCREM	VG
LLPCF	51.0 mm
TOTWT	148.0 g
WTCRAN	21.0 g
WTH&F	2.0 g
WTROS	125.0 g
NOINDS	1: NOAD
SEX	NK
AGE	AD
PATHOL	Trace of DJD on anterior surface of a thumb metac. fr.

Miscellaneous points of interest

Cran.	Frr. few in number and confined to vault. SIOT. 1 suture well fused.
J&T	None seen
H&F	3 small frr. incl. base of a path. metac. I mentioned above, and 2 other metac. SFs?
ROS	V. damaged, CUI, distal end of a hum. A few other cancellous frr. but the bulk of the ROS frr. are LBSFs: RIS.

TOMB 38

BONDIS	Half of ash-urn broken lengthways. Possible some bone may have been displaced.
DGCREM	VG, generally. A lot of white frr., but R mand. cond. and glabella region less WB.
LLPCF	41.0 mm
TOTWT	474.0 g
WRCRAN	90.0 g
WTJ&T	3.0 g
WTH&F	1.0 g
WTROS	380.0 g
NOINDS	1: NOAD
SEX	M: glabella
AGE	AD
PATHOL	V. faint trace of lipping on prox. end of L? ulna
URNGDS	Remains of knife handle? 1 animal bone fr. with metal core; 4 other animal bone frr. that are prob. associated.

Miscellaneous points of interest

Cran.	Frr. generally small. SSAP. Some SIOT. Glabella and suporb. region male. R? mastoid air cells with enormous emissary vein.
J&T	R mand. cond.: cyl >19.2 mm
H&F	1 R? scaphoid fr. and a possible metac. SF
ROS	Some cancellous material, but not much. Frr. RIS? Some accretion.

TOMB 39

Tomb poorly preserved. Cremated remains not analyzed (see chapter 3, pp. 113, 241, note 20).

TOMB 40

BONDIS	Upper part of ash-urn not preserved. Possible some bone may have been displaced.
DGCREM	Good
LLPCF	64.6 mm
TOTWT	210.0 g
WTCRAN	47.0 g
WTROS	163.0 g[18]
NOINDS	1: NOAD

SEX	M?: large R mastoid proc.
AGE	AD

Miscellaneous points of interest

Cran.	Mainly VFs but part of a zygomatic arch and the R mastoid proc. VFs, like all the others, small, thin, and showing some SIOT. 1 VF shows classic feature of a suture still being patent on the outside but completely fused on the inside.
J&T	None seen
H&F	None seen
ROS	Comprises large handful of LBSFs and a few small cancellous pieces. The longest PCF is much longer than any of the others.

TOMB 41

BONDIS	Ash-urn much damaged, probably by plowing. Very likely some bone may have been displaced.
DGCREM	QG. A lot of white pieces but a fair no. of CFs gray/ black on inside.
LLPCF	57.4 mm
TOTWT	349.0 g
WTCRAN	86.0 g
WTJ&T	1.0 g
WTH&F	2.0 g
WTROS	260.0 g
NOINDS	1: NOAD
SEX	NK
AGE	AD

Miscellaneous points of interest

Cran.	Frr. on the whole small and mainly from vault. SSAP. Some SIOT. Frr. seem slightly thicker: 1 VF 6.8 mm thick. A small mastoid proc.
J&T	Just 1 minute L maxill. fr. from near midline, with sockets for 21, 22, 23.
H&F	1 metac. I? head fr. 1 finger DP fr.
ROS	NVIF. Frr. generally small and perhaps RIS.

TOMB 42

BONDIS	Upper part of ash-urn plowed away. Possible some bone may have been displaced.
DGCREM	Good
LLPCF	51.5 mm
TOTWT	371.0 g
WTCRAN	95.0 g
WTJ&T	6.0 g
WTH&F	10.0 g
WTROS	260.0 g
NOINDS	1: NOAD
SEX	NK
AGE	AD

Miscellaneous points of interest

Cran.	Fr. L pet. temp. Fr. L malar with frontomalare. Frontal fr. from region around foramen caecum. WB. VFs not v. thick. SSAP. Some SIOT.
J&T	1 maxill. and 1 mand. fr. Not all sockets complete: no roots.

Tentative dental chart

MAXILLA

			LEFT
	24	25	26
33	34	35	36
			LEFT

MANDIBLE

H&F	8 met/met frr. 4 hand? PP frr., incl. an almost complete hand PP
ROS	V. few cancellous frr. Prox. end of a rad. 2 nice rib frr.

TOMB 43 (**PL. 485**)

BONDIS	Ash-urn complete, except for 1 fragment of handle arch, and sealed by stone. No possibility any bone could have been displaced.
DGCREM	Good
LLPCF	30.2 mm
TOTWT	17.0 g
WTCRAN	13.0 g
WTROS	4.0 g
NOINDS	1: NOAD
SEX	NK
AGE	Prob. a v. young child or a baby; greater precision not possible

Miscellaneous points of interest

Cran.	Exceed PCFs in number: v. thin, look as if they belonged to a v. young child or a baby.
J&T	None seen. Their absence makes age assessment v. difficult.
H&F	None seen
ROS	V. small quantity of LBSFs. No verts. No pelvis.

TOMB 44 (**PL. 486**)

BONDIS	Ash-urn recovered intact, complete with lid. No possibility any bone could have been displaced.
DGCREM	VG. V. few gray pieces.
LLPCF	59.3 mm
TOTWT	305.0 g
WTCRAN	74.0 g
WTJ&T	4.0 g
WTH&F	5.0 g
WTROS	2.0 g
NOINDS	1: NOAD
SEX	NK
AGE	ca. 8–10 yrs: DA

Miscellaneous points of interest

Cran.	Handful of small, thin, mainly VFs. Some SIOT. Sutures obviously still patent: SSAP. R&L pet. temps. No face frr. Definitely the bones of a child.
J&T	No maxilla. L. mand. cond. almost complete Fr. of R. US lower 6 (36 or 46): crown complete but lacking enamel. 3 TRFs. Small mand. body fr.: labial surface missing but tentative dental chart possible:

42	41	31	32	73	74	75
				33	34	35
RIGHT						LEFT

MANDIBLE

H&F	12–14 frr., incl. R&L metat. I head frr.; distal 3/4 of L metac. I with what looks like the remains of an ep. line on lateral side of head. If so it is unusual: metac. I usually does not have a capital ep. Plus: 2 finger? PPs, much of a finger PP, and a small PP base fr. L talus almost complete.
ROS	Usual colln of brittle vitreous LBSFs of all sizes. Plus some other interesting frr. Much of S1: neurocentral fusion complete but closure of neural arch incomplete posteriorly: smooth outline to end of L portion posteriorly. Another small fr. looks like a vert. with neurocentral fusion complete. Distal end R? hum., with all eps. unfused. An upper femoral fr. with neck showing surface for capital ep. Fr. of a distal femoral ep. Much of a prox. tibial ep. 1 UID LB end with metaphysial surface clearly visible. L talus almost complete

TOMB 45

BONDIS	Ash-urn damaged. Possible some bone may have been displaced, but probably little, if any.
DGCREM	Good
LLPCF	52.0 mm
TOTWT	247.0 g
WTCRAN	53.0 g
WTJ&T	2.0 g
WTH&F	2.0 g
WTROS	190.0 g
NOINDS	1: NOAD
SEX	NK
AGE	AD
PATHOL	V. slight trace of DJD on a prox. rad. fr.

Miscellaneous points of interest

Cran.	Frr. small, thin, WB; some SIOT. Frr. mainly of vault. No face.
J&T	3 v. small almost UID frr. of jaw with broken sockets, one from front of maxilla?, another from front of mand.? Sockets healthy. Also tip of R cor.proc.
H&F	Head of L metat. I; base of a hand PP
ROS	All frr. WB and RIS?. A few vert. frr.: none showing DJD.

TOMB 46

BONDIS	Ash-urn recovered intact, complete with multiple covers. No possibility any bone could have been displaced.
DGCREM	Good. Many white frr. Some black on verts. But frr. generally warped and white.
LLPCF	58.8 mm
TOTWT	503.0 g
WTCRAN	37.0 g
WTJ&T	11.0 g
WTH&F	5.0 g
WTROS	450.0 g
NOINDS	1: R&L pet.temps; C2 less dens; NOAD
SEX	NK
AGE	AD: NVO (cran. sutures), but some a.m. tooth loss suspected
PATHOL	V. slight trace of DJD on distal end of a L rad. fr.

Miscellaneous points of interest

Cran.	R&L pet. temps. Frontal region near foramen caecum v. WB. SIOT. SSAP. Frr. generally thin.
J&T	R maxill. and mand. frr. Angle of R side of mand.: flared out. R mand. body fr. L cor.proc. 1 loose root of an ant. tooth.

Tentative dental chart

MAXILLA

RIGHT						
		15	14	13	12	11
47	46	45	44	43	42	41
RIGHT						

MANDIBLE

H&F Metac. I head fr. 2 hand/foot PP frr. Navicular? fr. Metat. I head fr. Another metat. head fr.

ROS C2 less dens. No apparent DJD on verts, but not enough to go on.

TOMB 47 (**PL. 487**)

BONDIS Ash-urn intact and covered by a multiple lid. No possibility any bone could have been displaced.

DGCREM VG indeed. Most frr. whitish to white. Some grayish CFs and cancellous tissue. Even back of skull white.

LLPCF 62.2 mm

TOTWT 544.0 g

WTCRAN 170.0 g

WTJ&T 17.0 g

WTH&F 7.0 g

WTROS 350.0 g (vert.col. frr. 22.0 g)

NOINDS 1: R&L pet.temps; NOAD

SEX F? Frr. from all regions look gracile: R&L malars; L orbit.

AGE MA? DJD on at least 1 VEF and on heads of 2 metacs I. But tooth sockets look healthy (exc. of 22) and cran. sutures open.

PATHOL Some DJD on hands, verts and L mand. cond. Abscess above 22.

ANIMAL 2 small LBSFs, which might be animal: v. dense

Miscellaneous points of interest

Cran. WB and WR. Medium size; SSAP; much SIOT. Frr. R&L malars; L malar joins L frontal to form much of superolateral border of orbit: rim sharp; orbit small; F trait. Frontal sinus (2 frr.) not v. pneumatised. R&L pet.temps. Fr. L EAM with posterior root zygomatic arch. Region around foramen caecum—IOP—v. sharp; that around EOP internally white.

J&T Maxilla: 2 frr. (1R; 1L) with sockets for 15, 14, 13, 12, 11, and 21, 22, 23, 24. Abscess clearly visible in socket of 22: cf. 12; not deep and tapering; instead eroded and circular. Mand.: 9 poss. frr., incl. frr. of R&L conds and cor.procs (?). L mand. cond. with DJD ant. 5 body frr., incl. one with damaged sockets for 43, 42, 41. 2 UID frr. with broken sockets. ID of cor.proc. frr. in doubt. 5 root frr.; majority ant?. One looks as if crown had been v. worn, perhaps a dentine stump.

H&F Frr. of what look like R&L capitates, a lunate, and R&L scaphoids (but note poss. confusion between latter and parts of verts—e.g., mammillary procs and thoracic transverse procs). 4 metac. frr., incl. heads of R&L metacs I (?), each with marked DJD lipping ant.-lat. 6 hand PP/MP frr., incl. a head with DJD lipping. 1 thumb DP fr.; 1 hand DP fr.

ROS All regions rpd. Fem. head frr. Vert.col.; WT 22.0 g. But mainly LBSFs. Small fr. patella? Trace of C2 body with dens snapped off. ID in doubt. Fr. distal end hum.; v. gracile.

TOMB 48 (**PL. 488**)

BONDIS Ash-urn intact and tomb sealed by a very large stone. No possibility any bone could have been displaced.

DGCREM QG: some black LBSFs

LLPCF 44.7 mm

TOTWT 124.0 g

WTCRAN 13.0 g

WTH&F 1.0 g

WTROS 110.0 g

NOINDS 1: NOAD

SEX NK

AGE AD

Miscellaneous points of interest

Cran. 8 small, thin VFs. SIOT.

J&T None seen

H&F 1 minute metac. head fr.; 2 finger PP head frr.

ROS Small quantity of cancellous material. The rest are LBSFs.

TOMB 49

BONDIS Some damage to the upper part of the ash-urn. Unlikely any bone could have been displaced.

DGCREM Good

LLPCF 53.5 mm

TOTWT 228.0 mm

WTCRAN 50.0 g

WTJ&T	2.0 g
WTH&F	1.0 g
WTROS	175.0 g
NOINDS	1: NOAD
SEX	F? Gracile frr.
AGE	AD
SHELLS	2–3 frr. of marine shell

Miscellaneous points of interest

Cran.	Handful of medium-sized VFs. Apparently thin but SIOT widespread. 1 fr. with suture finely serrated almost down to inner table: closure only just beginning. But only one such specimen. Small fr. L malar with frontomalar suture: gracile.
J&T	1 minute mand.? fr. with 2 broken sockets, 1 larger one

43	42	41	31	32
RIGHT				LEFT

MANDIBLE

H&F	1 carpal? fr.: scaphoid, lunate, or pisiform?
ROS	Mainly LBSFs. Few identifiable pieces. 1 rib fr. Fr. distal end L? rad. Frr. clearly RIS.

TOMB 50

BONDIS	Lower body of ash-urn in situ; upper body found in fragmentary state but within tomb. Possible, but unlikely, some bone may have been displaced.
DGCREM	QG
NOFRR	ca. 40 CR&PC frr.
LLPCF	44.4 mm
TOTWT	29.0 g
WTCRAN	7.0 mm
WTH&F	1.0 g
WTROS	21.0 g
NOINDS	Prob. 1
SEX	NK
AGE	AD

Miscellaneous points of interest

Cran.	V. small no. of small frr. SIOT
J&T	None seen
H&F	1 tiny fr. of what looks like a lunate
ROS	Handful of undistinguished LBFs

TOMB 51 (**PL. 489**)

BONDIS	Ash-urn recovered intact with multiple lids/coverings. No possibility any bone could have been displaced.
DGCREM	VG indeed. Most bones v. white, warped, and vitreous.
LLPCF	62.7 mm
TOTWT	547.0 g
WTCRAN	88.0 g
WTJ&T	5.0 g
WTH&F	14.0 g
WTROS	440.0 g
NOINDS	1: NOAD
SEX	F
AGE	AD: 48 fully erupted
SHELLS	1 v. small cockleshell fr.

Miscellaneous points of interest

Cran.	Frr. generally small, WB, and thin. SIOT. SSAP. Vault bones v. thin indeed. R pet.temp.
J&T	R cor.proc. fr. R mand. body fr. With sockets of 47, 48. 1 ant. TRF.
H&F	Some large frr., incl. what look like 2 tali and a cuboid. A capitate fr. A metat. I head fr. and 2 PP frr.
ROS	Most of ROS apparently rpd but frr. rather too small to be v. informative. 1 fine rib fr. and a distal fib. fr. with what looks like the remnant of an ep. line.

TOMB 52 (**PL. 490**)

BONDIS	Ash-urn recovered intact. No possibility any bone could have been displaced.
DGCREM	Good. Most frr. white, warped, and brittle.
LLPCF	67.9 mm
TOTWT	416.0 g
WTCRAN	98.0 g
WTJ&T	2.0 g
WTH&F	6.0 g
WTROS	310.0 g
NOINDS	1: NOAD
SEX	NK
AGE	AD: some a.m. tooth loss
ANIMAL	See appendix B

Miscellaneous points of interest

Cran.	Frr. generally small and mainly VFs. NVIF. Not much SIOT.
J&T	An interesting mand. fr. from chin region. Much of labial surface damaged but genial tubs. present. Another UID jaw fr. with a socket. 1 loose TR.

Tentative dental chart

43	42	41	31
RIGHT			LEFT

MANDIBLE

H&F Quite interesting. R&L scaphoids and ca. 10 other met/met and phal. frr.
ROS Pieces all small in size and thus NVIF

TOMB 53

BONDIS Tomb v. much disturbed by Classical wall foundations
LLPCF 47.9 mm
TOTWT 60.0 g
WTCRAN 10.0 g
WTROS 50.0 g

Miscellaneous points of interest
A CUI colln of burned CR&PC frr.

TOMB 54

BONDIS Minor damage to upper part of ash-urn. Highly unlikely any bone could have been displaced.
DGCREM Good
LLPCF 58.7 mm
TOTWT 95.0 g
WTCRAN 44.0 g
WTJ&T 2.0 g
WTROS 49.0 g
NOINDS 1: L pet.temp.; NOAD
SEX NK
AGE AD
SHELLS 4 minute frr. of marine shell

Miscellaneous points of interest
Cran. Frr. generally small, thin, WB, and from vault. Some SIOT. L pet.temp.
J&T Small R maxill. fr. from midline to approx. 15 with several sockets badly damaged. 1 premolar TRF.
H&F None seen
ROS Comprises a handful of small LBFs: RIS. V. little cancellous material.

TOMB 55

BONDIS This bone was excavated in subtopsoil in the area immediately above Tomb 55. In this report there is no mention of any bone deriving from this tomb. It is therefore possible, but far from certain, that this 6 g was displaced from Tomb 55.
NOFRR 3 CVFs
TOTWT 6 g

Miscellaneous points of interest
3 small CVFs weighing 6.0 g. Maximum thickness 6.1 mm.

TOMB 56

BONDIS Damage to ash-urn lengthways. Very likely some bone may have been displaced.
DGCREM Good
LLPCF 34.5 mm
TOTWT 131.0 g
WTCRAN 30.0 g
WTJ&T 1.0 g
WTROS 100.0 g
NOINDS Prob. 1: NOAD
SEX NK
AGE AD
URNGDS Lump of rusty, slag-encrusted iron. Length 42 mm.

Miscellaneous points of interest
Cran. Few in number; small in size. SIOT.
J&T Small mand. fr. from chin region with empty sockets of:

44	43	42	41	31
RIGHT				LEFT

H&F None seen
ROS Few in number; small in size

TOMB 57 (**PL. 491**)

BONDIS Ash-urn recovered almost intact, but, curiously, had been placed intentionally almost upside down *in situ* in the tomb pit, where it was firmly set in place. Highly unlikely that any bone could have been displaced.
DGCREM Good
LLPCF 38.6 mm
TOTWT 39.0 g
WTCRAN 20.0 g
WTJ&T 1.0 g
WTROS 18.0 g[19]
NOINDS 1
SEX NK
AGE Impossible to assess accurately from meager evidence of v. thin CFs, 1 ant. TR, a small maxill. fr., and an unmeasurable fem. fr. The impression given is that these are the bones of a child less than 1 year old.

Miscellaneous points of interest
Cran. Frr. thin and quite large given the young age of this subject. Fr. of a pet.temp. with bony labyrinth.

J&T	Minute fr. of a maxilla with traces of roots of 2 molars. 1 ant. TR far from fully developed; root canal v. open at tip.
H&F	None seen
ROS	1 prox. fem. fr.? Quite large and looks more like that of a baby than a late fetus or neonate. Alas, too damaged to measure properly.

TOMB 58 (**PL. 492**)

BONDIS	Minor damage to upper part of the ash-urn, but highly unlikely any bone could have been displaced.
DGCREM	Good. Not much black. Some earth staining and many accretions.
LLPCF	60.6 mm
TOTWT	1522.0 g
WTCRAN	156.0 g
WTJ&T	10.0 g
WTH&F	6.0 g
WTROS	1350.0 g
NOINDS	2? Possible duplication of some R&L pet.temp. frr., and scaphoids.
SEX	NK
AGE	MA; and AD?
PATHOL	Slight trace of DJD on prox. end of a rad. Trace of wedging on a large vert. body.
URNGDS	Ca. 16 potsherds

Miscellaneous points of interest

Cran.	Frr. generally small, thin, and white. R&L pet.temps; plus 2 other small pet.temp. frr. V. small fr. from region of foramen caecum on frontal with portion of frontal sinus visible. SIOT.
J&T	Almost complete R&L mand. conds. Fr. L ramus with lingula. V. small fr. from region of 38: lingual surface of socket for 38 cribriform. Small mand. fr. with empty sockets from 33 to 44. 3 UID jaw frr. with sockets. 1 molar root and crown fr.: no enamel. 1 other TRF.
H&F	Ca. 17 small frr., incl. frr. of paired R&L scaphoids and of a third; a metat. head; a complete hand MP; an UID phal. head.
ROS	NVIF. Frr. not v. large or easy to identify. 2 rib frr. Prox. end of a rad. with slight trace of DJD. Vert. body with trace of wedging. Dens of a C2 or tip of a T vert. transverse proc.: prob. the former. Small patellar fr. Large chunk of ischium?, with CF adhering. Other similar accretions observed.

TOMB 59

BONDIS	Base only of ash-urn preserved in situ. Most of bone would have been displaced.
DGCREM	Good
NOFRR	5 PCFs
TOTWT	3.0 g

Miscellaneous points of interest

CUI burned frr.; WT 3 g

TOMB 60

BONDIS	Minor damage only to uppermost part of ash-urn. Highly unlikely any bone could have been displaced.
DGCREM	Average to good. Quite a lot of blackish CFs, esp. from back of skull (e.g., EOP region).
LLPCF	58.5 mm
TOTWT	167.0 g
WTCRAN	67.0 g
WTROS	100.0 g
NOINDS	1: 1 pet.temp.; NOAD
SEX	M?: EOP. But see below for comments on general gracility of bones
AGE	AD

Miscellaneous points of interest

Cran.	Frr. generally quite small and not v. thick
J&T	None seen
H&F	None seen
ROS	Mainly LBSFs; 1 or 2 rib frr.; no verts, pelvis, or large chunks of joint surfaces. Generally gracile.

TOMB 61?

BONDIS	The sherds came from a lens of blackened earth, containing cremated bone and some burned sherds in the area between Tombs 60, 61, and 62. The bone may have been displaced from either Tomb 61 or 62 (but not Tomb 60). Associated were the catalogued sherds 33, 34, and 35. There was no cremated bone encountered within Tomb 61, which is therefore perhaps the most likely tomb from which this bone may have been displaced.
DGCREM	Good
NOFRR	ca. 25; prob. all PC
LLPCF	39.1 mm
TOTWT	23.0 g

Miscellaneous points of interest

23.0 g of CUI burned bone

TOMB 62

BONDIS Upper part of ash-urn not preserved. Possible some bone may have been displaced.
DGCREM Not recorded
LLPCF 62.7 mm
TOTWT 52.0 g

Miscellaneous points of interest
52.0 g of burned bones, incl. 1 CVF; several VEFs; a metac.? fr.; 2 moderately long PCFs (second longest 52.0 mm). Rest much shorter. V. much a token or incomplete colln.

Plus: 1 UB fr. of unknown species

TOMB 63

BONDIS Possible some bone may have been displaced
DGCREM QG
LLPCF 35.7 mm
TOTWT 48.0 g[20]
WTCRAN 26.0 g
WTROS 22.0 g
NOINDS 1: NOAD
SEX F?: frontal fr.
AGE AD

Miscellaneous points of interest
Very unimpressive. Literally a handful of CUI CR&PC frr.

Cran. Frr. generally thin. Region around upper outer border of R orbit preserved down to frontomalare. Orbital margin sharp.
J&T None seen
H&F None seen
ROS See above. Very unimpressive and CUI.

TOMB 64

BONDIS Tomb almost totally destroyed by foundation trench cutting for a Classical wall, which accounts for its sad state of preservation.
DGCREM Good
NOFRR 3 PCFs
TOTWT 3.0 g

Miscellaneous points of interest
3.0 g of CUI PCFs

TOMB 65

BONDIS Ash-urn recovered almost complete. No possibility any bone could have been displaced.
DGCREM Good
LLPCF 57.5 mm
TOTWT 258.0 g
WTCRAN 35.0 g
WTJ&T 2.0 g
WTH&F 1.0 g
WTROS 220.0 g
NOINDS 1: L pet.temp.; R&L mand. cor.procs; NOAD
SEX NK
AGE AD

Miscellaneous points of interest
Cran. Handful of small, thin VFs. 1 much larger parietal fr. with parietotemporal AS: thin. V. widespread SIOT. Fr. L pet.temp.
J&T R&L cor.procs. 3 minute mand. frr. with broken sockets.
H&F 1 L? metat. head fr.
ROS Mainly LBSFs. But perhaps more UID cancellous pieces than usual. 2 VBFs with no DJD. 1 rib fr. 56.3 mm long. Frr. RIS.

TOMB 66

At least 1 fragment of cremated bone (not analyzed)

TOMB 67

BONDIS Ash-urn covered by another pot. No possibility whatsoever any bone could have been displaced.
DGCREM Good. Some black. Much earth staining.
LLPCF 55.9 mm
TOTWT 648.0 g
WTCRAN 125.0 g
WTJ&T 1.0 g
WTH&F 2.0 g
WTROS 520.0 g
NOINDS 1: 1 pet.temp fr.; NOAD
SEX M?: L suporb. region
AGE AD

Miscellaneous points of interest
Cran. L suporb. region with suporb. notch; quite large: M? Small mastoid proc. fr.
J&T 1 TRF. Small R? cor.proc. fr.
H&F Trapezoid; scaphoid; metac. head
ROS V. few recognizable frr. Rib fr.; fr. dens of C2?; prox. end ulna; prox. end R&L rads; several VBFs.

TOMB 68

BONDIS Ash-urn damaged lengthways. Possible some bone may have been displaced.

DGREM Not too good. Lot of black visible in centre of cortex of LBFs.
LLPCF 57.1 mm (by far the longest)
TOTWT 253.0 g
WTCRAN 45.0 g
WTH&F 3.0 g
WTROS 205.0 g
NOINDS 1: NOAD
SEX NK
AGE AD
ANIMAL 1 fr. sheep/goat cheek tooth

Miscellaneous points of interest

Cran. Frr. small, thin, and few in number
J&T None seen
H&F 1 navicular; 1 met/met head fr.
ROS Frr. small. Plus: 1 small fr. of UB bone.

TOMB 69 (**PL. 493**)

BONDIS Only minor damage to the upper part of the ash-urn. Almost no possibility any bone could have been displaced.
DGCREM Good. Frr. v. small. RIS?
LLPCF 20.4 mm
TOTWT 30.0 g
NOINDS NK
SEX NK
AGE NK
URNGDS 5 frr. of a thin bronze ring
MINERALS 1 small oval pebble

Miscellaneous points of interest

Cran. 2 v. small frr. of a pet.temp. VFs small and thin. Every sign they were RIS.
J&T None seen
H&F None seen
ROS Frr. small and gracile
Misc. WT of stones and pebbles 92 g

TOMB 70 (**PL. 494**)

BONDIS Only minor chipping to rim of ash-urn. No possibility any bone could have been displaced.
DGCREM Generally VG
LLPCF 63.4 mm
TOTWT 693.0 g[21]
WTCRAN 165.0 g
WTJ&T 10.0 g
WTH&F 5.0 g
WTROS 513.0 g
NOINDS 1: C2 with dens; chin region; NOAD
SEX M?: bones more robust than many other Torone specimens
AGE YA?: healthy VBFs and tooth sockets; VBF and a cancellous fr. with traces of ep. lines
PATHOL Some CVFs quite thick: 8.4, 8.5, 9.3 mm

Miscellaneous points of interest

Cran. On the whole WB but CVFs thicker than usual and consequently perhaps less WB, although a fr. from region around foramen caecum v. white (ID not in doubt: frontal sinus clearly visible). 4 pet.temp. frr. almost certainly of same individual, each broken in two.
J&T WR. 10 jaw frr. and 4 TRFs. Quite large fr. of R maxilla extending from approx. 14 to midline. Similar but much smaller fr. of L maxilla preserved; better burned than R. R&L mand. conds; neither complete but almost so. Fr. L cor.proc. L mand. body fr. with socket for 38 and half that of 37: both look healthy. Interesting mand. fr. from chin region with sockets for 42, 41, 31, 32 intact and healthy; broken sockets for 43 and 33, which also look healthy.
H&F R? scaphoid fr. 3 met/met SFs. 1 hand PP shaft and head fr. 3 finger DP frr.
ROS Mainly LBSFs, but also preserved was a respectable quantity of both VEFs and UID cancellous frr. Cancellous tissue generally not v. WB. Fr. distal end L hum. and fr. prox. end R? rad.: both WB; elbows did not poke out of fire. 1 cancellous fr. with distinct band of denser tissue running through. Ep. or Harris's line?

TOMB 71

Tomb very poorly preserved; no cremated bones encountered

TOMB 72 (**PL. 495**)

BONDIS Some damage to upper part of ash-urn. Unlikely that any bone could have been displaced.
DGCREM Generally VG. Some v. white CVFs.
LLPCF 66.7 mm
TOTWT 630.0 g
WTCRAN 115.0 g
WTJ&T 11.0 g
WTH&F 12.0 g
WTROS 492.0 g
NOINDS 1: dens of C2; R&L mand. lingulae; NOAD
SEX NK: no diagnostic pieces seen
AGE AD but NVO: state of closure of cran. sutures; no apparent traces of DJD on VBFs

Miscellaneous points of interest

Cran. Many in number and of all sizes. SSAP externally; signs of closure internally. Some SIOT. Fine specimen—v. white—of frontal bone from region around foramen caecum with frontal sinus.

J&T 10–11 mixed jaw frr., all small. Not easy to comment on sockets. 1 still has a root fr. in place. Interesting find: small frr. from around lingula on each side. Pretty well identical: 1 individual.

H&F 9 NVIF frr., mainly met/met heads and bases. 1 poss. carpal fr. and the head of a toe? PP. Fr. of L talus: small.

ROS Patellar fr. and many other cancellous/articular frr.: WT 51.0 g. Modest no. of VEFs, incl. isolated dens of C2; no clear traces of advanced DJD: WT 14.0 g. Large quantity of v. small frr.: WT 190.0 g. 6 identified rib frr.: WT 7.0 g. Rest of PCFs comprise NVIF LBSFs; WT 230.0 g.

TOMB 73

DGCREM NR
NOFRR 5 PCFs
LLPCF 29.1 mm
TOTWT 4.0 g

Miscellaneous points of interest

4.0 g of CUI burned bone

TOMB 74

Cremated remains not preserved

TOMB 75 (**PL. 496**)

BONDIS Upper part of tomb destroyed. Possible some bone may have been displaced.
DGCREM Good
LLPCF 37.8 mm
TOTWT 209.0 g
WTCRAN 57.0 g
WTH&F 2.0 g
WTROS 150.0 g
NOINDS 1: NOAD
SEX F?: frr. generally gracile
AGE AD
ANIMAL 3–4 bones that may have been worked[22]

Miscellaneous points of interest

Cran. Medium-sized colln of small, thin VFs with SSAP, in some cases both internally and externally. Frr. generally thin, the majority are 3.0–4.0 mm thick.

J&T None seen

H&F 5 v. small metac. and phal. shaft and head frr.

ROS Familiar combination of a small quantity of small UID cancellous pieces, and a larger one of small LBSFs. All RIS?

TOMB 76

BONDIS Upper parts of ash-urn destroyed. Possible some bone may have been displaced.
DGCREM Generally good. Some black cancellous frr. and gray patches in cortex of some LBSFs
LLPCF 58.3 mm
TOTWT 248.0 g
WTCRAN 84.0 g
WTJ&T 4.0 g
WTROS 160.0 g
NOINDS 1: NOAD
SEX M?: EOP
AGE AD

Miscellaneous points of interest

Cran. Modest colln of small VFs. No pet.temps. Not all thin: 1 parietal? fr. ca. 8.0 mm thick. Region around EOP WB int. and ext. Fr. L malar with frontomalar suture. Minute fr. of R suporb. region with small tub. medially for ligament retaining suporb. nerve. Quite widespread SIOT.

J&T 5 v. small maxill.? frr.: 2 with traces of broken sockets; 3 with traces of floor of maxill. sinus.

H&F No identifiable frr. seen

ROS Mainly LBSFs. Few cancellous pieces. Minute patellar fr. Frr. deliberately RIS?

TOMB 77

BONDIS Ash-urn damaged. Very possible some bone may have been displaced.
DGCREM Generally good
LLPCF 33.1 mm
TOTWT 125.0 g
WTCRAN 12.0 g
WTJ&T 1.0 g
WTROS 112.0 g
NOINDS 1: NOAD
SEX NK: no diagnostic pieces seen
AGE AD: some internal closure of cran. sutures
PATHOL 1 CVF 7.1 mm thick: not significant?
URNGDS Handful of potsherds
ANIMAL See appendix B

Miscellaneous points of interest

Cran.	VPR. Just a v. small colln of VFs.
J&T	1 TR
H&F	No clearly identifiable pieces seen
ROS	A CUI colln of short LBSFs, small cancellous frr., and even smaller misc. frr.

TOMB 78

BONDIS	Ash-urn recovered almost complete. No possibility any bone could have been displaced.
DGCREM	Generally VG. Even R pet.temp. fr. WB; 1 black patch
LLPCF	46.2 mm
TOTWT	260.0 g
WTCRAN	43.0 g
WTJ&T	3.0 g
WTH&F	4.0 g
WTROS	210.0 g
NOINDS	1: R pet.temp. fr.; fr. of ant. arch of C1 with facet for dens of C2; NOAD
SEX	NK: impossible to determine; frr. all v gracile
AGE	AD but NVO: no trace of advancing DJD on VBFS
PATHOL	Trace—v. doubtful—of a TR abscess
SHELLS	1 v. small marine shell fr.

Miscellaneous points of interest

Cran.	Small, thin, with sutures showing some closure on internal surface. Fr. R pet.temp. and a US pet.temp. fr. Fr. R zygomatic arch (temporal portion): gracile.
J&T	3 jaw frr. and 1 TRF. NVIF. Cond. fr. 1 socket fr. looks eroded rather than tapering to a point: trace of an abscess?
H&F	1 navicular? fr.; 2 met/met SFs; 2 hand PP frr. NVIF
ROS	NVIF. Some VEFs, but bulk seems to comprise LBSFs and a lot of v. small UID frr.

TOMB 79

Only a few scraps of cremated bone were recovered from the ash-urn (not analyzed).

TOMB 80

BONDIS	Upper part of tomb destroyed. Possible some bone may have been displaced.
DGCREM	QG
LLPCF	43.6 mm
TOTWT	95.0 g
WTCRAN	5.0 g
WTROS	90.0 g
NOINDS	1: NOAD
SEX	NK
AGE	AD

Miscellaneous points of interest

Cran.	ca. 7 CUI VFs
J&T	None seen
H&F	None seen
ROS	Almost exclusively LBSFs. CUI.

TOMB 81

BONDIS	Ash-urn much damaged. Possible some bone may have been displaced.
DGCREM	Generally good
LLPCF	33.9 mm
TOTWT	148.0 g
WTCRAN	23.0 g
WTROS	125.0 g
NOINDS	1: NOAD
SEX	NK: diagnostic pieces not observed
AGE	AD: not v. young? Lambdoid suture closed internally, open externally.

Miscellaneous points of interest

Cran.	Ca. 20 small VFs. NVIF.
J&T	None seen
H&F	None seen
ROS	Mainly CUI LBSFs and a few cancellous frr. incl. a hum./fem. head fr.

TOMB 82

Only a few fragments of cremated bone were recovered from the ash-urn (not analyzed).

TOMB 83 (**PLS. 497A–B**)

BONDIS	Ash-urn much damaged. Possible some bone may have been displaced.
DGCREM	Good. Usual number of darker cancellous frr.
LLPCF	42.5 mm
TOTWT	314.0 g
WTCRAN	36.0 g
WTJ&T	3.0 g
WTH&F	6.0 g
WTROS	265.0 g
NOINDS	2?: 1 AD; 1 child?
SEX	NK: no diagnostic pieces observed
AGE	AD prob. NVO: SC. CD: NK

Miscellaneous points of interest

Cran.	L pet.temp. plus a handful of small, thin VFs with finely serrated sutures

J&T	All mand. 1 cond. fr., 1 R ramus fr. with lingula, and 1 body fr. with remains of 4 healthy sockets
H&F	1 metac. I head fr. 4 hand/foot phal. frr. Head frr. of R&L metat. I.
ROS	Mainly UIF LBSFs with a handful of misc. cancellous frr. All frr. look worn and rolled.
ID of child	Based on thinness and porotic (speckled) appearance of outer surface: a characteristic of v. young CFs? WT of supposed child bones 4.0 g.

TOMB 84

BONDIS	Upper part of tomb and ash-urn completely destroyed. Possible some bone may have been displaced.
DGCREM	Good
LLPCF	47.0 mm
TOTWT	281.0 g
WTCRAN	37.0 g
WTJ&T	2.0 g
WTH&F	2.0 g
WTROS	240.0 g
NOINDS	2? Presence of a number of v. small frr. indeed suggests the possibility a v. young individual may also be rpd in the remains.
SEX	AD: F? Frr. generally small and gracile
AGE	AD, but prob. NVO

Miscellaneous points of interest

Cran.	Frr. generally small, quite thin, and WB
J&T	Ca. 7–10 TRFs. No identifiable jaw frr. seen.
H&F	1 met/met I head fr.
ROS	Comprises LBSFs, cancellous frr., and v. small UID pieces in ratio 3:5:1

TOMB 85

BONDIS	Only base and lower body of ash-urn preserved. Possible some bone may have been displaced.
DGCREM	Generally good
NOFRR	6 cran.; PC not counted
LLPCF	50.1 mm
TOTWT	143.0 g
WTCRAN	7.0 g
WTJ&T	1.0 g
WTROS	135.0 g
NOINDS	1: NOAD
SEX	NK: no diagnostic pieces observed
AGE	AD

Miscellaneous points of interest

Cran.	6 small, thin VFs
J&T	1 TR
H&F	None seen
ROS	Mainly CUI LBSFs. Frr. generally look worn and rolled.

TOMB 86

BONDIS	Minor damage only to upper parts of ash-urn. No possibility any bone could have been displaced.
DGCREM	Generally good
LLPCF	55.1 mm
TOTWT	179.0 g
WTCRAN	52.0 g
WTJ&T	4.0 g
WTROS	123.0 g
NOINDS	1: NOAD
SEX	NK: no diagnostic pieces observed
AGE	AD but prob. NVO: SC.
SHELLS	8–10 small cockleshell frr.

Miscellaneous points of interest

Cran.	Frr. generally not v. large or particularly thick. SC: open ext.; closing int. No pet.temps.
J&T	Fr. R? cond. Maxill. fr. with broken sockets for ca. 4 ant. teeth; 2 other small jaw frr.; 3 RFs and an almost complete lower molar: lacks only its enamel
H&F	None seen
ROS	Predominantly LBSFs. Handful of NVIF cancellous frr. incl. a patellar fr. WT: LBSFs 110.0 g, cancellous frr. 13.0 g.

TOMB 87 (**P. 498**)

BONDIS	Upper part of ash-urn not preserved. Possible some bone may have been displaced.
DGCREM	Excellent
LLPCF	21.2 mm
TOTWT	21.0 g
WTCRAN	13.0 g
WTROS	8.0 g
NOINDS	1
SEX	NK
AGE	Baby

Miscellaneous points of interest

Handful of CR&PC frr. of a v. young ind. CFs predominate: v. small and thin. Fr. pet. temp. No J&T or H&F.

TOMB 88

BONDIS	Upper part of ash-urn not preserved. Possible some bone may have been displaced.
DGCREM	Generally good
LLPCF	55.7 mm
TOTWT	509.0 g
WTCRAN	63.0 g
WTJ&T	2.0 g
WTH&F	4.0 g
WTROS	440.0 g
NOINDS	1: NOAD
SEX	NK
AGE	AD
ANIMAL	Burned sheep/goat astragalus (see appendix B)

Miscellaneous points of interest

Cran.	Handful of small, thin, WB frr., mainly of vault. Some SIOT. Small frr. of R? pet.temp.
J&T	2 minute jaw frr. with broken sockets; small fr. L mand. cond.; 1 TR
H&F	10 v. small frr. mainly of met/met shafts but incl. a metac. base fr. and 2 hand/foot PP head frr.
ROS	Handful of small cancellous frr. Approx. 4 times as many LBSFs.

TOMB 89

BONDIS	Possible some bone may have been displaced.
DGCREM	Not VG: rather a lot of black frr.
LLPCF	40.8 mm
TOTWT	147.0 g
WTCRAN	17.0 g
WTROS	130.0 g
NOINDS	1: NOAD
SEX	NK
AGE	AD
URNGDS	1 tiny potsherd

Miscellaneous points of interest

Cran.	20–30 v. small VFs. Widespread SIOT. NVIF.
J&T	None seen
H&F	None seen
ROS	A few small cancellous frr. The rest comprises a handful of LBSFs, many of which are similar in length to the largest, and another handful of v. small UID pieces.

TOMB 90

BONDIS	Upper parts of ash-urn damaged. Possible some, but probably not much, bone may have been displaced.
DGCREM	Fairly good; 1 fem.? LBSF black in middle of cortex.
LLPCF	46.2 mm
TOTWT	53.0 g
NOINDS	NK
SEX	NK
AGE	AD

Miscellaneous points of interest

Handful of undistinguished misc. CR&PC frr. PCFs predominate. 2 TRs. CUI.

TOMB 91

BONDIS	Upper parts of ash-urn damaged. Possible some bone may have been displaced.
DGCREM	Good
LLPCF	34.3 mm
TOTWT	188.0 g
WTCRAN	32.0 g
WTJ&T	1.0 g
WTROS	155.0 g
NOINDS	1: NOAD
SEX	NK
AGE	AD

Miscellaneous points of interest

Cran.	Handful of v. small VFs. Not much SIOT. RIS?
J&T	Minute mand. fr. with remains of 4 broken sockets and 1 RF
H&F	None seen
ROS	A few cancellous frr. The bulk are LBSFs. RIS?

TOMB 92

BONDIS	Only the base of the ash-urn was preserved. Very likely some bone may have been displaced.
DGCREM	QG
LLPCF	25.7 mm
TOTWT	20.0 g
NOINDS	NK
SEX	NK
AGE	AD

Miscellaneous points of interest

Handful of undistinguished misc. CR&PC frr. CUI.

TOMB 93

BONDIS	Upper parts of ash-urn damaged. Possible some bone may have been displaced.
NOFRR	7 PC
LLPCF	44.9 mm
TOTWT	23.0 g
NOINDS	NK

Miscellaneous points of interest

23.0 g of CUI LBFs

TOMB 94

Only a few scraps of cremated human bone were recovered from the ash-urn (not analyzed)

TOMB 95

Only a minor quantity of cremated human remains was recovered from the ash-urn (not analyzed), and it seems clear only a small quantity of cremated bone was ever placed into the tomb.

TOMB 96 (**PL. 499**)

BONDIS	Ash-urn found in an upside-down position, but intact. Highly unlikely that any bone could have been displaced.
DGCREM	Excellent: all remains reduced to a fine vitreous texture
LLPCF	74.5 mm
TOTWT	78.0 g
WTCRAN	26.0 g
WTJ&T	5.0 g
WTROS	47.0 g
NOINDS	1: NOAD
SEX	NK
AGE	AD
URNGDS	1 fr. animal bone 40.2 mm long: worked?
SHELLS	2: 1 cockle; 1 UID

Miscellaneous points of interest

Cran.	Incredibly WB. Much SIOT and sutures patent externally; completely closed internally. Fr. pet.temp. Fr. sphenoid with a pterygoid canal.
J&T	Interesting colln. Large R maxill. fr. 3 mand. frr.: 2 rather black R body frr. join along ancient break: edges covered with dust, and slight difference in color observable. Other mand. fr. is a portion of R ramus with lingula but no trace of 48.

Tentative dental chart

MAXILLA

RIGHT					
16	15	14	13	12	11
46	45	44	43	42	41
RIGHT					

MANDIBLE

13 still in situ. 15 double-rooted. Remains of an US upper 8? (18 or 28).

H&F	No easily identifiable fr. seen
ROS	An interesting mixture. Frr. of distal ends of R&L humeri. Prox. end R rad. Remains of 2 hum./fem. heads. V. few LBSFs.

TOMB 97

BONDIS	Only very minor damage to rim of ash-urn. No possibility any bone could have been displaced.
DGCREM	Generally good
LLPCF	49.1 mm
TOTWT	132.0 g
WTCRAN	24.0 g
WTJ&T	3.0 g
WTROS	105.0 g
NOINDS	1: L pet.temp. fr.; NOAD
SEX	NK
AGE	AD

Miscellaneous points of interest

Cran.	NVIF. Mainly small, thin VFs. Frr. in general so small it is difficult to distinguish betw. a CVF and the outer cortex of a LBSF. L pet.temp. fr.
J&T	Comprise only 2 maxill. frr. and a tip of L cor. proc. One of maxill. frr. black. Sockets for 13, 12 empty and healthy. That for 14 difficult to delineate. Possible that 14 lost a.m. and socket healed.
H&F	None seen
ROS	Mainly LBSFs. A few VEFs. CUI. 3 LBSFs of similar length: 41.2, 45.2, 49.1 mm. A v. UIF crem.

TOMB 98

Tomb very poorly preserved; no cremated remains encountered

TOMB 99

Cremated remains not analyzed

TOMB 100 (**PLS. 500A–B**)

BONDIS Ash-urn intact and covered. No possibility any bone could have been displaced.
DGCREM Generally VG
LLPCF 54.7 mm
TOTWT 455.0 g
WTCRAN 93.0 g
WTJ&T 2.0 g
WTH&F 2.0 g
WTROS 358.0 g
NOINDS 1: only one (L) pet.temp.; fr. C2 with dens; NOAD
SEX M? PCFs not v. gracile: quite robust
AGE AD: possibly of mature yrs. Traces of DJD; cranial sutures closed, but at least 2 lower molars present at death.
PATHOL Traces of DJD on 1 VBF and a metat. I head. Path. holes in several VBFs?

Miscellaneous points of interest

Cran. Small, thin, and WB. Some SIOT. Lambdoid suture—ID depends on presence of emissary foramen alongside—closed on inner surface.
J&T 1 mand. fr. from distal portion of body on L side containing remains of sockets for 37, 38. 1 almost complete lower molar, lacking enamel. Roots look healthy.
H&F Fr. metat. I head with slight trace of DJD. 1 metac. LBSF?
ROS Fr. C2 with dens: hole in body. 2 holes also visible in cancellous tissue of a VBF with trace of DJD. Could the holes be cysts or the products of burning? Trace of DJD also visible on another VBF. Fr. R patella. 5 large LBSFs with lengths 52.4, 52.7, 53.5, 54.4, and 54.7 mm.

TOMB 101 (**PL. 501**)

BONDIS Only very minor damage to uppermost part of ash-urn. No possibility any bone could have been displaced.
DGCREM V. poor in places, but otherwise satisfactory. L elbow poorly burned: poked out of fire? See below.
LLPCF 67.3 mm
TOTWT 331.0 g
WTCRAN 54.0 g
WTJ&T 5.0 g
WTH&F 1.0 g
WTROS 271.0 g
NOINDS 1: fr. of body of C1; NOAD
SEX M?: robust PCFs; rugged lat. cond. ridge of L hum.
AGE AD: prob. NVO; sockets of 21, 22, 23, 24 present and healthy
SHELLS Ca. 6 v. small shell frr., incl. 2 minute frr. of a sea-urchin shell
MINERALS Pot contained 530 g of small stones and pebbles

Miscellaneous points of interest

Cran. Fr. US pet. temp. Small fr. from region of EOP: black on int. surface.
J&T Ca. 4 small frr. and 1 TRF. Interesting fr. of L maxilla incl. roof of mouth/floor of nose and sockets for 21, 22, 23, 24. All healthy. 24 double-rooted, as one would expect.
H&F Fr. of what looks like a pisiform. ID in doubt. 1 black, charred finger DP: clearly the end of a finger that poked out of fire: cf. L elbow.
ROS Ca. 12 v. small vert. frr., incl. fr. of body of C1 with facet for dens of C2. VBFs not complete enough to make any assessment of presence of DJD possible. L? distal hum. fr. with associated L prox. ulna fr. Both frr. v. PB: elbow poked out of fire? Cf. Nea Mihaniona II and III, Derveni B, and Phoinikas 2 for parallels. Large fem. SF with classic round, convex surface on break: "pseudo-joint surface" appearance. Distal fib. fr.
This was a filthy crem. Washed by me. Bag contained huge quantity of v. fine black ashy powder. Did the vase just contain the sweepings from nearby pyre? Clearly not much care taken over collection of ashes. Whole skeleton rpd but not particularly WR: only a couple of dubious hand frr.; J&T and VBFs v. small. But nothing to suggest that much deliberate pounding took place: no RIS? Of the 271.0 g of ROS frr., 76.0 g came from the 530.0 g of small stones and pebbles.
Plus: a handful of UB foot bones, mainly tarsal and metatarsal.

TOMB 102

BONDIS Tomb disturbed by later inhumation, and ash-urn intentionally placed into new position, a process that caused some damage to it. Possible some bone may have been displaced.

DGCREM Generally VG indeed. Nearly all white.
LLPCF 57.6 mm
TOTWT 400.0 g
WTCRAN 46.0 g
WTJ&T 4.0 g
WTROS 350.0 g
NOINDS 1: NOAD
SEX NK, but frr. generally gracile: burning?
AGE AD but NVO: state of closure of cran. sutures; no apparent traces of DJD on 1 lumbar VBF
SHELLS 2 v. small marine shell frr.

Miscellaneous points of interest

Cran. Mainly small, thin VFs, few in number. Region from around EOP WB. Fr. R temp. with root of zygomatic arch, part of mand. fossa and part of EAM. 1 pet.temp. fr. and 2 VFs with patent sutures: starting to close on internal surface.

J&T 5 TRFs and 1 fr. of what may be the nondental part of the maxilla showing traces of the floor of the maxill. sinus and part of the nasolacrimal duct? 1 v. small mand. fr. with remains of 2 healthy sockets.

H&F None seen

ROS NVIF. Mainly LBSFs. A few vert. frr. All WB. Plus the usual colln of v. small frr. separated from the stones and pebbles. Quite large lumbar VBF: no DJD. Patellar fr. 5 LBSFs of much the same length: 45.9, 46.4, 48.4, 50.2, 57.6 mm
Clearly not v. much care taken over gathering of remains: few CFs; virtually no J&T; no H&F.

TOMB 103 (**PLS. 502A–B**)

BONDIS Upper part of ash-urn slightly damaged. Unlikely any bone could have been displaced.
DGCREM On the whole good, but 1 large fem. SF less WB.
LLPCF 78.8 mm
TOTWT 1323.0 g
WTCRAN 62.0 g
WTJ&T 8.0 g
WTH&F 20.0 g
WTROS 1233.0 g
NOINDS 2: frr. of 3 tali; frr. of 2 R mand. conds; frr. of R&L malar bones of different sizes from region of orbital margin up to frontomalare. ID of one of these malar frr. questionable.
SEX 1 is M: robust LBFs
AGE Both AD
URNGDS 2 pieces of animal bone (see appendix B)
MINERALS 3 interesting slag frr., 1 with a bone impression

Miscellaneous points of interest

Cran. Identifiable frr. small and few in number; quite extensive SIOT. Impression given that some of the unseparated VFs may have been moderately thick but not pathologically so. Fr. L pet.temp. Familiar frr. of what look like upper ant. portions of R&L malar bones of different sizes. 2 v. thin VFs 3.2 and 4.5 mm thick.

J&T 11 frr. 2 R mand. cond. frr.; 3 v. small maxill. frr. with broken sockets. 2 mand. frr. with broken sockets for 33, 34, 35, 36.
1 TRF and 2 other frr. that look like parts of a R and a L ramus below mand. conds. ID of last 2 frr. questionable.

H&F 3 talus frr.; not easy to side but 2 are definitely from the same side. Another talus? head fr. A cuboid? fr. 9 misc. met/met and phal. frr.; all small and UIF.

ROS Huge quantity of misc. frr. of all sizes, presumably from all parts of the 2 skeletons, though few cancellous pieces from vert.col. or fem. and hum. heads observed. Half of dens? of C2, sectioned sagitally. Frr. of prox. end of R ulna and distal end L rad.; Lister's tub. pronounced on latter. Fr. R patella; incomplete and impossible to measure. Small fr. fem. cond. 1 easily identifiable rib fr.; PB. Were these frr. RIS? Plus: 1 UB fr.

TOMB 104 (**PL. 503**)

BONDIS Tomb sealed and completely enclosed in a cist that was very well preserved. No possibility whatsoever any bone could have been displaced.
DGCREM VG
LLPCF 67.7 mm
TOTWT 781.0 g
WTCRAN 75.0 g
WTJ&T 2.0 g
WTH&F 5.0 g
WTROS 699.0 g
NOINDS 1: L? pet.temp. fr.; dens of C2; NOAD
SEX F? Frr. generally gracile
AGE AD; but NVO
ANIMAL See appendix B

SHELLS 1 whole cockleshell and ca. 15 frr. from within and nearby the pot (see appendix C)
MINERALS 3–4 frr. of an interesting concretion. Looks like an amalgam of small pebbles bound together with a loose calcareous matrix: shiny surface within; adherent to a bone? fr. at some time?
ORGANIC 3–4 small charcoal frr. from within and nearby the pot

Miscellaneous points of interest

Cran. A respectable colln of CVFs. All small and generally ranging in thickness from 2.0–4.2 mm (thickest 6.8 mm). SSAP, in most cases to full depth of suture. Some SIOT.
J&T Poorly rpd by 3 v. small frr. whose ID cannot be vouchsafed. They comprise a ramus fr. near cor.proc.; a fr. of R? cond.; and a minute mand. body fr. with 2 broken sockets.
H&F An undistinguished colln of 13 short met/met and phal. SFs
ROS An impressive colln comprising mainly medium-sized LBSFs and some small cancellous pieces. 1 cerv. VBF showing no trace of DJD. Dens of C2: ID not in question. From nearby also came a handful of mainly LBSFs; RIS?
Unburned human bones A small number of UB human bones, incl. a complete finger PP II L; and a toe PP.
Animal intrusions A large quantity of frog bones and a smaller one of rodents (incl. 2 crania) were found with the ancient cremated human remains. Modern? rodent bones also observed from time to time in other cremations, but their presence was not recorded because their number was insignificant and intrusions on a small scale are v. common.

TOMB 105

BONDIS Ash-urn complete. Tomb sealed. No possibility any bone could have been displaced.
DGCREM VG. Some black on LB cortex.
LLPCF 63.2 mm
TOTWT 255.0 g
WTCRAN 9.0 g
WTJ&T 5.0 g
WTH&F 1.0 g
WTROS 240.0 g
NOINDS 1: NOAD
SEX NK
AGE AD
PATHOL V. slight trace of DJD on a lumbar VBF
ORGANIC 4 small charcoal frr.

Miscellaneous points of interest

Cran. 8 small thin VFs. Extensive SIOT.
J&T Fr. L ramus of mand. extending from empty socket for 38 to broken cond.; cor.proc. missing. 1 small molar RF.
H&F Prox. 3/4 of a finger MP. 1 hand? MP? head. Frr. not associated.
ROS 1 large lumbar VBF showing a v. slight trace of DJD. Trace v. slight indeed. Several small cancellous frr. 1 recognizable rib fr. Bulk of colln comprises LBSFs, many not much shorter than the longest—unusual for Torone cremations.

TOMB 106 (**PL. 504**)

BONDIS Ash-urn complete and covered over by a large stone serving as a cover slab. No possibility any bone could have been displaced.
DGCREM VG
NOFRR 2 cran.; 20–30 PC
LLPCF 42.9 mm
TOTWT 52.0 g
WTCRAN 4.0 g
WTROS 48.0 g
SEX NK
AGE AD

Miscellaneous points of interest

A CUI token affair

TOMB 107

BONDIS Vessel recovered almost complete, but found in fragmentary state in tomb pit; probably damaged by Classical building activity and/or later stone robbing. Possible some bone may have been displaced.
DGCREM QG
LLPCF 56.8 mm
TOTWT 110.0 g
WTCRAN 14.0 g
WTJ&T 2.0 g
WTH&F 1.0 g
WTROS 93.0 g
NOINDS 1: NOAD
SEX NK
AGE AD
URNGDS 2 potsherds

Miscellaneous points of interest

Cran.	Ca. 12 small, CUI CVFs
J&T	Angle of R side of mand. 1 TR.
H&F	1 metat. head fr.
ROS	A few cancellous frr. and a handful of LBSFs. 1 prox. end rad. fr.: D 18.5 mm.

TOMB 108

BONDIS	Ash-urn recovered intact and tomb sealed by multiple covers. No possibility any bone could have been displaced.
DGCREM	Good
LLPCF	45.2 mm
TOTWT	85.0 g
WTCRAN	17.0 g
WTJ&T	1.0 g
WTH&F	1.0 g
WTROS	66.0 g
NOINDS	1: NOAD
SEX	NK
AGE	AD

Miscellaneous points of interest

Cran.	Meager colln of ca. 24 VFs. Apparently thin. Some SIOT. Outer table frr. show finely serrated suture lines.
J&T	1 minute mand. fr. with trace of mylohyoid line. 2 root sockets, 1 cribriform.
H&F	1 finger MP fr.
ROS	A few UID cancellous pieces and the usual colln of LBSFs. A meager colln; RIS?

TOMB 109

BONDIS	Ash-urn recovered intact and tomb undamaged. No possibility any bone could have been displaced.
DGCREM	Good
LLPCF	85.0 mm
TOTWT	244.0 g
WTCRAN	34.0 g
WTJ&T	2.0 g
WTH&F	1.0 g
WTROS	207.0 g
NOINDS	1: NOAD
SEX	NK
AGE	AD

Miscellaneous points of interest

Cran.	Handful of WB frr. Widespread SIOT showing fine serrations of sutures on outer surface. Fr. of a pet.temp., but almost exclusively VFs.
J&T	1 mand. fr.

Tentative dental chart

44	43	42	41	31	32	33
RIGHT						LEFT

H&F	2 small metac.? shaft frr.
ROS	A few cancellous pieces. Majority are LBSFs, most of them considerably shorter than the longest.

TOMB 110

BONDIS	Unusual tomb lacking any real ash-urn, although the fragmentary skyphos T110-1 may originally have served as such. The state of preservation of the tomb was such as to suggest some bone may have been displaced.
DGCREM	Good
NOFRR	5 cran.; ca. 20 PC
LLPCF	38.9 mm
TOTWT	13.0 g
SEX	NK
AGE	AD: closed cran. suture

Miscellaneous points of interest

Cran. fr. 1 cerv. VEF: no DJD. CUI.
Plus: 2 UB LBFs

TOMB 111 (**PL. 505**)

BONDIS	Ash-urn complete. Tomb sealed by 2 fairly massive cover stones. No possibility any bone could have been displaced.
DGCREM	QG: mand. fr. vitreous
LLPCF	35.5 mm
TOTWT	34.0 g

Miscellaneous points of interest

34.0 g of CUI burned frr.

J&T	Fr. of mand. body and ramus near region of 38

TOMB 112 (**PLS. 506A–B**)

Ash-urn I

BONDIS	Ash-urn almost complete. Tomb sealed by cover stones. No possibility any bone could have been displaced.
DGCREM	VG
LLPCF	40.8 mm
TOTWT	31.0 g
NOINDS	1: NOAD
SEX	NK
AGE	DA 5–7 yrs. Skeletal age: perhaps closer to 5 yrs. Assessed from evidence of tooth

eruption and esp. from recovery of the large crown of 11. A score of 28.5 mm for the TW of the femoral distal ep. may suggest a lower estimate; see Sundick 1979.

Miscellaneous points of interest

Cran.	Frr. v. thin. SIOT
J&T	3 minute jaw frr. from both maxilla and mand., with broken sockets suggesting some deciduous teeth had erupted and permanent crowns were developing. Also preserved: the crown of 11; MDCD 8.9 mm
H&F	No unequivocal frr. seen
ROS	Handful of cancellous material and LBSFs. Also recovered: a femoral distal ep.; TW 28.5 mm.

Ash-urn II

BONDIS	Ash-urn recovered intact. Tomb sealed by cover stones. No possibility any bone could have been displaced.
DGCREM	Good
NOFRR	Ca. 24 CFs
LLPCF	NR
TOTWT	9.0 g
WTCRAN	9.0 g
NOINDS	1: NOAD
SEX	NK
AGE	Child

Miscellaneous points of interest

A small colln of v. thin CVFs of a child. WB but no SIOT. 1 pet.temp. fr. The CVFs are very thin indeed. Did they belong to the occupant of Ash-urn I; or did Tomb 112 contain the remains of 2 children?

TOMB 113

BONDIS	Only about 1/3 of the body of the ash-urn was preserved in situ. Possible some bone may have been displaced. Also possible that the ash-urn was placed into the tomb in fragmentary state (see chapter 3).
DGCREM	Good
LLPCF	61.0 mm
TOTWT	162.0 g
WTJ&T	3.0 g
WTH&F	4.0 g
WTROS	155.0 g
NOINDS	1: dens of C2: NOAD
SEX	NK
AGE	AD: some a.m. tooth loss
URNGDS	1 potsherd

Miscellaneous points of interest

Cran.	Frr. small, thin, with sutures finely serrated. SIOT.
J&T	Mand. fr.

Tentative dental chart

31	32	33	34	35	36
					LEFT

H&F	3 metac.? SFs
ROS	A few cancellous frr. and a large handful of LBSFs. CR&PC frr. weighed together: 155 g.

TOMB 114

BONDIS	Ash-urn complete, but recovered in such a poor state it virtually disintegrated into small fragments beyond reconstruction. Nevertheless, it was encountered in situ and the tomb was sealed. Unlikely any bone could have been displaced.
DGCREM	Good
LLPCF	44.0 mm
TOTWT	204.0 g
WTCRAN	61.0 g
WTJ&T	2.0 g
WTH&F	1.0 g
WTROS	140.0 g
NOINDS	1: NOAD
SEX	NK
AGE	AD: NVO

Miscellaneous points of interest

Cran.	Frr. small and thin. SSAP; some SIOT. Frr. of at least 1 pet.temp. L. mastoid proc.
J&T	Fr. of a US mand. cond. Minute maxill. fr. with traces of broken sockets, incl. 1 cribriform molar? socket. 1 molar RF. 1 enamelless molar crown fr.
H&F	1 metac.? SF
ROS	Small quantity of cancellous material; largely UID. Rest comprises LBSFs, incl. a prox. end rad. fr.

TOMB 115

BONDIS	Only very minor damage to the uppermost parts of the ash-urn. No possibility any bone could have been displaced.
DGCREM	Good
LLPCF	73.8 mm
TOTWT	194.0 g
WTCRAN	57.0 g
WTJ&T	2.0 g

WTROS	135.0 g
NOINDS	1: R&L pet. temps; NOAD
SEX	NK
AGE	AD but prob. NVO

Miscellaneous points of interest

Cran.	Frr. small and thin: SSAP. Some SIOT. R&L pet.temps. Upper portion of R&L malars with frontomalare.
J&T	1 mand. fr. from near symphysis with ca. 6 broken sockets for ant. teeth
H&F	None seen
ROS	Mainly LBFs; plus ca. 10 small cancellous frr.

TOMB 116

BONDIS	Tomb disturbed by activities of either Classical builders or later stone robbers; only part of the ash-urn was recovered. Possible that some bone may have been displaced.
DGCREM	Good
LLPCF	48.6 mm
TOTWT	194.0 g
WTCRAN	23.0 g
WTJ&T	1.0 g
WTROS	170.0 g
NOINDS	1: NOAD
SEX	NK
AGE	AD

Miscellaneous points of interest

Cran.	A v. small quantity of CUI CVFs
J&T	1 almost complete enamelless lower incisor
H&F	None seen
ROS	A CUI colln of LBSFs with a v. small quantity of cancellous material

TOMB 117

BONDIS	Ash-urn recovered complete (though the pot was lacking its foot and as such was used in a damaged state). Tomb sealed. No possibility any bone could have been displaced. An interesting tomb that proves, beyond any doubt, that only a small colln of cremated bone was deemed necessary in some cases.

Miscellaneous points of interest

10.0 g of CUI burned bone

TOMB 118

Ash-urn I

BONDIS	Upper part of ash-urn not preserved. Possible some bone may have been displaced.
DGCREM	Good
NOFRR	1 cran.; 1 PC
LLPCF	35.6 mm
TOTWT	3.0 g
ANIMAL	1 UB animal bone fr. (see appendix B)

Miscellaneous points of interest

CUI

Ash-urn II

BONDIS	Damage only to upper part of ash-urn. Little possibility any bone could have been displaced.
DGCREM	Good
LLPCF	65.1 mm
TOTWT	87.0 g
WTCRAN	30.0 g
WTROS	57.0 g
NOINDS	1: NOAD
SEX	NK
AGE	AD

Miscellaneous points of interest

Cran.	VFs only; no pet.temps. 1 quite large fr. of L parietal with lambdoid suture; SSAP down to asterion; thickness 6–6.5 mm.
J&T	None seen
H&F	None seen
ROS	Mainly LBSFs, 2 two of which are firmly stuck together

Ash-urn III?

BONDIS	Vessel much damaged. Unclear whether an ash-urn or not.
DGCREM	Good
LLPCF	42.9 mm
TOTWT	11.0 g

Miscellaneous points of interest

A CUI colln of CR&PC frr., incl. ca. 12 CVFs and a handful of LBSFs

TOMB 119

BONDIS	Tomb much disturbed. Base only of ash-urn preserved. Strong possibility some bone may have been displaced.
DGCREM	NR
LLPCF	49.3 mm
TOTWT	9.0 g

Miscellaneous points of interest
Ca. 10 CR&PC frr. weighing 9.0 g. CUI.

TOMB 120

BONDIS	Only about 1/2 of ash-urn preserved. Tomb clearly disturbed by Classical building activity. Possible some bone may have been displaced.
DGCREM	Good
NOFRR	15–20 PC; 1 C
LLPCF	54.0 mm
TOTWT	40.0 g
SEX	NK
AGE	AD
SHELLS	1 fr.

Miscellaneous points of interest
A CUI colln
Plus: 1 UB LBF

TOMB 121?

BONDIS	Tomb very poorly preserved, only a minor quantity of human bone recovered from the immediate area of Tomb 121 (see chapter 3).
DGCREM	NR
TOTWT	12.0 g

Miscellaneous points of interest
12.0 g of CUI burned bone

TOMB 122

BONDIS	Quite a lot of damage to tomb on account of Classical building activity. Very likely some bone may have been displaced.
DGCREM	QG
LLPCF	49.7 mm
TOTWT	356.0 g
WTCRAN	41.0 g
WTJ&T	5.0 g
WTROS	310.0 g
NOINDS	1: NOAD
SEX	F?: v. thin CFs
AGE	AD
URNGDS	2 potsherds

Miscellaneous points of interest

Cran.	Prob. <50 small, thin VFs. Not much SIOT. SSAP ext.; some closure int. CVT 5–6 mm.
J&T	2 v. small maxill. frr. that articulate along ant. portion of palatine suture. Each damaged laterally: no sockets present. 1 mand. fr. with damaged sockets of 44, 43, 42, 41, 31.
H&F	No identifiable pieces seen
ROS	Colln made up almost entirely of LBSFs. All v. heavily encrusted with a calcareous? deposit; and RIS? Plus: 5 UB bone frr.

TOMB 123 (**PLS. 507A–B**)

BONDIS	Ash-urn recovered almost intact. Little or no possibility any bone could have been displaced.
DGCREM	Excellent. Many frr. have a vitreous "clinking" texture.
LLPCF	Adult: 58.9 mm; fetus: 33.0 mm
TOTWT	579.0 g (adult) + 22 g (fetus) = 601 g
WTCRAN	130.0 g
WTJ&T	9.0 g
WTH&F	10.0 g
WTROS	430.0 g
NOINDS	2: 1 F and 1 fetus/neonate
SEX	Adult F: some of the CFs v. v. thin; but evidence from joints and pelvis absent; fetus: NK
AGE	YA; late fetus/young neonate
ANIMAL	2?: 1 LBF 33.5 mm long with a v. thick cortex, and a rib? fr. with gutter

Miscellaneous points of interest

Cran.	Adult: CFs generally WB and quite thin: SSAP. R pet.temp. Malar fr. with frontomalare. Fetus: Evidence for presence of this subject with the adult rests on the colln of some small CVFs that are v. thin and have a young person's suture conformation. Some of the CVFs have not separated into inner and outer tables, and their thickness ranges from 1.5–2.2 to ca. 3.0 mm. The recovery of a L pet.temp. v. much smaller than the adult R pet.temp. also suggests the presence of a v. young person, as does the dental evidence (see below).
J&T	Adult: R maxill. fr and 2 mand. frr. 2 other small US jaw frr. Fr. L mand. cond. Fr. US ramus. Almost complete enamelless upper molar. Fetus: This evidence is helpful rather than confirmatory, comprising as it does 4 small jaw frr. that look v. like those of a late fetus or neonate: e.g., each one bears what looks v. like the crypt of a developing tooth.

Tentative dental chart (adult)

RIGHT										LEFT
		13	12	11						
45	44	43	42	41	31	[ ]	33	34	35	

H&F Adult: 15 frr. incl.: a lunate; a scaphoid fr.; a L metac. I fr.; 2 finger PP frr.; a talus fr.; and a metat. head

ROS Adult: The familiar colln of cancellous frr. (few in number) and a larger one of smallish, WB LBSFs. Frr. of distal end L hum.; R patella; distal end L fib.

General comments

Adult: The 15 H&F frr. really cannot be used as evidence of great care in collecting remains for burial. The paucity of ROS material suggests the gathering of so many H&F pieces was to some extent coincidental. Every sign of RIS.

TOMB 124 (**PLS. 508A–B**)

BONDIS Ash-urn recovered intact. No possibility any bone could have been displaced.

DGCREM Good. A v. large cremation indeed from a whole pot.

LLPCF 68.8 mm

TOTWT 1146.0 g

WTCRAN 220.0 g

WTJ&T 14.0 g

WTH&F 13.0 g

WTROS 899.0 g

NOINDS Prob. only 1: no duplication of major pieces, but problems presented by what look like 2 mand. cor.procs, a crista galli that looks like them, and 3 met/met I heads that are too damaged to identify with ease.

SEX NK

AGE AD

PATHOL Slight trace? of DJD on a metac. I head

URNGDS Portion of rolled up bronze sheet: length 26.2 mm

ANIMAL Several burned "animal" frr. (see appendix B)

SHELLS A fine colln of sea-urchin spines and some small sea-urchin shell frr. (see appendix C)

Miscellaneous points of interest

Cran. No easily identifiable face frr., apart from a poss. nasal proc. of a maxilla with opening into nasolacrimal duct. L pet. temp. 2 small frr. from near EOP. Mainly VFs: not v. large and perhaps thicker than some. Thickness ranges from 6.5–7.0 mm. Some SIOT. Crista galli looks v. like a mand. cor.proc.

J&T R mand. cond. and sigmoid notch. R cyl >17.7 mm. R cor.proc., and what looks like another R cor.proc. 5 maxill./mand. frr. with assorted broken sockets. Remains of an upper and a lower molar and an ant. tooth.

H&F Whole lunate (L?) and pisiform; a scaphoid? fr.; assorted met/met and phal. frr., incl. 3 met/met I heads (ID v. difficult)

ROS Large quantity of NVIF PCFs, incl. a respectable rib fr., part of a hum. medial epicondyle, the prox. end of a radius (D 18.0 mm), and frr. of C1 and C2 with dens. Nothing to suggest these PCFs belonged to 2 inds. Some additional weights:

CFs	220.0 g
J&T	14.0 g
H&F	13.0 g
Large PCFs	350.0 g
Cancellous frr.	110.0 g
Small pieces	140.0 g
V. small pieces	15.0 g
More misc. pieces	230.0 g
More misc. PCFs	54.0 g

TOMB 125

BONDIS Quite some damage to ash-urn. Possible that some bone may have been displaced.

DGCREM Good

LLPCF 52.4 mm

TOTWT 140.0 mm

WTCRAN 22.0 g

WTROS 118.0 g

NOINDS 1: NOAD

SEX NK

AGE AD

URNGDS 1 large potsherd

ANIMAL 1 UB sheep/goat astragalus (see appendix B)

SHELLS 1 large fr. of a marine shell that looks deceptively like a human frontal bone with porotic hyperostosis. Definitely shell (not analyzed).

Miscellaneous points of interest

Cran. V. small colln of small thin frr. Widespread SIOT. Fr. R malar bone with frontomalare.

J&T	None identified
H&F	None identified
ROS	Handful of undistinguished CUI PCFs

TOMB 126

BONDIS	Upper part of tomb destroyed. Possible some bone may have been displaced.
DGCREM	Good
LLPCF	37.1 mm
TOTWT	94.0 g
WTCRAN	48.0 g
WTROS	46.0 g
NOINDS	Prob. only 1: L. pet.temp. fr.; NOAD
SEX	NK
AGE	CD?

Miscellaneous points of interest

Cran.	Outnumber PCFs. Handful of v. small and v. thin VFs, ranging from <2.0 to ca. 3.5 mm thick. Sutures patent throughout full thickness of bone. Not much SIOT. Fr. L pet.temp.
J&T	No identifiable frr. seen
H&F	No identifiable frr. seen
ROS	V. modest colln comprising mainly LBSFs. Small, but prob. not RIS. PCFs smaller than cran.

TOMB 127 (**PL. 509**)

BONDIS	Ash-urn recovered intact and tomb sealed. No possibility any bone could have been displaced.
DGCREM	Good
LLPCF	45.5 mm
TOTWT	280.0 g
WTCRAN	65.0 g
WTJ&T	3.0 g
WTH&F	2.0 g
WTROS	210.0 g
NOINDS	1: R pet.temp.; NOAD
SEX	NK
AGE	MA

Miscellaneous points of interest

Cran.	Modest colln of smallish, thin VFs: SIOT in many cases. Some SSAP int. and ext.; others clearly closed on both surfaces. Subject prob. MA. R pet.temp.
J&T	3 minute jaw frr. with 1 broken socket apiece. Fr. of 2 molars and 1 canine.
H&F	3 small frr. that might be met/met SFs
ROS	Usual small colln of cancellous material and a larger one of LBSFs

TOMB 128

BONDIS	Upper part of ash-urn not preserved. Possible some bone may have been displaced, but probably not much, if any.
DGCREM	Good
LLPCF	57.5 mm
TOTWT	425.0 g
WTCRAN	70.0 g
WTJ&T	4.0 g
WTH&F	1.0 g
WTROS	350.0 g
NOINDS	1: NOAD
SEX	NK
AGE	AD

Miscellaneous points of interest

Cran.	Handful of mainly VFs 6.0–6.5 mm thick. Some SIOT. Sutures pretty well closed.
J&T	Mand. fr. from symphysis, with large genial tubs. present and damaged sockets for 42, 41, 31, 32. Too damaged to chart accurately. Another UIF jaw fr. with broken sockets. Damaged R mand. cond. 4 TRFs.
H&F	1 minute fr. that might come from a finger PP base
ROS	1 iliac blade fr., plus the usual assortment of UIF cancellous pieces and LBSFs. RIS?

TOMB 129

BONDIS	Only base and lower body of ash-urn preserved. Remainder of tomb (i.e., the upper half or so) destroyed. Possible some bone may have been displaced.
DGCREM	Good
LLPCF	38.5 mm
TOTWT	240.0 g
WTCRAN	Not worth weighing
WTJ&T	Not worth weighing
WTROS	240.0 g
NOINDS	1: NOAD
SEX	NK
AGE	NK

Miscellaneous points of interest

Cran.	Small handful recovered: too small to be informative. Some sutures patent. Some SIOT. Not worth weighing separately.
J&T	2 minute maxill.? frr. with broken sockets. 6 TRFs, incl. remains of an upper molar and an upper first premolar. Not worth weighing separately.
H&F	None recognizable

ROS	Several of the bones are stuck to each other, and also to small pebbles. RIS?

TOMB 130 (**PL. 510**)

BONDIS	Urn recovered intact and tomb sealed. No possibility any bone could have been displaced.
DGCREM	Excellent
LLPCF	59.0 mm
TOTWT	115.0 g
WTCRAN	28.0 g
WTROS	87.0 g
NOINDS	Prob. 1: NOAD
SEX	NK
AGE	YA
ANIMAL	1 UB LBF of a small animal (see appendix B)
SHELLS	1 cockleshell fr.

Miscellaneous points of interest

Cran.	Small quantity of small, thin VFs, ranging from 2.9 to ca. 4.5 mm thick. SSAP. No SIOT.
J&T	None identified
H&F	None identified
ROS	A small colln of LBSFs

TOMB 131

Tomb very poorly preserved; cremated remains not encountered

TOMB 132

Tomb much disturbed; cremated remains not encountered

TOMB 133

BONDIS	Minor damage to upper part of the ash-urn, but highly unlikely any bone could have been displaced.
DGCREM	Good
LLPCF	25.5 mm
TOTWT	81.0 g
WTCRAN	10.0 g
WTJ&T	1.0 g
WTH&F	1.0 g
WTROS	69.0 g
NOINDS	1: NOAD
SEX	NK
AGE	AT?: v. little to go on
SHELLS	See appendix C

Miscellaneous points of interest

Cran.	V. small colln of small, thin VFs. 1 parietal fr. is only 3.4 mm thick, another 5.0 mm. An adolescent?
J&T	1 developed ant. TR, with a groove on one side, and what might be 1 minute jaw fr. with an empty crypt. ID v. much in doubt.
H&F	1 phal. fr.
ROS	V. few cancellous pieces and a small handful of remarkably small frr.

TOMB 134 (**PL. 511**)

BONDIS	Minor damage to upper part of the ash-urn, but highly unlikely that any bone could have been displaced.
DGCREM	Good
LLPCF	47.2 mm
TOTWT	738.0 g
WTCRAN	105.0 g
WTJ&T	4.0 g
WTH&F	9.0 g
WTROS	620.0 g
SEX	NK
AGE	MA?: DJD on verts; cranial sutures
PATHOL	Trace of DJD on dens of C2, bodies of 2 other verts and a metac. I head fr.

Miscellaneous points of interest

Cran.	Frr. v. small and UIF: RIS? Sutures fused on inside but lines visible on outside. Frr. generally thin.
J&T	2 mand. frr.: 1 from chin region, with sockets for 43, 42, 41, 31, 32, 33. The other from molar region on R side of mand. Sockets damaged but some a.m. tooth loss suspected. Fr. L mand. cond. 3 TRFs.
H&F	Impressive colln of 20 frr., incl. a complete pisiform; a navicular(?), a metac. I head fr. with DJD, a metat. I head fr., and the base of a finger DP.
ROS	Fr. C2 with dens. Otherwise a UIF colln of cancellous material and LBSFs. Perhaps one or two more VEFs than usual. A distal tib. fr. with what looks like a squatting facet (transferred to Box B46).

ABBREVIATIONS AND CONTRACTIONS FOR THIS APPENDIX

AD	adult of unknown age
a.m.	ante mortem
ant.	anterior(ly)
approx.	approximate(ly)
ARS	accidental root stump
AS	articular surface
AT	adolescent aged between 12 and 17 years
BAGLAB	bag label
bicond.	bicondylar
BONDIS	bone displacement
br.	breadth
bucc.	buccal(ly)
C	cranial; cervical, if followed by number of vertebra
ca.	about
CD	child of less than 12 years
cerv.	cervical(ly)
CF	cranial fragment
cf.	compare
CL	carious lesion
clav.	clavicle; clavicular
COC	cusp of Carabelli
colln	collection
cond./conds	condyle/condylar; condyles
condn	condition
contd	continued
cor.proc./s	coronoid/coracoid process/es
cran.	cranial/cranium
CR&PC	cranial and postcranial
CUI	completely uninformative
CVF	cranial vault fragment
CVT	cranial vault thickness
DA	dental age
DE	dentine exposed/exposure
DGCREM	degree of cremation
D	diameter
dist.	distal(ly)
DJD	degenerative joint disease
DP	distal phalanx
EAM	external acoustic meatus
EDS	empty damaged socket
EH	enamel hypoplasia
EOP	external occipital protuberance
ep./eps	epiphysis/es (-ial)
ES	empty socket
ext.	external(ly)
F	female
fem.	femur; femoral
fib.	fibula; fibular
fr./frr.	fragment/s
frgcon	fragmentary condition
GC	good condition
hum.	humerus; humeral
HW	heavily worn
ID	identify; identification; identifiable
incl.	including
inf.	inferior(ly)
int.	internal(ly)
interprox.	interproximal
ITD	impossible to determine
J&T	jaws and teeth
L	left; lumbar, if followed by number of vertebra
lab.	labial(ly)
lat.	lateral(ly)
LBF	limb bone fragment
LBSF	limb bone shaft fragment
ling.	lingual(ly)
LLPCF	length of longest postcranial fragment
LT	loose tooth/teeth
M	male
MA	middle aged (36–45 years)
mand.	mandible; mandibular
MAX.	maximum
maxill.	maxillary
MDCD	mesiodistal crown diameter
mes.	mesial(ly)
met/met	metacarpal/metatarsal
metac./metacs	metacarpal/s
metat./metats	metatarsal/s
misc.	miscellaneous
MP	middle phalanx
NK	not known
NMULC	not measured under laboratory conditions
no./nos.	number/s
NOAD	no apparent duplication
NOFRR	number of fragments
NOINDS	number of individuals
NR	not recorded
NRS	natural root stump
NVIF	not very informative
NVO	not very old
NVW	not very worn

occ.	occlusal
ORGANIC	organic remains
OS	occlusal surface
pal.	palatal(ly)
PAS	preauricular sulcus
path.	pathology; pathological
PATHOL	pathology
PB	poorly burned
PC	postcranial
PCF/PCFs	postcranial fragment/s
pet.temp./temps	petrous temporal bone/s
phal./phals.	phalanx/es
p.m.	post mortem
POSS/poss.	possible (-ly)
PP	proximal phalanx
PPR	poorly preserved
prob.	probable (-ly)
proc.	process
prox.	proximal(ly)
QGC	quite good condition
QM	quite marked(ly)
QW	quite worn
R	right
RA	root abscess
rad.	radius; radial
RD	root development
RF	root formation
RIS	reduced/reduction in size
ROS	rest of skeleton
rpd	represented
S	sacral, followed by number of segment
SC	sutural closure
SF/s	shaft fragment/s
SHD	socket healed
SIOT	separation of inner and outer tables
SLW	slight wear; slightly worn
SMC	suprameatal crest
SN	sciatic notch
SSAP	suture(s) serrated and patent
sup.	superior(ly)
suporb.	supraorbital
supracond.	supracondylar
SW	scarcely worn
T	thoracic, usually followed by number of vertebra
TAB	tooth absent
TASM	tooth and socket missing
TASP	tooth and socket present
TDTM	too damaged to measure
tib.	tibia(l)
TLAD	tooth lost after death
TLBD	tooth lost before death
TOTWT	total weight
TPR	tooth present
TPSM	tooth present, socket missing (loose teeth)
TR	tooth root
TRF	tooth root fragment
tub./tubs.	tubercle/s; tuberosity/ies
TW	transverse width
UB	unburned
UCR	unerupted crown
UDCR	unerupted developing crown
UID	unidentified; unidentifiable
UIF	uninformative
URNGDS	urn goods
US	unsided
UW	unworn
v.	very
VBF	vertebral body fragment
VEF	vertebral fragment
vert./verts	vertebra/e; vertebral
VF	vault fragment
VG	very good
VGC	very good condition
VHW	very heavily worn
VPC	very poor condition
VPR	very poorly represented
VSW	very slightly worn
VW	very worn
VWR	very well represented
WB	well burned
WD	well developed
WE	wrinkled enamel
WTH&F	weight of hands and feet
WTJ&T	weight of jaws and teeth
WTROS	weight of rest of skeleton
WM	well marked
WR	well represented
WSBR	wear stage (Brothwell)
WT	weight
WTCRAN	weight of cranial fragments
YA	young adult aged between 18 and 25 years
yrs	years

KEY TO FÉDÉRATION DENTAIRE INTERNATIONALE TOOTH-SIDE IDENTIFICATION SYSTEM

According to this system each tooth—permanent and deciduous—is identified by two numbers. The first number indicates the quadrant it comes from; the second indicates the tooth. Thus 18 is the upper right permanent third molar; and 75 the lower left deciduous second molar. Further information on dental notation is easily available on many web sites on the Internet.

Quadrants

I. PERMANENT
- 1 = Upper right
- 2 = Upper left
- 3 = Lower left
- 4 = Lower right

II. DECIDUOUS
- 5 = Upper right
- 6 = Upper left
- 7 = Lower left
- 8 = Lower right

Individual tooth identification

I. PERMANENT
- 1 = central incisor
- 2 = lateral incisor
- 3 = canine
- 4 = first premolar
- 5 = second premolar
- 6 = first molar
- 7 = second molar
- 8 = third molar ("wisdom tooth")

II. DECIDUOUS
- 1 = central incisor
- 2 = lateral incisor
- 3 = canine
- 4 = first molar
- 5 = second molar

LIST OF INHUMATIONS

Tomb	Sex	Age	Stature
1	NK	NK	NK
2	NK	13 1/2–14	ITD
3	NK	ca. 7	ITD
4	F?	NK	ITD
5 Skeleton 1	F?	20–30?	ITD
5 Skeleton 2	NK	ca. 17	ITD
5 Skeleton 3	NK	10–12	ITD
6	M	ca. 40	ITD
7	F	ca. 30?	159.21 cm (5′ 2 3/4″)
8	NK	18–20?	ITD
9 West	F?	AD	ITD
9 East	F?	35-?	ITD
9 North	M?	35+	ITD
9 Immature	NK	ca. 18	ITD
10	M	45, at least	ITD
11	M	35+?	173.13 cm (5′ 8 1/4″)
12	NK	ca. 6	ITD
13	M	ca. 35	ITD
14	M?	45+	ITD
15	M	30–35	178.76 cm (5′ 10 1/2″)
16 Skeleton 1	M?	35+?	ITD
16 Skeleton 2	F?	20–35?	ITD

LIST OF CREMATIONS

Tomb	BONDIS	LOLPCF	TOTWT	NOINDS	Sex	Age
18	PBPNM	44.0	343.0	One	NK	AD
19	PTMBR	57.1	143.0	One	F?	YA?
20	NP	61.0	286.0	One	NK	YA?
21	NP	39.5	78.0	One	NK	7–8 mo.
22	HU	49.5	188.0	One	NK	AD
23	NP	45.3	78.0	One	NK	AD
24	HU	47.1	169.0	One	F?	AD
25	NP	69.5	252.0	One	M	AD
26	HU	44.8	692.0	One	NK	AD
27	LP	49.6	220.0	One	NK	AD: MA
28	NP	28.0	41.0	One	NK	CD?
29	PBPNM	13.0	10.0	One	NK	<2 1/2 yrs?
30	HU	44.5	201.0	One	NK	AD
31	VL	58.5	423.0	One	NK	AD
33	CERT	29.9	8.0	NK	NK	NK
34	CERT	NR	2.0	NK	NK	NK
35	POSS	48.5	255.0	One	NK	AD
36	VL	39.3	67.0	One	NK	CD/AT
37	NP	51.0	148.0	One	NK	AD
38	POSS	41.0	474.0	One	M	AD
40	POSS	64.6	210.0	One	M?	AD
41	VL	57.4	349.0	One	NK	AD
42	POSS	51.5	371.0	One	NK	AD
43	NP	30.2	17.0	One	NK	Baby
44	NP	59.3	305.0	One	NK	ca. 8–10 yrs
45	PBPNM	52.0	247.0	One	NK	AD
46	NP	58.8	503.0	One	NK	AD: NVO?
47	NP	62.2	544.0	One	F?	MA?
48	NP	44.7	124.0	One	NK	AD
49	UL	53.5	228.0	One	F?	AD
50	POSS/UL	44.4	29.0	One	NK	AD
51	NP	62.7	547.0	One	F	AD
52	NP	67.9	416.0	One	NK	AD
53	CERT	47.9	60.0	NK	NK	NK
54	HU	58.7	95.0	One	NK	AD
55	POSS	NK	6.0	NK	NK	NK
56	VL	34.5	131.0	One	NK	AD
57	HU	38.6	39.0	One	NK	<1 year?
58	HU	60.6	1522.0	Two?	NK	MA
					NK	AD?
59	CERT		3.0	NK	NK	NK
60	HU	58.5	167.0	One	M?	AD
61?	CERT	39.1	23.0	NK	NK	NK
62	POSS	62.7	52.0	NK	NK	NK
63	POSS	35.7	43.0	One	F?	AD

Tomb	BONDIS	LOLPCF	TOTWT	NOINDS	Sex	Age
64	CERT	NR	3.0	NK	NK	NK
65	NP	57.5	258.0	One	NK	AD
67	NP	55.9	648.0	One	M?	AD
68	POSS	57.1	253.0	One	NK	AD
69	NP?	20.4	30.0	NK	NK	NK
70	NP	63.4	693.0	One	M?	YA?
72	UL	66.7	630.0	One	NK	AD: NVO
73	CERT	29.1	4.0	NK	NK	NK
75	POSS	37.8	209.0	One	F?	AD
76	POSS	58.3	248.0	One	M?	AD
77	VP	33.1	125.0	One	NK	AD
78	NP	46.2	260.0	One	NK	AD: NVO
80	POSS	43.6	95.0	One	NK	AD
81	POSS	33.9	148.0	One	NK	AD
83	POSS	42.5	314.0	Two?	NK	AD: NVO?
					NK	CD?
84	POSS	47.0	281.0	Two?	F?	AD: NVO?
					NK	CD/AT
85	POSS	50.1	143.0	One	NK	AD
86	NP	55.1	179.0	One	NK	AD: NVO?
87	POSS	21.2	21.0	One	NK	Baby
88	POSS	55.7	509.0	One	NK	AD
89	POSS	40.8	147.0	One	NK	AD
90	PBPNM	46.2	53.0	NK	NK	AD
91	POSS	34.3	188.0	One	NK	AD
92	VL	25.7	20.0	NK	NK	AD
93	POSS	44.9	23.0	NK	NK	NK
96	HU	74.5	78.0	One	NK	AD
97	NP	49.1	132.0	One	NK	AD
100	NP	54.7	455.0	One	M?	AD
101	NP	67.3	331.0	One	M?	AD: NVO?
102	POSS	57.6	400.0	One	NK	AD: NVO?
103	NP?	78.8	1323.0	Two	M	AD
					NK	AD
104	NP	67.7	781.0	One	F?	AD: NVO?
105	NP	63.2	255.0	One	NK	AD
106	NP	42.9	52.0	NK	NK	AD
107	POSS	56.8	110.0	One	NK	AD
108	NP	45.2	85.0	One	NK	AD
109	NP	85.0	244.0	One	NK	AD
110	VL	38.9	13.0	NK	NK	AD
111	NP	35.5	34.0	NK	NK	NK
112: I	NP	40.8	31.0	One	NK	CD: 5–7
112: II	NP	NR	9.0	One	NK	CD
113	POSS	61.0	162.0	One	NK	AD
114	NP?	44.0	204.0	One	NK	AD: NVO?
115	NP	73.8	194.0	One	NK	AD: NVO?

Tomb	BONDIS	LOLPCF	TOTWT	NOINDS	Sex	Age
116	POSS	48.6	194.0	One	NK	AD
117	NP	NR	10.0	NK	NK	NK
118: I	POSS	35.6	3.0	NK	NK	NK
118: II	LP	65.1	87.0	One	NK	AD
118: III?	CERT	42.9	11.0	NK	NK	NK
119	SP	49.3	9.0	NK	NK	NK
120	POSS	54.0	40.0	NK	NK	AD
121?	VL?	NR	12.0	NK	NK	NK
122	VL	49.7	356.0	One	F?	AD
123	LP	58.9	579.0	Two	F	YA
		33.0	22.0		NK	Fetus/neonate
124	NP	68.8	1146.0	One?	NK	AD
125	POSS	52.4	140.0	One	NK	AD
126	POSS	37.1	94.0	One	NK	CD?
127	NP	45.5	280.0	One	NK	MA
128	PBPNM	57.5	425.0	One	NK	AD
129	poss	38.5	240.0	One	NK	NK
130	NP	59.0	115.0	One	NK	YA
133	HU	25.5	81.0	One	NK	AT?
134	HU	47.2	738.0	One	NK	MA?

Key to additional abbreviations:
HU = Highly unlikely
LP = Little possibility
PBPNM = Possible/ly, but probably not much
PTMBR = Probable that most bone recovered
VL = Very likely

NOTES

1. I thank Professor Alexander Cambitoglou for inviting me to examine these bones; the Royal Society and Mr Oussama Moukaddem for providing funds that enabled me to do so; and Dr John Papadopoulos and Dr Jill Carington Smith for explaining their archaeological context and importance.
2. *Weight*: 1600–3600 g (McKinley 1989a:66); 2200–3750 g (Holck 1986:73, table 9). *Duration*: 1–2 hours (McKinley 1989a:65); 75–120 minutes (Holck 1986). *Temperature*: 500–1000°C (McKinley 1989a:65); ca. 700–1100°C (Holck 1986:37, fig. 3). See too Wells 1960; Gejval 1969.
3. Such material is particularly interesting, for example when a lump of previously almost molten and subsequently twisted bronze finally adheres to a cranial fragment, as it did to one from the amphora in Tomb T58 at Lefkandi (Musgrave, report on September 1987 field season in preparation).
4. Direct comparisons are not easy to make, and any use of the mean as opposed to the median is probably not very helpful. For further information on weight see Musgrave (1980: 441–443); and
   Grimm (1974): range 2–990 g; *n* = 27
   Grimm (1985): range <1–1260 g; *n* = 67
   Hazzledine (1982): range <1–1350 g; *n* = 107
   Holck (1986:117–124): male range 10–3175 g, mean 637.9 g; female range 30–1950 g, mean 455.6 g
   Kühl (1983a): individual scores of 500 g, 1050 g, 1350 g
   Kühl (1983b): individual scores for four mothers and their babies: 1175 + 16 g; 1370 + 12.5 g; 1570 + 4 g; 1200 + 5 g
   Kühl (1988): individual scores of 1840 g, 2430 g, 290 g, 240 g, 94 g
   Kühl and Remagen (1986): an individual score of 1415 g
   McKinley (1989a): adult range 200 to almost 2000 g; mean ca. 800 g
5. Hiatt 1969:106. Watkins (1982:81–82) records evidence for the burial of severed heads in a Bronze Age cemetery in Scotland. In the Anglo-Saxon cemetery at Loveden Hill, Lincolnshire, three of the inhumed bodies "had been decapitated and buried headless" (Wilkinson 1980:230). Elsewhere, Holck (1986:178–185) discusses the evidence for mutilation in Norwegian cremations.

6. Although admittedly of very different periods:
   Archaeological: the double burial in the Derveni krater (see Musgrave 1990b).
   Literary: the burial of Patroclos and Achilles, described by Homer, starting with the passage in *Iliad* XXIII:236–248, in which Achilles gave clear instructions that Patroclos's bones should be carefully collected from the center of his pyre and then placed in a gold 'phiale' "against the time when I myself shall have vanished in the world below" (E. V. Rieu's translation of line 244). In *Odyssey* XXIV:73–77 the spirit of Agamemnon addresses Achilles and describes the details of his cremation and the subsequent depositing of his ashes in a golden amphora—the handiwork of Hephaistos and a gift from Dionysos—alongside those of Patroclos: "In this lie your white bones, glorious Achilles, and mingled with them those of the dead Patroclos, son of Menoiteus."
7. See McKinley (1989b:242, 248, fig. 1); Gebuhr (1983: tables 1–6) for confirmation of this observation. McKinley's (1989b:242) comment on average life expectancy at Spong Hill is very apt: "on a very crude level, [it] appears to have been between 30–40 years. The subadult years were apparently fairly "safe" (a generally noted trait in demographic analysis), with infancy being rather more traumatic. Over 6% of the adults survived over 40 years, the number . . . probably [being] in excess of this. . . ."
8. Xirotiris and Langenscheidt (1981:156): "Inherited in such a procedure is a degree of uncertainty." This problem has been discussed in detail by McKinley (1989a:70). Of the radii from Spong Hill only 5 percent had complete heads and were thus usable in any attempt to determine stature (McKinley 1989a:71). Gladykowska-Rzeczycka (1974), Xirotiris and Langenscheidt (1981), and McKinley (1989a) cite references to papers containing suggested equations, for example Gralla (1964). See further Kühl (1983a; 1983c; 1988); Kühl and Remagen (1986) for examples of their application.
9. I had slightly better luck among the more extensive remains from the Knossos North Cemetery. A torus mandibularis—an uncommon, and supposedly hereditary, familial trait—was present on three mandibular fragments in Pots 36, 58 and 79 from T.285.
10. For information about cribra orbitalia see Steinbock (1976), Hillson (1980) and Brothwell (1981). For a discussion of the condition on Iron Age cremated crania from North Germany see Kühl (1980; 1983c; 1983e; 1985). See also Stuart-Macadam (1989). In this paper she reviews convincing evidence that microbial infection arising from poor hygiene may have been the major factor causing cribra orbitalia rather than poor diet.
11. Examples have been recorded by Denston 1977a; 1981b; Kühl 1980; 1983e; and myself (from Tomb 107.7 in the Knossos North Cemetery). Lunt and Barnetson (1982:92) have described the recovery of two molar crowns that survived cremation because they had not yet erupted. See also Chandler 1987; McKinley 1989b for a discussion of dental pathology in cremated teeth.
12. The urn goods from Lefkandi (Musgrave 1980) were not very impressive and included a small iron pin from S38, a bronze pin from S58 and a small piece of iron from T14.2. Among the contents of T58, which I examined in September 1987, I found three lumps of twisted bronze, one with a cranial fragment adhering to it (Musgrave, report in preparation). Pot 88 at Lower Gypsadhes Hill yielded fragments of a sword (Musgrave 1981). The Knossos North Cemetery, on the other hand, was a rich source of interesting small finds, among them: worked bone from T45; worked obsidian from T75 and T107; a terracotta figurine from T75; and beads from T107, T218, and T229 (Musgrave 1996). The quartz bead from T229 is a very beautiful object indeed. For a discussion of the Anglo-Saxon urn goods—mainly glass and bronze and in most cases burned—from Spong Hill see McKinley 1989a; 1989b.
13. The procedure for charting the prevalence of caries was that adopted by Whittaker (1993:50–51) in his study of the skeletons from Christ Church, Spitalfields: "Lesions were only charted as carious if there was a defect in the enamel surface or the dentine of the root." For this reason standing dentine root stumps—my NRSs—were included as carious. They would scarcely have been reduced to that state without the intervention of caries at some time or other.
14. The recording of abscesses presents a number of problems. There are three options:
   Option 1. To include only "toothed" sockets and exclude the healed ones of teeth lost before death. This gives an idea of abscess activity at the time of death of each individual in the sample. The formula for calculating this frequency in table A.6 is: A (abscessed sockets) / B ("toothed" sockets only) × 100.
   Option 2. To include all sockets: "toothed" and healed alike. This approach is somewhat du-

bious in that it yields an artificially low prevalence. Almost certainly some healed sockets may have been abscessed before their teeth were shed. My lower left first molar was extracted over thirty years ago for this reason. I am sure that no trace of an abscess remains today. The formula for calculating this frequency in table A.6 is: A (abscessed sockets) / B (all sockets: "toothed" and healed) × 100.

Option 3. To include all sockets, but combine the abscessed and healed sockets. This at least offers a "periodontal health index" for the sample as a whole, which takes into account present and past pathology. The formula for calculating this frequency in table A.6 is: A (abscessed sockets + healed sockets) / B (all sockets: "toothed" and healed) × 100.

15. None were recovered with the Bronze Age cremations from Simons Ground (Hazzledine 1982:26); their absence from sites of the sixth to second centuries B.C. in north Germany was, according to Kühl (1983c), normal for the pre-Roman Iron Age of this region.
16. "Animals [at Spong Hill] would be slaughtered and butchered, the meat removed for cooking and the remnants—head, feet, tail and possibly hide—placed on the pyre" (McKinley 1989b:244).
17. Throughout this catalogue the word "malar" has been used to in preference to "zygomatic" because it is shorter. In Gray's Anatomy—the ultimate Court of Appeal for British anatomists—the cheek bone is the "zygomatic" bone. The term "malar" is, I believe, still preferred by many clinicians for the same reason.
18. This includes 8 g of PCFs (inv: B81.19) encountered in earth directly above Tombs 38, 39, 40 and 45. According to JKP they most likely came from either Tomb 40 or Tomb 45. Their assignment to Tomb 40 is therefore somewhat arbitrary but defensible.
19. More information on weights: misc. PCFs 10.0 g; VEFs and LB ends 6.0 g; small C or PCFs 2.0 g.
20. These weights are of the brushed and gently scraped bones. The latter were particularly earth-encrusted. For strict accuracy it might be advisable to subtract 5 g (ca. 10 percent) from the TOTWT score of 48 g.
21. Some miscellaneous weights: medium to large LBSFs 250.0 g; vertebral frr. 22.0 g; general cancellous frr. 36.0 g; small misc. frr. 205.0 g.
22. These bones were never subsequently located and are not included in appendix B.

Appendix B
The animal remains found in tombs

Sandor Bökönyi†

with addenda by Deborah Ruscillo

The Early Iron Age cemetery at Torone is among the few of the period to have yielded animal remains in tombs—or rather where the animal remains, mostly poorly preserved, were recovered and studied. This report concentrates on the animal bones found in cremation tombs, inside the ash-urn with the cremated human remains; a list of these tombs (table B.1) completes the report. A small number of fragmentary animal bones also were noted in the fill of some of the inhumation tombs, but in all such cases the material was probably intrusive and could not be associated with the tomb with any certainty.

Animal remains were encountered in sixteen tombs and in the immediate vicinity of a further tomb[1] (marine remains are presented in appendix C). This may seem rather few from a total of 118 cremation tombs, but it should be remembered that many cremations were found in a poor state of preservation, yielding only a very small quantity of human remains (see also chapter 4, appendix A). It should also be noted that among the cremation tombs that were very well preserved, there was clear evidence for the incomplete collection of the human bone for deposition in the ash-urn (see appendix A). This latter aspect of the funerary ritual, coupled with the poor state of preservation of many of the tombs, would have greatly affected the process of survival and retrieval of animal remains associated with individual tombs. The occurrence of animal remains in sixteen tombs should therefore be viewed as the minimum preserved, and it is possible, if not probable, that more tombs would have had associated animal remains originally.

The animal remains from tombs belong to fourteen classes or categories, discerned for the purposes of convenience and not in terms of animal systematics. The material represents twenty-four cases; as it is fragmentary, case denotes the incidence of a particular class (two or more individual bones of the same class in each tomb are counted as one case), as follows:

Class	Case
Cattle	1
Sheep	1
Goat	1
Sheep/goat	7
Sheep/goat-size	2
Pig	3
Small carnivore	1
Rodent	1
Insectivore	1
Bird	1
Frog	1+
Reptile	1
Large mammal	1
Animal	2
Total	24+

The distribution of these classes in the graves is as follows: twelve tombs (Tombs 47, 52, 62, 68, 88, 96, 118, 123, 124, 125, 130 [cf. 23]) contain only one class each, four graves (Tombs 24, 77, 103, 104) have two classes, and one grave (Tomb 18) has three. The remains of the small rodents (Tomb 104), insectivore (Tomb 104), reptile (Tomb 23), and frogs (Tomb 104), all unburned, are almost certainly intrusive (see **pl. 515**). These creatures spend a large part of their lives in underground burrows and often die there; they would have got into the tombs at some undetermined time after interment and there met their end. The one complete cremation cist tomb (Tomb 104)

would have provided an ideal environment for such species, and it is no coincidence the majority of such remains were encountered in this one tomb.

The remaining ten classes probably consist of domestic species. Only in the case of the small carnivore (Tomb 118) and the bird (Tomb 130) is there a possibility of a wild animal. In the case of Tomb 118, the carnivore may well be of a domestic species, such as dog or cat, although the possibility of fox or badger cannot be dismissed. The bird in Tomb 130 may be domestic, but at Torone the incidence of wild bird bones from the Early Bronze Age to the post-Byzantine era is comparatively quite high.[2] The clear predominance, if not exclusivity, of domestic animal bones is of interest as the pattern seen in the Early Iron Age, albeit from a small sample, is in keeping with animal husbandry and exploitation patterns of the Bronze Age and of the succeeding Archaic and Classical periods.

On the question of frequency, the preponderance of caprovines is noteworthy. Of the nineteen cases (excluding those thought to be intrusive), caprovines account for more than 50 percent of the sample—a figure in keeping with those established at the site for the far better represented samples from earlier and later periods.

The majority of the animal bones recovered were burned, although the grades of burning differed depending on how close or how long the bones (with or without flesh) were subjected to fire. Some of the bones listed below as unburned may have been from animals roasted, but where the bone itself did not come into direct contact with the flame. The most heavily burned bones were decalcinated, others had been deformed by heat. Some bones were only partially burned; perhaps the most interesting of these is the proximal radius fragment of a goat from Tomb 24, where part of the bone was burned to different grades of decalcination, while the remainder was unburned (**pls. 512a–b**). Such a pattern of burning suggests this part of the animal had been placed, or was discarded, on top of the pyre or toward one side, perhaps at an advanced stage in the process of cremation, but was not totally enveloped by the flames. The same bone fragment was among the few of the cemetery large enough (proximal width 27 mm, proximal diameter 14 mm) to allow the original size of the animal to be estimated. These dimensions are, on the whole, smaller than those found for the majority of goat remains from the large sample at Torone of the species from all periods, despite the fact that the radius derives from an adult animal.[3] The only other case where bone size gives some clue to the original size of the animal is the sheep astragalus from Tomb 125 (max. length 30 mm; max. width 20 mm), which indicates a medium-sized animal. It is worth adding that in two of the three cases of pig bone encountered in tombs (Tombs 103, 124), the animals were clearly juvenile.

A further point is that the majority, although not all, of the animal bone fragments found in tombs were of long bones, particularly those parts of the animal with little available meat. If this observation is a fair reflection of reality—and the sample is certainly not great—then the bone discarded and found in the pyre refuse may indicate an important aspect of funeral ritual and, furthermore, account for the fragmentary state of the material recovered: that an animal butchered, sacrificed, or ritually killed was divided and distributed among the living, and that the dead received only a very small portion of the kill, generally those parts not desired by the living (see chapter 4).

Table B.1 Tombs yielding faunal remains

Tombs	Fauna	Bones
Tomb 18	*Bos taurus*	Upper right p_2, adult
	Ovis/Capra	Radius diaphysis fr.
		Femur diaphysis fr.
		Radius diaphysis fr. (burned)
	Animal	Long bone diaphysis fr. (burned?)
In the vicinity of Tomb 23 (TR 1 2#24 sherds near S.F.14)	Reptile	Maxilla and vertebra
Tomb 24 **(pl. 512a–b)**	*Capra*	Radius and ulna proximal fr., right, adult (medial part burned in different grades to decalcination; lateral part unburned)
	Ovis/Capra	Two ulna frr. of the same extremity
		Humerus diaphysis fr. (unburned?)
Tomb 47	*Ovis/Capra*	Long bone diaphysis frr. (heavily burned)
Tomb 52 **(pl. 513a–b)**	*Sus domestica*	Costa fr., adult(?) (burned to decalcination)
Tomb 62	*Ovis/Capra*	Radius diaphysis fr. (unburned)
Tomb 68	*Ovis/Capra*	Tibia diaphysis fr. (unburned)
Tomb 77	*Ovis/Capra*	Thoracic vertebra fr. (unburned)
		Radius diaphysis fr. (unburned)
		Tibia diaphysis fr. (unburned)
	Ovis/Capra-size	Long bone diaphysis fr. (unburned)
		Costa fr. (probably animal)
Tomb 88	*Ovis/Capra*	Left astragalus (burned)
Tomb 96	Mammal	Large mammal (unidentified) long bone
		Diaphysis fr. (unburned)
Tomb 103 **(pl. 514)**	*Ovis/Capra*	Tibia diaphysis fr. (burned)
	Sus scrofa	Two joining mid tibia diaphysis frr., juvenile (unburned)
Tomb 104 **(pl. 515)**	*Ovis/Capra*	Tibia fr. (unburned)
	Intrusive	Three rodent skeletons
		One insectivore skeleton
		Several frog skeletons
Tomb 118 (Ash-urn 1)	Carnivore	Small carnivore (dog, cat, fox, badger) left zygomatic fr. (unburned)
Tomb 123	Two possible animal bones(?) noted by J. H. Musgrave (appendix A) could not be identified	
Tomb 124	*Sus domestica*	Femur diaphysis and tibia diaphysis frr.
		Right astragalus and right calcaneum, juvenile (burned)
Tomb 125	*Ovis*	Astragalus, right, adult (unburned)
Tomb 130	*Avis*	Ulna proximal fr., adult (unburned)
Worked bone small finds	**Type of object**	**Species**
T10-7	Bone bead	Antler fr. (end of tang); possibly red deer
T38-3	Fragmentary worked bone handle	Sheep/goat tibia
T52-4	Iron knife with unriveted bone handle	Probably rib; unidentified species
T56-4	Fr. of iron blade with possible bone handle	Possible traces of bone only; not identifiable

NOTES

† Sandor Bökönyi died suddenly on Christmas Day 1994. He had read and approved a corrected version of this contribution in the summer of 1994. A further pig bone located in 1995 from Tomb 103 was identified and added to the list by Deborah Ruscillo. I am grateful to her for reading this section and providing some illuminating comments. (J.K.P.)

1. Given the designation "TR 1 2#24 sherds near S.F.14," these remains were encountered in the immediate vicinity of Tomb 23. The fact that the species represented is a reptile suggests the remains were probably not associated with the tomb.
2. In the entire animal bone sample of all periods thus far identified from the site, bird bones account for at least thirty-five of a total of fifty-seven species.
3. The adult age of the animal is suggested by the fact that the ulna was fully grown together with the radius.

Appendix C
Marine remains and land mollusks from Terrace V

Deborah Ruscillo

The tombs and surrounding stratigraphy on Terrace V yielded approximately 2.4 kg of mollusks (both land and sea), and other marine remains. Thirty-four species of mollusks, at least one species of echinoderm, one crustacean, and three species of fish were identified from 134 Early Iron Age tombs and accompanying five soil deposit types on the terrace. Most of the shell sample was recovered through regular excavation, while approximately 200 g of the material was extracted from water-sieved soil samples taken from within and around the tombs. The soil deposit types can be summarized as follows:

- Type 1: Top soil, including plow soil and humus (includes Early Iron Age to post-Byzantine period material)
- Type 2: Stone packing to level out the terrace (post-Byzantine)
- Type 3: Classical deposits associated with Classical domestic architecture.
- Type 4: Early Iron Age cutting in the southwest portion of the cemetery grounds. The tombs located within the bedrock cutting are the earliest on Terrace V. Deposit type includes soil, ash lenses, pyre refuse, and earth around tombs in the area of the cutting.
- Type 5: Recompacted bedrock, including sparse finds of pottery and organic material found only in Early Iron Age cutting

This report focuses on the marine remains from within the tombs and funerary urns, indirect contexts associated with particular tombs (from tomb trenches), and remains from deposit type 4. See table C.1 for a catalogue of the analyzed shell and marine samples from all contexts on Terrace V.

By far the most abundant marine remains from Terrace V are mollusks. This is partially due to the nature of shells. Calcium bicarbonate resists biodegradation and can eventually fossilize over the course of thousands of years, whereas more fragile specimens of fish bone, for example, can be eroded by soil acidity, crushed, or carried away by rodents. These factors affect preservation in the sample obtained, and thus the frequency of occurrence in the data. Nevertheless, mollusks appear to have been preferred marine grave offerings, as this list of cumulative species suggests:

Mollusca	*Alvania cimex*	Marine snail
	Bittium reticulatum	Needle shell
	Callista chione	Venus shell
	Cerastoderma edule	Common cockle
	Cerithium vulgatum	Common cerith
	Chamelea gallina	Chicken venus
	Columbella rustica	Dove shell
	Conus mediterraneus	Cone shell
	Cypraea lurida	Lurid cowrie
	Dentalium vulgare	Tusk shell
	Donax trunculus	Truncate donax
	Euthria cornea	Spindle shell
	Glycymeris glycymeris	Dog cockle
	Haliotis lamellosa	Common ormer
	Monodonta turbinata	Checkered top
	Murex brandaris	Dye murex
	Murex trunculus	Trunk murex
	Nassarius reticulatus	Netted dog whelk
	Ostrea edulis	Oyster
	Patella caerulea	Mediterranean limpet
	Patella vulgatum	European limpet

	Pharus legumen	Razor shell
	Spondylus gaederopus	Thorny oyster
	Thais haemastoma	Rock shell
	Triphora perversa	Needle shell
	Venerupis decussata	Cross-hatch carpet shell
	Venus verrucosa	Warty venus
	Vermetus sp.	Worm shell
Crustacean	*cf. Cancer pagrus*	Crab
Echinoderm	*Paracentrotus lividus*	Rock urchin
Osteichthyies (fish)	*Thunnus thynnus*	Tunny (Tuna) and at least two other unidentifiable species
Land mollusca	*Cecilioides acicula*	
	Clausilia cruciata	
	Euconulus fulvus	
	Helix aspersa	
	Helix pomatia	
	Hellicella sp.	

Most of these species are edible. This report shows that food items rather than ornate shells were preferred marine grave offerings. It also shows that the few inedible marine mollusks found in tomb contexts tell us something about the funerary rituals involved with specific burials.

THE ANALYSIS

All specimens, both whole and fragmentary, were measured (mm) and weighed (g). For whole valves, greatest length (L) was measured from the umbo to the opposite edge, and for complete gastropods from the apex to the siphonal canal. For gastropods where apices are broader than they are tall (e.g., *Monodonta*, *Hellicella*), greatest length was measured apically (the body whorl from the aperture edge across). All measurements were made using the Vernier caliper. Whole specimens were weighed individually, whereas fragments were weighed cumulatively by species per context. Material recovered from water-sieving and flotation was weighed as a group from each soil sample.

Identifications were made primarily by recognition; the more fragmentary specimens required comparative material—literature, control sampling, live specimens—to verify classification. Shell sampling from local Torone shores was required to identify water-worn shell and to compare modern and ancient species present in the area. Control sampling also was conducted from other areas south of the Lekythos and from adjacent hills to verify the unnatural deposition of tiny marine gastropods found in tomb contexts, the significance of which is discussed below. Control samples were taken from surface soil down to bedrock in each location.

THE SPECIES

Most identified mollusks were common species in the Aegean. Species that are common in the area but rare in the sample (*Cypraea lurida*, *Haliotis lamellosa*, *Conus mediterraneus*) suggested a deliberate selection based on aesthetic qualities rather than food value. Shells that appeared in relatively great quantities (*Cerastoderma edule*, *Patella caerulea*) were and still are commonly exploited as food items and indicate these mollusks were abundant and easily collected as common meal items in the Protogeometric period in Torone.

The existence of a single broken crab claw within an inhumation tomb context (Tomb 13) could be an indication of crustacean offerings to the dead. However, as it is the only piece of crab found within the tomb, it also could have been part of an ornament or talisman. Crab claws have been found in tomb contexts elsewhere—for example, one claw was found at the Bronze Age site of Toumba tou Skourou in the tomb associated with pit 19 (Vermeule and Wolsky 1990), and four claws were recovered from Archaic-Classical Salamis in Tomb 79 (Demetropoulos 1974). The claw from Tomb 13 at Torone has been identified as *Cancer pagurus* or *Eriphia spinifrons* based on overall size and the shape of the tubercles.

Many fragments of urchin, both test (exoskeleton) pieces and spines, were found in deposit type 4 and in eleven direct tomb contexts. Echinoids seem to be deliberately included in some tomb assemblages at Torone. Similarly, urchin remains were reported from four funeral pyres from ancient Salamis on Cyprus (Demetropoulos 1970). Urchins were exploited for their food value as they are today, suggesting that their offering was associated with funeral dining or meals for the dead. Urchin remains preserved in the sample were very fragmentary and usually were recovered from sieved material samples, which is to be expected as

urchin remains are tiny and fragile by nature. The identification of most fragments is fairly secure as *Paracentrotus lividus* (rock urchin); the black and dark brown color and the minute transverse grooves along the spines are good diagnostic features of this species. Some smaller light gray and yellowish spines could be *Psammechinus microtuberculatus* (Mediterranean green urchin). The green urchin is very common in the area today. Its most striking feature is its green test and deep violet spines. The effects of soil acidity and burning on the original color are uncertain, so identification by color alone is dubious. This species has transverse grooves along each spine, like the rock urchin. Both species occur in the same samples, just as they coexist in the same environment, sometimes even sharing the same rock.

Five fish vertebrae were recovered from the sample, four from within tombs (one burned), and one from an indirect tomb context (Tomb 49). Late Bronze Age fish remains have been reported from tomb II, chamber 4 at Toumba tou Skourou (Vermeule and Wolsky 1990), and from tomb IT2/241 (child burial) at Hala Sultan Tekke from the same period (Demetropoulos 1976). The inclusion of fish in the tomb debris also suggests an association with funeral meals, either for the dead or the mourners at these sites. Only the single vertebra from outside Tomb 49 could be identified to the species *Thunnus thynnus*. Its large size (24.00 mm) and distinctive, longitudinally striated bony banding along the centrum walls provide diagnostic information for this identification. The vertebra is too large to be another member of the Scombridae family (e.g., mackerel), but too small to be swordfish (*Xiphias gladius*), although the latter, as an immature specimen, is also a possibility.

A knife cut along the ventral surface of the centrum indicates that the fish was butchered and probably eaten before being deposited in the grave. The four other small and fragmentary fish vertebrae could not be identified but are in secure tomb contexts (Tombs 108, 117). One vertebra is burned (Tomb 117, a cremation), suggesting that fish remains were among the pyre debris and not burial offerings. The two vertebrae recovered from Tomb 108 are from different species.

Land snails were generally regarded as intrusive because of their tendency to burrow and their attraction to carrion. *Cecilioides acicula*, for example, can burrow to a depth of two meters and more (Evans 1972). *Hellicella* sp. were by far the most common land snails in the sample, and can be seen today in abundance on rotting plants and trees. *Hellicella* sp. were distinguished from *Oxychilus* sp. by the matte (rather than glossy) finish of the shell and the remnant brown spiral pigment around the whorl on some of the better preserved specimens (J. Evans 1972:72). *Oxychilus* sp. have been reported from pyres of Archaic/Classical Salamis (Demetropoulos 1970), and a *Hellicella* sp. necklace, composed of twenty-one specimens, was reported from Tomb 27f from Early Cycladic Naxos (Doumas 1977).

Helix spp., although edible, did not occur in enough frequency in the sample to be considered as either food items or offerings. *Helix* spp. have been reported from Early Cycladic tombs in Naxos (Doumas 1977), from sixth millennium B.C. tombs in Rizokarpaso in Cyprus (Toumazou 1987) and from tombs in ancient Salamis (Demetropoulos 1970). *Helix aspersa* was eaten by the ancient Greeks and Romans and is still eaten by the modern Greeks in a *stifado* dish, while other cultures consume them as "escargots." *Helix pomatia*, a larger version, was consumed by the Romans as well, and is still eaten in the east. While their character as a commonly eaten snail might suggest funerary offerings, *Helix* also have burrowing tendencies and are especially drawn to carrion. *Helix*, then, were also regarded as intrusive.

Table C.1 Catalogue of marine remains and land snails from Terrace V

Tomb no.	Marine remains[a]	Quantity/state of remains	Dimensions Length[b] (mm)	Weight (g)
4	*Murex trunculus*	1 fr.	PL 31.35	3.10
9	*Cerastoderma edule*	1 complete	CL 29.05	3.52
	Murex trunculus	1 fr.	PL 14.00	0.85
	Bittium reticulatum (s)	1 complete		
	Cerastoderma edule (s)	18 frr., 2 burned		
	Cerithium vulgatum (s)	2 frr.		
	Murex trunculus (s)	3 frr.		
	Patella caerulea (s)	2 frr., 1 burned		
	Hellicella sp. (l)	40+ complete, 1 burned fr.		
			Cumulative weight	**8.17**
10	*Murex trunculus*	1 fr.	PL 28.89	2.35
11	*Cerastoderma edule*	2 frr.		0.85
	Hellicella sp. (l)	1 complete	CL 10.64	0.19
12	*Patella caerulea*	1 complete	CL 45.34	6.45
13	*Callista chione*	1 fr.	PL 39.00	4.75
	Cerastoderma edule	2 complete, 33 frr.		
	Cerithium vulgatum	2 frr.		
	Donax trunculus	1 fr.	PL 20.25	0.75
	Glycymeris glycymeris	1 complete	CL 17.98	1.12
	Monodonta turbinata	2 frr.		
	Murex trunculus	33 frr.		
	Patella caerulea	3 complete, 11 frr.		
	Venerupis decussata	1 fr.	PL 12.50	0.25
	Iridescent (unident.)	2 frr.		
	Helix cf. *pomatia* (l)	1 fr.	PL 34.30	1.00
	Cancer pagurus (c)	claw	CL 15.45	0.50
			Cumulative weight	**67.02**
14	*Cerastoderma edule*	4 frr.		
	Murex trunculus	1 fr.	PL 24.79	3.70
	Patella caerulea	1 fr.	PL 23.49	1.70
			Cumulative weight	**7.60**
17	*Patella caerulea**	1 complete	CL 39.93	3.95
18	*Cerastoderma edule*	1 fr.	PL 12.90	0.55
20	*Cerastoderma edule**	4 frr.		
	Cerastoderma edule	1 fr.	PL 7.48	
	*Cerithium vulgatum**	1 fr.	PL 32.53	3.38
	Hellicella sp. (l)	1 complete	CL 2.88	0.50
	Paracentrotus lividus (e)	1 spine fr.	PL 3.94	
			Cumulative weight	**8.18**
23	*Cerastoderma edule* (s)	1 fr.	PL 6.52	0.40
26	*Paracentrotus lividus* (s)	2 spine frr.		
	Unidentifiable (s)	7 frr.	*Cumulative weight*	**0.30**
28	*Cerastoderma edule*	2 complete, 5 frr.	CL 40.01, 45.24.	
	Callista chione	3 complete	CL 44.87, 46.70, 51.83	
	(N.B. all specimens calcined)		*Cumulative weight*	**87.80**
33	*Helix* sp. (l)*	2 frr.		4.40
	Hellicella sp.*	2 complete		1.05

Tomb no.	Marine remains[a]	Quantity/state of remains	Dimensions	
			Length[b] (mm)	Weight (g)
35	*Cerithium vulgatum*	1 fr.	PL 36.61	3.90
33–35	*Cerastoderma edule**	1 fr.	PL 16.11	1.45
	*Patella caerulea**	1 fr.	PL 29.39	1.10
36	*Cerastoderma edule**	1 fr.	PL 22.46	2.00
	*Cerithium vulgatum**	1 fr.	PL 36.64	4.00
	*Spondylus gaederopus**	1 worn fr.	PL 56.11	22.50
39	*Cerastoderma edule*	1 fr.	PL 11.15	0.60
42, 43	Unidentifiable*	1 fr.		2.25
48	*Cerastoderma edule**	3 frr.		3.92
49	*Thunnus thynnus* (f)*	1 vertebra	24.00	5.10
	Hellicella sp. (l)	1 complete	CL 4.21	0.30
	Unidentifiable		2 frr.	0.70
50	*Patella caerulea*	1 complete	CL 44.42	7.30
51	*Cerithium vulgatum**	3 frr.		14.00
49, 51	*Patella caerulea**	1 complete	CL 23.97	0.70
52	*Cerastoderma edule*	36 frr.		1.70
	Cerithium vulgatum	2 frr.		1.90
	Murex trunculus	1 fr.	PL 48.66	6.40
54	*Cerastoderma edule* (s)	5 frr.		0.75
55	*Cerastoderma edule**	1 fr.	PL 20.09	0.70
	*Venerupis decussata**	1 fr.	PL 24.73	2.60
57	*Cerastoderma edule*	1 fr.	PL 22.80	1.20
	Cerithium vulgatum	1 complete	CL 34.53	2.40
	Murex trunculus	1 fr.	PL 30.03	1.35
58	*Helix* sp. (l)	1 fr.	PL 11.61	0.55
60	*Cerastoderma edule*	1 complete	CL 23.02	2.80
	Murex trunculus	1 worn fr.	15.55	0.70
	Murex trunculus (s)	1 fr.	PL 15.99	0.95
61, 63	*Thais haemastoma**	1 complete	CL 31.25	3.40
63	*Cerastoderma edule**	1 fr.	PL 27.60	2.15
	*Patella caerulea**	1 fr.	PL 23.19	0.60
65	*Cerastoderma edule**	3 frr.		2.60
	*Patella caerulea**	1 fr.	PL 21.08	0.80
	Cerastoderma edule (s)	1 fr.	PL 6.59	0.40
66	*Patella caerulea*	1 complete	CL 23.35	1.02
67	Unidentifiable	1 fr.		1.80
68	*Cerastoderma edule*	1 complete, 1 fr.	CL 21.41	
	Monodonta turbinata	1 fr.	PL 16.79	
	Murex trunculus	1 fr.	PL 28.23	
	Patella caerulea	1 fr.	PL 36.23	
	Hellicella sp. (l)	1 complete	CL 9.47	
	Bivalvia (s)	1 fr.	PL 14.12	
	Columbella rustica (s)	1 complete	CL 12.40	
				Cumulative weight **11.60**
69	*Patella caerulea**	8 frr.		
	Cerastoderma edule (s)	1 fr.	PL 3.87	
	Patella caerulea (s)	1 fr.	PL 15.72	
				Cumulative weight **3.90**

Tomb no.	Marine remains[a]	Quantity/state of remains	Dimensions Length[b] (mm)	Weight (g)
70	*Murex trunculus*	1 complete	CL 47.71	14.15
	Hellicella sp.	1 fr.	PL 13.66	
	Cerastoderma edule (s)	1 fr.	PL 4.68	
			Cumulative weight **14.69**	
78	*Spondylus gaederopus*	1 fr.	PL 38.08	2.70
81	*Cerastoderma edule* (s)	1 fr.	PL 22.31	
	Patella caerulea (s).	23 frr.	*Cumulative weight* **4.60**	
83	*Helix* sp. (l)	1 fr.	PL 6.30	0.30
86	*Cerastoderma edule* (s)	8 frr.		
	Cerithium vulgatum s)	1 fr.	PL 5.41	
	Hellicella sp. (l)	1 fr.	PL 3.89	
			Cumulative weight **0.45**	
90	*Patella caerulea*	1 fr.	PL 26.63	1.20
100	*Cerastoderma edule* (s)	1 burned fr.	PL 15.26	
	Cerastoderma edule (s)	4 frr.		
	Murex trunculus (s)	1 fr.		
	Patella caerulea (s)	1 fr.		
	Hellicella sp. (l)	60+ specimens	*Cumulative weight* **3.60**	
101	*Cerastoderma edule* (s)	8 frr.		
	Murex trunculus (s)	1 fr.	PL 22.83	
	Paracentrotus lividus (e)	2 spines		
	Euconulus fulvus (l)	1 complete	CL 5.94	
	Hellicella sp. (l)	30 complete, 40+ frr.	*Cumulative weight* **4.75**	
102	*Cerastoderma edule**	5 frr.		
	*Patella caerulea**	1 fr.	PL 10.10	
	Hellicella sp.*	6 complete		
	Cerastoderma edule (s)	1 fr.	PL 4.59	
	Murex trunculus (s)	1 fr.	PL 8.90	
			Cumulative weight **6.02**	
103	Unidentifiable (s)	3 frr.		0.40
104	*Bittium reticulatum*	1 complete	CL 7.62	
	Cerastoderma edule	1 complete, 8 frr.	CL 17.06	
	Monodonta turbinata	1 fr.	PL 15.59	
	Murex trunculus	1 complete, 3 frr.	CL 34.19	
	Patella caerulea	1 fr.	PL 25.53	
	Clausiliidae (l)	1 complete	CL 14.71	
	Hellicella sp. (l)	3 complete	*Cumulative weight* **8.89**	
105	*Cerastoderma edule**	1 fr.	PL 26.07	1.95
	Patella caerulea (s)	1 complete	CL 25.53	0.90
	Helix sp. (l)	1 fr.	PL 21.99	0.70
			Cumulative weight **3.35**	
107	*Spondylus gaederopus**	1 fr.	PL 43.02	38.20
108	*Cerastoderma edule*	3 frr.		
	Bittium reticulatum (s)	2 complete		
	Cerastoderma edule (s)	1 burned fr., 50 unburned frr.		
	Columbella cf. *rustica* (s)	1 complete, 4 worn frr.		
	Monodonta turbinata (s)	5 frr.		

Tomb no.	Marine remains[a]	Quantity/state of remains	Dimensions Length[b] (mm)	Weight (g)
	Murex trunculus (s)	burned fr., 5 unburned frr.		
	Patella caerulea (s)	2 burned frr.		
	Venerupis decussata (s)	9 frr.		
	Hellicella sp. (l)	100+ specimens	CL 5.61, PL 4.80	
	2 vertebrae (f)	1 complete, 1 fr.		
	Paracentrotus lividus (e)	1 test frr. + 11 spine frr.	*Cumulative weight* **26.25**	
109	*Cerastoderma edule* (s)	76 frr.		
	Cerithium vulgatum (s)	7 frr.		
	Chamelea gallina (s)	1 fr.		
	Columbella rustica (s)	19 frr.		
	Donax trunculus (s)	7 frr.		
	Glycymeris glycymeris (s)	1 fr.		
	Monodonta turbinata (s)	13 frr.		
	Murex trunculus (s)	7 burned frr. + 9 unburned frr.		
	Patella caerulea (s)	15 frr.		
	Triphora perversa (s)	39 complete		
	Vermetus sp. (s)	1 fr.		
	Cecilioides acicula (l)	2 complete		
	Euconulus fulvus (l)	2 complete		
	Hellicella sp. (l)	219 complete		
	Paracentrotus lividus (e)	8 test frr. + 37 spine frr.	*Cumulative weight* **16.70**	
110	Iridescent (unident.)	1 fr.	PL 50.92	
111	*Cerastoderma edule*	1 complete	CL 30.95	
	Spondylus gaederopus	1 fr.	PL 1.09	
	Cerastoderma edule (s)	1 burned fr., 4 unburned frr.		
	Chamelea gallina (s)	1 fr.		
	Patella caerulea (s)	4 frr.		
	Hellicella sp. (1)	39 complete + 22 frr.		
	Paracentrotus lividus (e)	2 test frr.		
112	*Cerastoderma edule*	1 burned fr.	PL 22.64	
	Thais haemastoma	1 fr.	PL 39.76	
	Cerastoderma edule (s)	3 burned frr.,60 unburned frr.		
	Columbella rustica (s)	9 burned/worn frr.		
	Glycymeris glycymeris (s)	1 fr.		
	Monodonta turbinata (s)	10 frr.		
	Murex trunculus (s)	2 burned frr. 9 unburned frr.		
	Patella caerulea (s)	2 burned frr., 1 unburned fr.		
	Venerupis decussata (s)	1 fr.		
	Hellicella sp. (l)	40+ complete		
	Paracentrotus lividus (e)	2 test frr. + 2 spine frr.	*Cumulative weight* **18.72**	
113	*Spondylus gaederopus*	1 burned fr.	PL 55.95	39.15
114	*Alvania cimex* (s)	2 complete	CL 2.60, 3.05	
	Bittium reticulatum (s)	7 complete		
	Cerastoderma edule (s)	2 burned frr.,241 unburned frr.		
	Certhium vulgatum (s)	3 frr.		
	Chamelea gallina (s)	2 frr.		
	Columbella rustica (s)	7 worn frr.		
	Donax trunculus (s)	1 fr.		
	Glycymeris glycymeris (s)	3 frr.		

Tomb no.	Marine remains[a]	Quantity/state of remains	Dimensions Length[b] (mm)	Weight (g)
	Monodonta turbinata (s)	1 frr.		
	Murex trunculus (s)	7 frr.		
	Oyster (s)	3 frr.		
	Patella caerulea (s)	29 frr.		
	Triphora perversa (s)	13 complete		
	Venerupis decussata (s)	6 frr.		
	Venus verrucosa (s)	1 fr.		
	Vermetus sp. (s)	1 fr.		
	Cecilioides acicula (l)	3 complete,15 frr.		
	Euconulus fulvus (l)	1 complete		
	Hellicella sp. (l)	613 complete,420+ frr.		
	Helix sp. (l)	3 frr.		
	Paracentrotus lividus (e)	14 test frr. + 33 spine frr.	*Cumulative weight* **36.45**	
115	*Spondylus gaederopus*	1 complete	CL 83.75	71.50
	Cerastoderma edule (s)	35 frr.		
	Donax trunculus (s)	1 fr.		
	Monodonta turbinata (s)	1 fr.		
	Patella caerulea (s)	1 fr.		
	Cecilioides acicula (l)	5 complete		
	Hellicella sp. (l)	67 complete, 18 frr.		
	Paracentrotus lividus (e)	11 spine frr.	*Cumulative weight* **72.7**	
116	*Spondylus gaederopus*	1 complete	CL 72.07	62.70
117	*Cerastoderma edule*	1 complete	CL 30.09	3.27
	Alvania cimex (s)	1 complete		
	Cerastoderma edule (s)	1 burned fr., 28 unburned frr.		
	Cerithium vulgatum (s)	2 frr.		
	Columbella rustica (s)	5 worn frr.		
	Donax trunculus (s)	1 fr.		
	Monodonta turbinata (s)	1 fr.		
	Murex trunculus (s)	2 frr.		
	Ceciliodes acicula (l)	1 fr.		
	Euconlus fulvus (l)	1 complete		
	Hellicella sp. (l)	31 complete + 20 frr.		
	2 vertebrae (f)	1 burned, 1 complete	PL 3.84, CL 2.34	
	Paracentrotus lividus (e)	1 test fr. + 2 spine frr.	*Cumulative weight* **6.62**	
118	*Cerastoderma edule*	1 fr.	PL 32.28	
	Cerastoderma edule (s)	29 frr.		
	Cerithium vulgatum (s)	1 fr.		
	Columbella rustica (s)	3 worn frr.		
	Monodonta turbinata (s)	2 frr.		
	Murex trunculus (s)	2 frr.		
	Oyster (s)	2 frr.		
	Patella caerulea (s)	2 frr.		
	Venerupis decussata (s)	2 frr.		
	Hellicella sp. (l)	19 complete, 30 frr.		
	Paracentrotus lividus (e)	1 spine fr.	*Cumulative weight* **7.05**	
119	*Cerastoderma edule*	1 fr.	PL 20.05	1.95
120	*Cerastoderma edule*	3 frr.	3.90	
	Helix sp.	1 fr.	17.61	0.80

Tomb no.	Marine remains[a]	Quantity/state of remains	Dimensions Length[b] (mm)	Weight (g)
121	*Murex trunculus*	1 fr.	PL 19.29	2.40
123	*Cypraea* sp. (s)	1 burned fr.	PL 33.45	1.60
	Euconulus fulvus (l)	1 complete	CL 6.77	0.20
124	*Cerastoderma edule**	2 CL, 1 fr.		
	*Conus mediterraneus**	1 complete	CL 27.77	5.00
	*Glycymeris glycymeris**	1 complete	CL 50.03	17.90
	*Patella caerulea**	26 complete, 25 frr.		
	Paracentrotus lividus (e)	43 test frr.	*Cumulative weight* **46.88**	
131	*Cerastoderma edule**	1 fr.	PL 25.21	1.30
133	*Cerastoderma edule**	3 complete	CL 24.05, 24.16, 33.27	
	*Cerithium vulgatum**	1 fr.	PL 45.44	
	*Haliotis lamellosa**	1 fr.	PL 27.09	
	*Monodonta turbinata**	1 complete	CL 11.96	
	*Murex brandaris**	2 complete	CL 50.79, 51.39	
	Murex trunculus	1 fr.	PL 11.47	
	*Spondylus gaederopus**	1 fr.	42.03	
	Iridescent (unident.)*	2 frr.	60.37, 68.77	
			Cumulative weight **58.10**	
134	*Euthria cornea**	1 complete	CL 32.06	1.90
	*Cerithium vulgatum**	1 fr.	PL 36.77	5.20
	*Nassarius reticulatus**	2 complete	CL 21.51, 22.20	
	*Patella caerulea**	1 fr.	PL 22.38	0.60
			Cumulative weight **10.30**	
			Total weight from tomb deposits: 849.11	
Deposit type				
1	*Cerastoderma edule*	5 complete, 11 frr.		
	Cerithium vulgatum	3 frr.		
	Columbella rustica	1 worn fr.		
	Donax trunculus	1 fr.		
	Euthria cornea	1 complete		
	Glycymeris glycymeris	1 fr.		
	Monodonta turbinata	2 complete		
	Murex trunculus	3 complete, 4 fr.		
	Nassarius reticulatus	1 complete		
	Patella caerulea	5 complete, 3 frr.		
	Oyster	1 worn fr.		
	Spondylus gaederopus	5 frr.		
	Thais haemastoma	1 complete, 1 fr.		
	Venerupis decussata	1 fr.		
	Hellicella sp. (l)	4 complete, 1 fr.		
	Cerastoderma edule	5 complete, 11 frr.	*Cumulative weight* **148.82**	
2	*Cerastoderma edule*	10 complete, 9 frr.		
	Cerithium vulgatum	1 fr.		
	Monodonta turbinata	1 complete, 1 fr.		
	Murex trunculus	6 frr.		
	Oyster	2 frr.		
	Patella caerulea	4 complete		
	Thais haemastoma	2 frr.		
	Spondylus gaederopus	3 complete, 14 frr. 2 worn		
	Paracentrotus lividus (e)	3 test frr.	*Cumulative weight* **879.37**	

Tomb no.	Marine remains[a]	Quantity/state of remains	Dimensions Length[b] (mm)	Weight (g)
3	*Cerastoderma edule*	3 complete, 2 frr.		
	Patella caerulea	5 complete		
	Patella vulgatum	1 complete		
	Spondylus gaederopus	1 complete	*Cumulative weight* **75.92**	
3–4	*Cerastoderma edule*	1 complete, 1 fr.		
	Euthria cornea	1 fr.		
	Monodonta turbinata	1 complete, 1 fr.		
	Murex brandaris	1 complete		
	Murex trunculus	6 frr.	Cumulative weight **24.28**	
4	*Bittium reticulatum*	2 complete		
	Callista chione	1 fr.		
	Cerastoderma edule	4 complete, 75 frr.		
	Cerithium vulgatum	1 complete, 2 frr.		
	Columbella rustica	1 complete, 5 worn frr		
	Dentalium vulgare	1 fr.		
	Euthria cornea	1 complete, 1 fr.		
	Glycymeris glycymeris	2 complete (1 calcined)		
	Monodonta turbinata	1 complete, 6 frr.		
	Murex trunculus	1 complete, 46 frr. (2 burned)		
	Oyster	3 frr.		
	Patella caerulea	11 complete, 15 frr. (1 burned)		
	Pharus legumen	1 fr.		
	Spondylus gaederopus	4 frr. (1 worn)		
	Thais haemastoma	1 fr.		
	Venerupis decussata	9 frr. (3 burned)		
	Venus verrucosa	1 fr.		
	Iridescent (unident.)	1 fr.		
	Hellicella sp. (l)	34 complete, 124 frr.		
	Helix aspersa (l)	1 complete, 3 frr.		
	Paracentrotus lividus (e)	4 test frr. 6 spines	*Cumulative weight* **373.58**	
4–5	*Cerastoderma edule*	1 complete, 1 fr.		
	Murex trunculus	1 fr.	*Cumulative weight* **12.15**	
5	*Cerastoderma edule*	6 frr.		
	Cerithium vulgatum	1 fr.		
	Cypraea lurida	1 complete		
	Glycymeris glycymeris	1 complete		
	Murex trunculus	1 fr.	*Cumulative weight* **32.88**	
			Total deposit weight **1547.00**	
			Total sample weight **2396.11**	

Key:

a
* = from indirect contexts associated with tombs
s = sieved material
l = land snail
e = echinoid
f = fish
c = crustacean

b
cl = complete weight
pl = preserved weight

ANALYSIS OF THE DATA

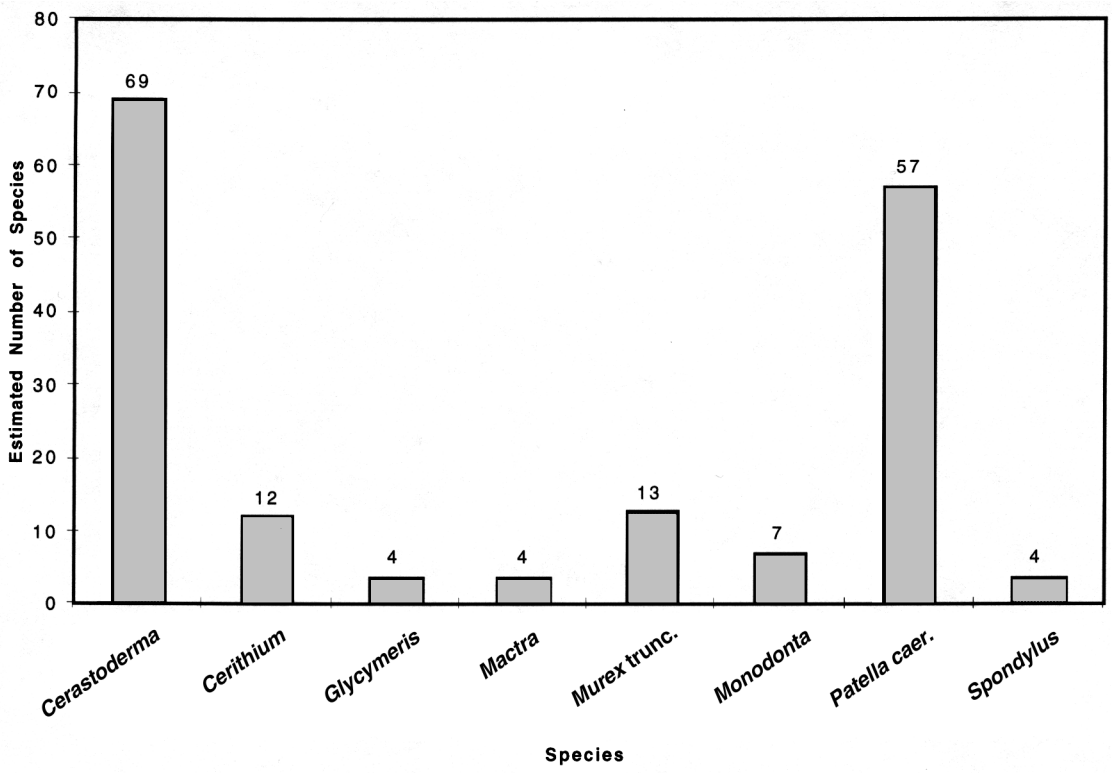
After gathering the context samples and manipulating the data, several patterns concerning marine grave gifts were noted. The results focus on marine remains from deposit type 4 and tomb contexts, both direct and indirect. It should be noted, however, that no marine species were exclusive to any of the other soil deposit types that did not exist

in tomb contexts or in deposit type 4. The greater variety of mollusks occurred in and around the tombs. See table C.1 for soil deposit inclusions.

Common marine remains

Graph C.1 displays the most common marine mollusk inclusions discovered in and around the tombs. Eight species comprise the bulk of marine remains, with two (*Cerastoderma edule* and *Patella caerulea*) greatly surpassing the other species in number. All eight species are edible. The remaining twenty species from the cumulative species list have fewer than four complete specimens from the cemetery grounds. *Cerastoderma* shells are the most common, with *Patella* shells closely following. However, cockles are bivalves whereas limpets are univalves, which significantly decreases *Cerastoderma* numbers although there is no evidence that cockles were offered at the cemetery with both valves intact.

The approximate number of valves and gastropod shells was calculated by dividing the average weight of a single specimen from each species into the total weight per species recovered from the cemetery. This method was used to arrive at a gross estimate for the original number of valves because the majority of mollusks were fragmentary. Results using comparison by weight alone can be dubious, however. For example, the total weight of *Cerastoderma* shells from the cemetery was 236.28 g, while the total weight of *Spondylus* shells was 238.12 g. By weight it would appear that *Spondylus* was the more common mollusk, but if one considers that each *Spondylus* valve has an average weight of 59.85 g and *Cerastoderma* an average of 3.43 g, it becomes clear there are approximately seventeen times more *Cerastoderma* valves than *Spondylus*, and that *Spondylus* does not frequently occur. Average weight should also be used with caution as it assumes all fragments mend into complete shells, when in reality it may be that each fragment represents a single specimen. If this were the case, the maximum number of *Cerastoderma* valves would be 191, and *Spondylus* would still be only 8. Although the average weight method has its limitations, it is an applicable technique when examining fragmentary samples, particularly when each species varies dramatically in size and weight.



GRAPH C.1. Most common marine mollusks in the Protogeometric cemetery

In and out

The validity of including deposit type 4 and indirect tomb contexts with the direct tomb material was investigated. Lists were drawn to compare species occurring within the tombs against those occurring outside the tombs in contemporary levels. All types of land gastropods, as well as echinoids and fish, were recovered from samples taken within and outside the tombs. Marine mollusks and crustaceans, however, did show variation. In addition to the crab claw already discussed, Tomb 13 has a relatively large marine assemblage, including two iridescent pieces of a large marine gastropod. The presence of these lustrous pieces, although occurring once in an "outside" context as well, leads one to suspect they were included for their aesthetic quality rather than their food value. If this is true, than a crab claw used as an ornament within the same context is a plausible suggestion. Claws are worn as ornaments today, mounted on a metal or wooden base and hung around the neck.

Marine mollusks that occurred within tombs but not outside included the species *Cypraea*, *Donax*, *Triphora*, and *Vermetus*. The last two species are fairly insignificant. *Triphora* shells are tiny, with an average length of about 3.0 mm (Harris 1982) and a maximum length of 15.0 mm (Delamotte and Vardala-Theodorou 1994). *Vermetus* shells are inedible and unattractive. It is unlikely these species were included deliberately within the tomb assemblages. *Donax* too, are small (averaging 18.0 mm in length) but edible, perhaps analogous in size and manner to eating pistachio nuts. *Donax*, therefore, could have been deliberate inclusions.

The cowrie (*Cypraea* sp.), known for its beauty, was found burned with only a tooth edge preserved. It was the only marine remains recovered from Tomb 123, a cremation burial that contained an adult female and a fetus or neonate. Perhaps the special circumstances of the burial required a different treatment. For example, two *Cypraea lurida* were found in a burial amphora with the remains of a small infant ("p") from the Archaic necropolis of Vroulia on Rhodes (Kinch 1914). At Toumba tou Skourou, tomb II, chamber 3, containing adult and infant bones, appeared to have received "special treatment" that was different from other burials: two valves of *Mactra* and twenty-five valves of *Donax* were thrown down into the chamber on top of the body, perhaps "as a farewell before [the tomb] was closed" (described by Reese in Vermuele and Wolsky 1990:391). It is also significant that the cowrie found in Tomb 123 at Torone was one of the only burned mollusks from the cemetery, suggesting that it was incinerated with the dead on the pyre. Another cowrie (*Cypraea lurida*) was recovered from deposit type 5 among the recompacted bedrock within the Early Iron Age cutting, and is associated with the cemetery as well. This cowrie was in excellent preservation and included a human-made pierced hole, probably for stringing as an ornament (**pl. 516**). Similarly, a single *Cypraea lurida* with a "suspension hole" was reported from the Necropolis of Vroulia in space IV (Kinch 1914:160).

Species found outside the tombs, in their pits, or in contemporary strata included *Conus*, *Dentalium*, *Euthria*, *Haliotis*, *Murex brandaris*, *Nassarius*, and *Pharus*. That they all occur infrequently and outside tombs suggests they may not belong to the cemetery assemblage, but rather are stray intrusive or nondeliberate inclusions. Further, while most of these species can probably be eaten, none are known for their food value, at least in modern times. *Conus* and *Haliotis* are appreciated for their aesthetic qualities, and the others listed are used commonly in modern-day Greece as fish bait. Only *Dentalium* and *Pharus* have single occurrences in deposit type 4, while the others are indirectly associated with specific tombs.

These mollusks were likely not placed outside the tombs based on ritual dictating where specific species should be put in relation to the dead. It is possible, however, that species located in tomb pits could have been thrown in before the grave was sealed. Deposit type 4 also includes pyre debris, so shells in this stratum may have been present during cremations rather than burials.

Inhumations vs. cremations

There are sixteen inhumations and 118 cremations. Predictably, therefore, there were more than double the number of species in cremations than in inhumations and because only one inhumation (Tomb 9) had soil samples water-sieved. More interestingly, perhaps, than the mollusks in this comparison are the non-molluskan marine remains. The only crustacean specimen from Terrace V

occurred in an inhumation (Tomb 13), whereas fish and echinoids occurred only in cremations. This, again, could be due to the lack of sieved material from the inhumations, but it is still worth noting. The fish and echinoid remains could also be indicative of the location of the pyre, as discussed below. What is perhaps more notable in this comparison are the similarities: a predominance of edible species with the odd pretty piece. Funeral feast ritual appears to have remained the same in respect to marine inclusions, even when the funeral type varied. It is remarkable, in contrast, that at Torone no animal bones were recovered from Early Iron Age inhumation tombs, but only from cremations (see appendix B). It should be stressed, however, that the incidence of animal bones in tombs at Torone was not great.

From the excavations at Olynthos, from the total of 598 burials only graves 327, 462, and 514 (see Robinson 1942) were reported with seashells. All three tombs were child inhumations—only 53 burials of the total 598 were cremations. There is, however, a suspicion that a single mollusk placed at the grave of a child was a demographic choice rather than a burial ritual, even though there were other child burials without marine remains. The shell could also have been representative of the individual, a personal item, or a personal grave offering from someone close to the deceased, but Olynthos is slightly inland perhaps making marine mollusks more inaccessible.

At Lefkandi, shell remains although few were reported from both cremations and inhumation burials. Tombs S19 and T3 (adult inhumations), S27 (cremation), and T36 (a child burial) all contained marine mollusks, indicating there were no apparent criteria regarding burial type for marine remains to be included in the tombs.

In the Athenian Agora, only one Protogeometric inhumation yielded marine remains. The tomb (I 18:3) contained the remains of a middle-aged woman buried with an assortment of animal bones and the remains of an iridescent *Pinna* shell (Ruscillo, forthcoming).

Infants and children

When comparing the demographic findings of the human material (see appendix A) with the marine remains, it is significant that there is no evidence for marine inclusions in infant (under 2.5 years) burials in the Early Iron Age cemetery. Tomb 123 contained marine remains, but here the infant was buried with an adult, suggesting the marine offerings may have been intended for the latter.

From the tombs of children or adolescents secure evidence of associated marine remains comes from Tombs 112 and 133, which include the remains of three children. Tombs 12, 28, and 36 also had indirect marine inclusions. Perhaps children who could consume and were given seafood to eat during life were treated like adults where marine offerings were concerned. Significant may be that a lovely piece like *Haliotis*, which occurred only once in the whole cemetery sample, was associated with a child burial (Tomb 133). While edible species occurred in this tomb as well, a *Haliotis* shell is nice to look at and seems well suited for placement with a child.

From prehistoric and historic cemetery sites in the Aegean, there is an abundance of comparanda concerning marine remains in infant and child burials. Not all cultures, such as Early Iron Age Torone, agree on excluding seashells from infant burials. At Khirokitia-Vounoi in Cyprus, a hoard of *Monodonta* shells was found in association with infant burial B59 (Toumazou 1987); from Kameiros in Rhodes, Tomb 183 contained an infant under one year of age with two shells (Gates 1979); at Vroulia in Rhodes, infant P was found with two *Cypraea lurida* shells, while infant S was associated with a pierced *Cassis saburon* and another small pierced shell (Kinch 1914). There appears to be no standard ritual or choice regarding the inclusion of marine remains and the age of the deceased.

Other child burials will reinforce the idea of a nonstandardized ritual relating marine remains and age in the Aegean: from Naxos, Early Cycladic Tomb 9, a possible child burial, contained two tusk shells, four *Coni*, and two pierced *Helix* shells (more likely *Natica* sp.) (Doumas 1977). At Classical Olynthos, as already discussed, three child burials each contained a single marine mollusk (Robinson 1942), while at Archaic Kameiros, four of seven tombs containing one to two marine shells were child burials (Gates 1979). At Submycenaean/Protogeometric Lefkandi, the tomb of a child of about 6 years of age, one of four tombs containing shell, contained two *Pecten jacobaeus*

(Popham, Sackett, and Themelis 1980); at Hala Sultan Tekke, one of two Late Bronze Age tombs with marine remains was a 5-year-old buried with two fish vertebrae (Demetropoulos 1976). Marine remain inclusions from Late Helladic child burials at Perati also seem to have no pattern (Iakovides 1980). Some marine remains from child burials are ornamental, like those from Naxos, while others are suspected food offerings, as with the Hala Sultan Tekke burial. Reasons for specific selections of shells are not clear, but there are examples where selections seem demographically motivated: from Perati, burials yielded some 400 mollusks, 385 of which were *Conus* shells from probable child burials. Some *Coni* were filled with lead, which Reese (1982, 1985) has described as weights or game pieces. The presence of *Coni* in hoards associated with child burials seems a logical combination knowing the love of children for games.

The marine remains in child burials seem to be chosen based on availability and/or personal choice reflecting individual tastes and availability rather than standard ritual.

DISCUSSION

When dealing with edible marine fauna, one should acknowledge that after the meat is eaten from within, usually all that is left is an attractive outer shell. There is no reason why a mollusk, for example, cannot serve two purposes: food *and* ornament. In fact, there are a few reasons other than sustenance that might explain the occurrence of mollusks within burials. Kinch (1914) in his early assessment of the shells from Vroulia was alone in realistically appealing to the aesthetic equalities of shell: "We all like beautiful shells from the sea; you see them in houses or in sanctuaries, the children like them, given as gifts or suspended from the neck" (Kinch 1914:160).

Robinson takes a more symbolic approach to understanding shells in burial contexts:

> Sea shells have been found perforated and worn as necklaces, but they are so few in comparison that their use as adornment could not have been primary. They may have been *ex voto* offerings, or they may have had an apotropaic meaning. Probably their significance was not unlike that of eggs. If the Greeks pictured the world or various mythological characters born of eggs, they also pictured, even more frequently, characters born of sea shells (Aphrodite), or from the sea itself. . . . (Robinson 1942:198–199)

The reasons for including certain items within a grave are partly ritual, but mostly personal. Even today, a person can be buried with their favorite personal items or little mementos of the world they are leaving behind. We can never comprehend fully the philosophies of cultural ritual, or personal motivation through material remains. We must apply the evidence we have and extrapolate ideas. In archaeology, our information extends from ancient literary sources, material remains, experiments and models, and modern ethnographic parallels. Certainly, the inconsistency of individual human nature would dictate that for every burial there are different feelings and aspects reflected by the various grave offerings. While general characters of burials may be consistent within a culture, like treatment of the corpse, or how the body is placed in a tomb, or the material with which the tomb is constructed, small grave offerings and meals will differ from family to family.

Ethnography

Most of the marine samples from the Torone tombs constitute edible species. Whether the marine remains served a second aesthetic purpose as grave goods is not clear as edible species appeared consistently as offerings. As can be seen from other excavations, this has not always been the case: in Naxos, for example, the majority of the seashells in graves were offered in the form of necklaces; from Prosymna, Grave XX was found with sixty *Cerastoderma* shells and a cowrie, all with suspension holes. In some circumstances then, the aesthetic value of seashells is primary in grave contexts. There are only two burials from Early Iron Age Torone that could include examples of primary aesthetic marine gifts. Tomb 123, the mother and fetus/neonate burial, contained the remains of only one large cowrie shell; Tomb 115 had a complete *Spondylus* shell associated with other grave goods, including fibulae, which was apparently placed intentionally at the side of the ash urn (**pl. 517**).

That shells were offered primarily as meal items in Torone burials is a hypothesis reflected in modern ethnographic examples in Greece. In Kasos, for example, the family of the dead will bring daily food items to consume at the grave as part of the funeral service. *Koliva* (boiled barley and pomegranate seeds) and other traditional funerary foods are distributed after burial in most Greek towns as well. Danforth (1982) explored food in death rituals in Potamia in Northern Thessaly. The villagers of Potamia regarded the traditional foods distributed at funeral services as symbolic of the journey into the next world:

> Just as the body of the dead must be (destroyed or) eaten by the earth in order to pass into the other world, so the food distributed at memorial services must be consumed in order for it to reach the dead. . . . By consuming this food, they enable it to pass into the other world, where it nourishes the dead. . . . Both kinds of food koliva, panhidha, and bread, and the body of the deceased must be eaten in order for the soul to enter paradise. (Danforth 1982:105)

There was no evidence that the mollusks from the Early Iron Age tombs at Torone contained any meat when deposited at the graves. Empty shells suggest the mollusks were consumed by mourners at the grave or at the funeral, just as modern ethnographic examples have illustrated. Food is generally not offered directly to the dead in the grave because it too will rot; it must be consumed by the living in order to reach the dead (Danforth 1982:109). Perhaps the fact that the shell of marine mollusks does not rot makes them an ideal food offering: symbols of the meal remaining in direct contact with the dead.

Ancient literary sources also relate food offerings to the dead. Ancient writers describe grave offerings of milk, honey, water, wine, celery, meal, and *koliva* (Alexiou 1974). Pausanius writes that animal offerings were slaughtered over the trench so the blood would flow into the earth and appease the souls of the deceased. The offerings were part of a feast in honor of the dead, the meal being (sometimes) burned as a holocaust (Alexiou 1974:9). The scene depicted on the Geometric krater in New York (14.130.15) shows warriors bringing a variety of dead animals to a funerary pyre. Iconographic representations from the Geometric and Classical periods reveal the importance of animal or food offerings at a funeral. There is an underlying theme in ancient death ritual: appeasement of the soul.

Burial snacks or cremation meals?

No hoards of shell were found associated with any of the tombs on Terrace V to indicate a funeral feast. In Lefkandi, for example, a contemporary deposit of 115 shells located in the north boundary ditch of the Palia Perivolia cemetery was thought to be the remnants of a funerary feast associated with burial(s) in the cemetery (Jones 1979–80:230); from Khirokitia-Vounoi, an infant grave (B59), was found associated with a hoard of *Monodonta* shells believed to be the refuse from a funeral meal (Toumazou 1987:44). In Early Iron Age Torone, some tombs were found without marine remains altogether, while others had few remnants. The average weight of the marine assemblages from forty tombs in Terrace V was 24.33 g. Heavier assemblages that raised the average included weighty mollusks such as *Glycymeris*, *Spondylus*, *Ostrea*, etc. Twenty-four grams of shell means less than 10 g of meat, and is by no means representative of a funeral feast. If consumed at the grave at all, the seafood may have been eaten along with other items.

No assemblage that contained more than one shell exclusively exploited one particular species; all the graves showed nonspecific marine offerings. For example, Tomb 13 contained at least twelve different species, all edible, whereas Tomb 114 had more than twenty species identified, eight of them nonedible. Many tombs had a single shell. There is little consistency in the frequency of offerings of marine species at grave sites on Terrace V. Perhaps this indicates that choices and amounts of sea foods were based on availability or personal tastes.

Where shell finds were rare at other burial sites, Shackleton (1969) offered another explanation: the shells were remains from the undertaker's snack. This is an interesting idea that would explain the presence of a few limpet shells or a single cockle. Another explanation is that the shells in and around the tombs could also be secondary placement, perhaps thrown in with the human remains

after the cremation. The mollusks are more likely to have been eaten at the funeral site, then added in part to the tomb later during burial. While some cremated remains were pounded and then transferred into ash-urns for burial, shell and urchin offerings could also have been crushed in the process. This treatment would explain why in many cases marine remains come to be so fragmentary, the majority of the fragments being recovered from water-sieving. While most seashells in the sample are not burned, many crushed fragments are. Therefore, this hypothesis of a secondary placement within the tombs fits in some cases. Tomb 28, however, has five complete specimens (two *Cerastoderma*, three *Callista*) that have been subjected to fire (shown by their calcined state), indicating that the shell may have been present at the cremation but avoided being crushed.

Location of the pyres

Water-sieving of soil remains from the tombs produced small fragments of edible species and tiny complete land and marine mollusks. The same soil samples also produced water-worn pieces of seashell and smooth beach pebbles (**pl. 518**). The presence of *Alvania*, *Bittium*, and *Triphora* (all <8.00 mm), as well as worn *Columbella* pieces and beach pebbles occurring within ash-urns, is good evidence that at least some cremations occurred on the shore.

Based on the evidence provided by worn shells and pebbles the following scenario may be reconstructed. A pyre was built on the beach. After burning the pyre collapsed, spreading the pyre material and human remains on the shore. The human remains would then be crushed and gathered (the human remains in Early Iron Age Torone show evidence of crushing, see appendix A). A simple experiment on a modern beach south of the Lekythos revealed that pounding on pebbles causes remnants of bone and ash to sink and be mixed with beach material. Therefore, after the crushing of the bones, beach material could easily have been collected with the bone and ash and placed in the grave or urn. Worn pieces of *Columbella* that are burned as well (**pl. 519**), are good examples of this scenario. Worn dove shells can be found in abundance today on beaches south of the Lekythos and could serve no apparent purpose as intentional inclusions. There is no evidence that beaches to the north of the Lekythos, which are comprised of small golden gravel rather than smooth dark pebbles, were used as locations for pyre burning.

Deposit type 4 included ash and pyre refuse, suggesting that some cremations were actually performed on the terrace. The presence of *Bittium* in deposit type 4 could be explained as contamination from pyre refuse brought up from the beach, or it may imply that beach material was used in some pyre constructions on the terrace. *Bittium* was also found in sieved soil from Inhumation Tomb 9, but its presence there is probably intrusive from deposit type 4 as burned shell fragments were recovered from the sample as well. Being an inhumation, the body would not likely have been exposed to fire.

That some cremations occurred on the shore is also likely as large fires can be controlled easily on gravel and sand near the water. Shore cremation could be a seasonal indicator because of the danger of dry brush on the terrace catching fire during the summer months. Cremation on the beach is reminiscent of the funeral of Patroklos, where Achilles and soldiers prepared his funeral pyre on the shore:

> [The soldiers] set to work . . . felling the tall oaks with their long-bladed axes, and trees came crashing down. The Achaeans split the logs and then roped them to the mules, who cut up the ground with their feet in their efforts to haul them down to the plain through the tangled undergrowth. . . . When they reached the shore, they laid them neatly down at the spot where Achilles planned to build a great mound for Patroklos. . . . In the middle of the procession, Patroklos was carried by his own men, who had covered his body with the locks of hair they had cut off and cast upon it. . . . When they came to the place appointed for them by Achilles, they put Patroklos down and quickly built him a noble pile of wood. . . . They made a pyre a hundred feet in length and breadth, and with sorrowful hearts laid the corpse on top. At the foot of the pyre, they flayed and prepared many well-fed sheep and shambling cattle with crooked horns. The great-

> hearted Achilles, taking fat from all of them, covered the corpse with it from head to foot, and then piled the flayed carcasses around Patroklos. . . . To these he added some two-handled jars of honey and oil, leaning them against the pyre; and in his zeal, he cast on the pyre four high-necked horses, groaning aloud as he did so. . . . Then he went on to do an evil thing—he put a dozen brave men, the sons of noble Trojans to the sword and set the pyre alight so that the pitiless flames might feed on them. . . . [When the flames expired, Achilles ordered,] "We must collect my lord Patroklos' bones, being careful to distinguish them, though that will not be difficult as he lay in the center of the pyre, separated from the rest who were burned on the verge of it, horses and men together. We will put his bones in a golden vase and seal it with a double layer of fat, against time when I myself shall have vanished in the world below. (Homer, *Iliad* XXIII, 140–282)

This account of funerary ritual from an ancient author conforms to the findings in some cremation burials from Early Iron Age Torone. There is ample evidence from beach material in the crematory urns at Torone that pyres were burned on the shore. Furthermore, Homer clearly states that the burned remains were gathered and sealed in a container. When pyres collapse, material is spread around and mixed together; I doubt whether they were able to distinguish all human remains from those of animal and human offerings. In haste, some cremated remains may easily be collected with beach material, as is the case in Early Iron Age Torone. The account of the funeral of Patroklos is not far removed in time from the burials on Terrace V. This is a potential case where faunal remains are the pieces to the puzzle presented by ancient authors. Cremation tombs that give good indications of beach burning are Tombs 108, 109, 112, 114, 117, and 118; Tombs 68 and 104 are possible candidates as well. Small marine gastropods and worn pieces of dove shells were the main criteria for this selection.

Control samples from adjacent hills and regions surrounding Terrace V showed that smooth dark beach pebbles, worn *Columbella* fragments, and tiny marine gastropods were characteristic of beach samples taken south of the Lekythos. Control samples also confirmed that marine gastropods were not deposited by natural geological processes prior to the occupation of the terrace. Only in the cemetery contexts do beach pebbles occur on the site.

CONCLUSION

The analysis of marine remains and land mollusks from the Early Iron Age cemetery at Torone produced some interesting results. The majority of the remains were of marine mollusks, mostly edible species. By comparison with other marine samples from tomb contexts from the Aegean, the similarities of inclusions are fairly minimal and are based largely on individual burial circumstances and local availability rather than a standard ritual pattern. While consistencies of marine species and their treatment in grave contexts can be seen on a local scale within a cemetery site, no consistent pattern is followed grave to grave. At Torone, consistencies concerning marine species, preservation, and frequency could be noticed from the tomb assemblages studied. Distinctions among marine offerings could not be confidently demonstrated for inhumation versus cremation burial types, but demographic differences did exist given the apparent exclusion of marine remains from infant burials.

Edible species comprised the bulk of the sample, with *Cerastoderma* and *Patella* shells occurring most frequently, probably an indication of availability and common meal items. Food consumption at the funeral site rather than the burial site by mourners is likely, as indicated by the minimal and fragmentary remains associated with the actual tombs. This is reinforced and illustrated by ethnographic evidence, both modern and ancient, as well as archaeological material remains from other burial sites. More important, the inedible and rarer items from the tombs tell us more about individual tastes and the nature of the burial.

Seemingly insignificant small marine gastropods and pebbles can place the possible location of a cremation on the beach. Crushed and burned fragments suggest that shell offerings were probably made at the cremation site rather than at the grave. These glimpses into death rituals of Early

Iron Age Torone could not have been seen without soil sample sieving. The results of the analysis reinforce the importance of sieving special context samples so that little clues into past culture, so difficult to define, are not missed.

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Appendix D
The plant remains from tombs

Ferenc Gyulai and Kristina Kelertas

The contents of all the ash-urns, especially those that were intact or undisturbed, were water-sieved and the cremated remains separated from the remainder of the material, which was never great. Although the process yielded a small number of burned animal bones that were part of the funerary ritual (see appendix B) and marine remains (appendix C), carbonized floral remains were not encountered. In addition, soil samples were taken from a number of relatively undisturbed cremation tombs where the quantity of pyre debris was substantial in order to retrieve plant and other burned organic remains. A number of similar samples also were taken from the Early Iron Age kiln on Terrace V (see table D.1).

Although the overall density is very low, as can be seen from the absolute counts of the plant material, some interesting trends can be observed. Water-sieving may have yielded only a small amount of archaeobotanical remains, but these remains were nevertheless of value, particularly given the dearth of comparable material from contemporary burial contexts in the Mediterranean and from Aegean Early Iron Age sites more generally. That such relatively small sample sizes did recover some interesting remains argues strongly in favor of more intensive sampling in the future, to allow for larger, more representative samples.

A total of thirty-seven samples from ten tombs were studied together with four samples from the kiln, the latter yielding no charred plant remains. The several species of noncarbonized seeds recovered are noted but are not included as part of the prehistoric remains; they are almost certainly recent intrusions of common plants of the fields and vineyards growing in the area today. Only the charred plant material is considered fully in this study.

Most samples were processed by water flotation, and the material analyzed consists only of the sample portion greater than 1 mm (**pls. 520–521**). This sampling strategy carries with it a bias toward larger botanical remains (i.e., those greater than 1 mm). Consequently, it cannot be said with certainty that the samples potentially did not contain, for example, small weed seeds or other smaller seeds that may have been usd in some way.

The charred seeds recovered from the tombs consist of the following species:

Pulses	*Lens culinaris*
	Vicia ervilia
	Vicia faba subsp. *minor*
	Vicia sp.
	Fabaceae family
Fruit plants	*Prunus spinosa*
	Vitis vinifera
	Vitis sp.
Cereals	*Hordeum vulgare*
	Cerealia

These species are well-documented and important food sources during the period, and most are domesticates.

Table D.1 Catalogue of plant remains recovered from deposits on Terrace V

Source	Sample #	Charcoal	Qty.	Type of charred remain	Unidentified seeds	Recent seeds
Tomb 9	28	a				
Tomb 70	69, 70	a				6 *Euphorbia helioscopia*
						1 *Euphorbia* cf. *exigua*
Tomb 100	27	a			3	3 *Fumaria officinalis*
Tomb 101	23	a	1	*Lens culinaris*	1	
		a	*39*	*Lens culinaris*		
Tomb 104		0				
Tomb 108	22	a	1	*Vicia ervilia*		
	84	a	1	*Fabaceae*	1	2 *Euphorbia helioscopia*
	85	a	1	*Fabaceae*		
	86	a	2	*Prunus* cf. *spinosa*		
			1	*Vicia* sp.		
	87	??				
	88					
	89					
	97	a				
	98	a				
	99	a				
	100	b				
	101	a				
Tomb 109 **(pl. 520)**	7		1	*Hordeum vulgare*		
			1	*Vitis vinifera*		
	17	??				
	57	b	1	*Hordeum vulgare*	1	3 *Fumaria officinalis*
			1	*Vitis* sp.		5 *Euphorbia helioscopia*
						5 *Euphorbia* cf. *exigua*
						21 *Stachys annua*
	58	a	1	*Vitis* sp.		
Tomb 111		a	3	*Cerealia*		
Tomb 112	36	a				3 *Euphorbia helioscopia*
	37	a	1	*Vicia faba* subsp. *minor*	1	1 *Fumaria officinalis*
	38	a				
Tomb 114 **(pl. 521)**	14		2	*Vitis vinifera*		
	72	a				
	73	c				
	74	c				3 *Fumaria officinalis*
	75	c				
	76	c				
	77	c				
	78	b				
	79					
Tomb 117	71	a	1	*Fabaceae*	3	
Deposit Type 4	20	a			2	

Source	Sample #	Charcoal	Qty.	Type of charred remain	Unidentified seeds	Recent seeds
Kiln	49	a				
	50	a				1 cf. *Arenaria serpyllifoli*
						1 *Caryophyllaceae*
	51	a				
	52	a				
Totals			58		12	56

Key:
a sporadic remains
b few remains
c many remains

Common names of recent (uncharred) seeds:
Arenaria serpyllifora: Thyme, leaved sandwort
Caryophyllaceae: Pink family
*Euphorbia exigu*a: Dwarf spurge
*Euphorbia helioscopi*a: Sun spurge
Fumaria officinalis: Common fumitory
Stachys annua: Annual woundwort

Among the pulses, *Lens culinaris* (lentil) is the most common of the seed remains from the tombs, with forty seeds recovered. Lentil is one of the "oldest and most appreciated grain legumes of the Old World" (Zohary and Hopf 1988:85). This plant is common throughout the Neolithic in Greece, although it decreases in importance in Bronze Age settlements, while again increasing in Iron Age settlements (Zohary and Hopf 1988:89). *Vicia faba* (broad bean) is one of the main pulses of Old World agriculture that grows in importance in Late Neolithic and Early Bronze Age settlements. Although there is only one seed of this species from the tomb remains, there are many finds from other Iron Age and Classical settlements in Europe and west Asia, indicating that the *Vicia faba* was a major food source during these periods (Zohary and Hopf 1988:106). The seeds were probably used foremost for human consumption and for animal fodder. However, Classical Greek and Roman texts give evidence of ritual use of *Vicia faba* as well. During these periods, the seeds of broad bean were used as grave goods to be deposited with the dead. The Greeks even had a specific "bean god"—Kyamitos—in whose shrines the beans were offered (Koerber-Grohne 1994:127).

From the Early Iron Age tombs of Torone only one seed of bitter vetch, *Vicia ervilia*, was recovered; large quantities also have been found in other Greek contexts. The seeds of bitter vetch are indeed very bitter and require special processing in the form of roasting or soaking in order to render them edible for humans and for domestic creatures such as horses, pigs, and chickens. Ruminants are able to eat the seeds without fear of poisoning. The seed is often thought of as purely animal feed, because since Roman times it has been used primarily for fodder; it was considered inferior for human consumption, to be eaten only by the very poor or in times of famine (Zohary and Hopf 1988:107). Kroll (1983:48), however, maintains that at the settlement site at Kastanas it was surely used for human consumption as it was by far the most common seed among the excavated remains, particularly in the Bronze Age.

The fruit tree *Prunus spinosa*, a member of the plum family, carries the common names of blackthorn or sloe. This plant is a warmth-loving wild thorny bush (Kroll 1983:76). The plum species generally were taken into cultivation only in Roman times, and the one *Prunus spinosa* seed found here was surely collected from the wild. In Kastanas, the remains of blackthorn consist of three charred stones found in the Iron Age layers along with many other gathered fruit types. Finds of the domesticated grape vine, *Vitis vinifera* are common since the Bronze Age in Greece. Grapes were an important part of food production in the Mediterranean in prehistory and later, providing fresh fruits, easily storable dried raisins, and juice for

wine making (Zohary and Hopf 1988:137). Five pips from *Vitis* species were found among the Early Iron Age tombs.

Only five grains of cereals were recovered among the seed remains from the tombs, and of these only two were identifiable to the species level as *Hordeum vulgare*, or barley. Barley is one of the founder crops of Old World agriculture and retains its importance today. It has been used for human consumption in the form of bread (although considered inferior to wheat bread), beer, porridge, and soups, as well as for animal fodder. In Greece, barley plays an important role especially in the Neolithic and Bronze Ages, when it is the prevailing cereal (Zohary and Hopf 1988:62).

As noted above, all the plant species from the tombs are from common food sources, and most are domesticates. Compared with more recent burial practices, it is not surprising that these plants were found in a tomb context and it is likely they were purposefully buried with the dead as an important grave good. It is unfortunate that so few grave contexts contained pyre refuse and thus possible remains of plant material. If nothing else, perhaps this short report will serve to inspire more archaeologists to water-sieve samples from such contexts so that the ritual use of plants can be more thoroughly investigated in the future.

Part II
Analysis of the material

4

Mortuary practices

Prolegomena: Theoretical perspectives and the archaeology of death

Death is only one of van Gennep's (1908 [1960]; cf. Bell 1992) rites of passage of the individual, the *social persona*, but it is, ironically, the most archaeologically visible: archaeologists rarely view birth, initiation, and marriage with the same sort of immediacy. But despite its archaeological visibility, the grave is only one small aspect of a complex social process that includes the funerary ritual. When dealing with the evidence of a grave or cemetery, archaeologists are not dealing with mortuary practices per se, but rather with their residues. This is well illustrated in periods where there is a plethora of literary, iconographic, and ethnographic material to supplement the archaeological evidence. In the Classical period, for example, funerary practices are rendered vivid as a result of the material gathered by, among many others, Alexiou, Vermeule, Garland, and Sourvinou-Inwood. Alexiou (1974:4–14) discusses, for example, the wake, the funeral procession, and burial; the offerings at the tomb, not only at the time of interment, but those on the third, ninth, and thirtieth days from death; and the lamentation by kinswomen and strangers, with the tearing of hair and cloak and the beating of breasts (cf. Cavanagh and Mee 1995). Vermeule (1979:1–41, 83–117, 145–178) discusses, among other things, the "stupid dead," the "happy hero" and the "pornography of death," while Sourvinou-Inwood (1995:10–107) turns to text and belief and, following the work of Griffin (1980), discusses death and the world of the dead in Homer.

It is clear that tombs, and especially a fully excavated cemetery, have much to offer toward the reconstruction of mortuary practices, as Durkheim stressed in his classic statement of 1912:

> Funerary rites have always been considered choice morsels by observers, travelers and ethnologists. To those who know how to see, they tell much about the life of the tribe, ethnic group, or society involved. To those who know how to listen, they make it possible to piece together the system of representations of the group to which the man or woman whose funeral is being celebrated belonged. (Durkheim 1912 [1968]:133)

This passage serves as a useful starting point as it draws attention to the fact that archaeologists—unlike ethnographers or cultural anthropologists—cannot directly observe living entities. As Trigger (1989:357; cf. Clarke 1978:12–14) writes: "prehistoric archaeology is the only social science that has no direct access to information about human behavior . . . archaeologists cannot talk to the people they study or observe their activities." Against this backdrop it is important to bear in mind the criticisms cultural anthropologists have leveled at archaeologists. For example, Bloch (1981) seriously doubted whether any archaeologist could correctly reconstruct living social systems from funerary remains. As recently as the second edition of the now classic *Celebrations of Death: The Anthropology of Mortuary Ritual*, Metcalf and Huntington (1991: 14–15) not only draw attention to the "paradigm lag" in archaeology—which is such that archaeology has been consistently one stage behind general anthropology (cf. Leone 1972:16)—but stress that archaeology is *not* anthropology: "the contrast between archaeology and anthropology is obvious" (Metcalf and Huntington 1991:19). With regard to

"processual" archaeology specifically, Metcalf and Huntington (1991:15, 16) state it has "no real sociological base," and elsewhere they speak of the "series of slippery subsidiary assumptions" involved. They even note that the connotations of "processual" are different from those implied by Turner (1957, 1969) in social anthropology. And similar criticisms are leveled toward so-called postprocessual archaeologists (Metcalf and Huntington 1991:18). In criticizing Chapman's (1987:202) general assumption "that not all societies are unique," Metcalf and Huntington (1991:18) note that a "social anthropologist is startled by such a beginning; surely we study particular cultures precisely because they *are* unique." Where the New Archaeologists of the 1960s and 1970s drew heavily on anthropology, the so-called postprocessualists of the 1980s cast their nets far wider in order to draw from a variety of other disciplines. The forays into structuralism and poststructuralism; symbolism; ideology; hermeneutics; reflexive, critical, and other theory (e.g., Hodder 1982a; 1982b; 1982c; 1987b; 1989a; 1991; Miller and Tilley 1984), to complement the more traditional approaches, have been described by Metcalf and Huntington (1991:14–15) as a rush to catch up following the vacuum caused by Leone's (1972) "paradigm lag."

Such criticism is, however, both unfair and unwarranted, as it oversimplifies developments in archaeology and overgeneralizes by categorizing archaeologists in the unrealistically—and increasingly irrelevant—narrow definitions of processualism and postprocessualism. Reality is rarely so clear-cut, and it has been noted by Chippindale (1995:11; cf. Flannery 1982; Deetz 1989:435) that most archaeologists are at the same time many things, including culture historians, so-called processualists, and postprocessualists. It is the perceived "rush to catch up" that has resulted in much that has made archaeology of the 1980s and 1990s dynamic and what it is today. Collectively labeled as "alternative archaeologies" by Ian Morris (1994b:42–43), such studies represent both a generation of ideas flowing from within the discipline of archaeology, as well as ideas influenced by developments in other fields (see, among many others, Geertz 1973; 1980; cf. Morris 1993a:26–32; Miller 1984; 1987; Shanks and Tilley 1987; Hodder 1985; 1989b; Bapty and Yates 1990; Tilley 1991; see further Walters 1980; Crapanzano 1986; Keesing 1987). Many of these ideas with specific regard to the archaeology of death and burial are admirably collected and presented by Parker Pearson (1999).

Few other aspects of archaeological endeavor have received the theoretical attention accorded to funerary practices. Indeed, one can review much of the history of archaeological thought by focusing attention just on burials. Against this backdrop it is important to review some of the more influential approaches that have been applied to mortuary archaeology. Since the 1960s numerous conceptual techniques have been used to approach and appraise mortuary practice; they have even been described as a "dazzling battery of . . . apparatus with which to interrogate the past" (J. Thomas 1991: 103). Thomas conveniently characterizes these approaches, beginning with what he refers to as an "antiquarian phase" where the emphasis was on religious beliefs, usually colored by a romantic view of the past and often dictated by a classical education, to a shift where focus was given to cultural affinity (J. Thomas 1991:103; cf. Jørgensen 1987: 17). In the latter, burials proved to be essential elements for the construction of grand culture-historic schemes as they provided closed contexts for the mutual association of material traits (cf. Chapman and Randsborg 1981:3). From an Aegean perspective, both these approaches are clearly seen in, for instance, the study of Mycenaean burial customs (for traditional overviews see Dickinson 1994: 208–233; Feuer 1996:139–154; see also Pullen 1985:88–156). When Schliemann first gazed on a gold mask from Shaft Grave IV in Grave Circle A at Mycenae, he thought he was staring at the face of none other than Agamemnon, even though his relative chronology was woefully inaccurate. In a similar vein, the large constructed tholos tombs were instantly associated with Homeric characters whose exploits were dramatically enlivened by later Athenian tragedians. Klytemnestra and Aigisthos were appropriately allocated neighboring tholos tombs at Mycenae, and the largest of them all, indeed among the largest single-spanned buildings until the Pantheon was built in Rome under Hadrian (Higgins 1981:87), was reserved for the patriarch of the clan, the legendary Atreus, or alternatively to Agamemnon. So grand was this tomb it was even referred to as a treasury.[1]

For more practical dirt archaeologists, and for culture historians of the Greek world, Mycenaean tombs quickly became the essential components of a cultural scheme. The "Shaft Graves," for example, became synonymous with "Early Mycenaean culture," and indeed the term "period of the Shaft Graves" still has a specific historical meaning (Vermeule 1972:82–110; 1975). The later chamber tombs of Mycenaean centers (Wace 1932; Blegen 1937), many of which (unlike the more prominent tholos tombs) escaped the looters' notice, have served as the basis for later Mycenaean culture, providing as they do rich assemblages of various materials viewed as typical of that culture. First and foremost, Mycenaean chamber tombs became something distinctly "Mycenaean," even though the origins of such tombs are still debated and despite the fact that not the entire population of the Mycenaean world was disposed of so lavishly.

The appearance of tholos and chamber tombs at various centers throughout the Peloponnese, Attika, and Boiotia was taken as proof that common cultural traits arose as a consequence of shared values or beliefs. The northernmost extent of such tombs, in Thessaly, formed the traditional limit of Mycenaean culture, to the north of which a distinctly "non-Mycenaean," or "Barbarian" culture prevailed (for Early Iron Age tholos tombs in Thessaly see, most recently, Georganas 2000). As recently as 1983, Feuer devoted a monograph to the subject of *The Northern Mycenaean Border in Thessaly*, which sought to view the "cultures" on either side of this divide in a more systematic way. Despite its rigorous grounding in settlement and spatial archaeology and regional analysis in order to provide an appropriate theoretical framework, the result is a dotted line on a map (Feuer 1983: 199, fig. 98), a central Greek version of Hadrian's wall, reaffirming a unified notion of a "Mycenaean cultural sphere." A similar trend has followed in the study of the Early Iron Age. And it is remarkable that to this day whereas regions such as north Euboia, Boiotia, and Thessaly are regarded as "early Greek," cultures to the north of a notional line drawn through northern Thessaly are not only regarded as foreign, but as the very antithesis—the "Other" (Fotiadis 2001)—of the "core provinces" further south. Indeed, the Early Iron Age Chalkidike and much of coastal Macedonia and Thrake continue to be seen as veritable new worlds, there for the taking by enterprising southerners (e.g., Popham 1994; Snodgrass 1994a). The peculiar reputation Macedonia acquired in the discipline of Aegean prehistory that Fotiadis (2001) so cogently speaks of is one that left its legacy on the discipline of historical archaeology.

Throughout the study of Mycenaean and Greek burial customs in general, religion and religious beliefs have played a central role. This is perhaps best seen in the work of Nilsson (1936; 1955; 1968). A prolific and judicious scholar, Nilsson meticulously sifted through a copious body of material in order to focus on religion and its continuity in Greek tradition. Although his various studies looked well beyond the evidence of mortuary custom to encompass many aspects of material culture, burials and funerary iconography nevertheless played an important role. In all his endeavors, Nilsson's preoccupation was *religion*; social and economic considerations were either neglected or relegated to a minor role. The fact that Nilsson was one of the very few scholars of the Aegean to have not only bridged but essentially discarded the epistemological divide separating the Bronze Age from the cultures of Archaic and Classical Greece, has meant that his influence was equally profound in the realms of Aegean prehistory and Classical archaeology (cf. Papadopoulos 1993). Although many scholars followed Nilsson's precepts in the study of religion and religious beliefs, few have done so successfully on both sides of the Early Iron Age divide.

The dramatic revisions that took place with the developments of New Archeology in the 1960s (see especially Binford 1962; 1964; 1968; 1971; Flannery 1968; 1972; J. Brown 1971a; 1971b) were slow in reaching the Mediterranean. Among the first studies that showed an awareness of the new methodology in the Aegean was an important paper by Jacobsen and Cullen (1981) that dealt with mortuary practices in Mesolithic and Neolithic Greece, particularly the burials from Franchthi Cave (for Cyprus see Keswani 1989, with references). But even the Greek Neolithic was too distant in time for developments in its study to have had any far-reaching effects on students of the later Bronze Age, Early Iron Age, and Archaic and Classical periods. The tenets of the New Archaeology relating to mortuary practice, particularly in

the work of Saxe (1970; 1971), Binford (1971), J. Brown (1971a; 1971b), Tainter (1978; cf. 1973; 1975; 1976; Tainter and Cordy 1977), and others (e.g., Shennan 1975; Chapman 1977) were straightforward. In its most basic form, the prime supposition is that there is a direct correlation between mortuary variability in the archaeological record and social differentiation in life (for a useful overview see O'Shea 1984:1–22; cf. 1981; see also Hertz 1907 [1960]:82; van Gennep 1908 [1960]: 146; Radcliffe-Brown 1922:148; Bendann 1930: 280; Goody 1962:61–62). Thomas summarizes the basic tenet in this way:

> [T]o demonstrate that mortuary practice was a system of communication by which information about a deceased person was signaled to the living. By these means, the community might adapt to its changed circumstances. Where a society was more internally ranked, this could be 'read off' by discerning the differences in the degree of effort expended in the treatment of individual burials. (Thomas 1991:104)

Added to this was Goodenough's (1965) role theory, which offered a means of dividing the social persona into a series of roles or social identities (Parker Pearson 1999:73). The existence of regularities linking living society, or certain aspects of it, with the procedure of that society in its disposal of the dead reveals, according to O'Shea, three central relationships:

> 1. Mortuary differentiation is patterned, and its elements are integrated with other aspects of the sociocultural system. 2. The mortuary differentiation accorded an individual, although not necessarily isomorphic, is consistent with his social position in the living society. 3. The complexity of the system of mortuary differentiation will increase with the complexity of the society at large. (O'Shea 1984:21)

Such an approach stresses that the study of mortuary variability must specify the processes that link past behavior with the contemporary structure of the archaeological record.

The simplicity of this approach remains appealing and compelling, but as many scholars have noted it is not without difficulties. Among other problems are the frames of reference: there is a very nebulous scale between egalitarian and highly ranked societies. As Wason (1994:1) has remarked, it is hard to pin down just what we ought to mean by egalitarian, and also with concepts such as "inequality," "hierarchy," and "ranking," and without laboring the point, a society of full equality is an ideal never realized. Despite the assumption that the archaeologically visible tomb is an accurate indicator of the level of expenditure afforded an individual during the funerary *ritual*, a second problem was that the approach was limited to determining rank (whatever the term means exactly). Once a degree of hierarchy was achieved, the exercise tended to be over. A third, more practical, problem was that this methodology focused on the individual and on individual disposal of the deceased (e.g., O'Shea 1984; 1996). Consequently, it is difficult to apply the same theory both to societies that bury their dead collectively, in multiple tombs, and to those that dispose of their dead in ways that leave no trace in the archaeological record (see Atkinson 1968; Snodgrass 1980a:21; cf. 1977:12; I. Morris 1987:95–109).

For these and other reasons the approach was met with debate (see especially Ucko 1969; Binford 1971; Leach 1977), and by the late 1970s and early 1980s a number of archaeologists and anthropologists expressed their concerns (Bloch 1981). Randsborg (1980; cf. 1981), for example, argued that in certain periods of Danish prehistory, mortuary remains reflect social ranking in life, whereas in other periods they do not. Okely (1979:87; see also Hodder 1980), in her study of the Gypsies in Britain, warned that mortuary practices may disguise or invert the identity, social structure, and ideology of the living. Similarly, Jacobson-Widding (1988), in her comparison of Swedish and African funerals, showed that the normal social structure and ideology in life could be inverted or transformed into its opposite during funeral rituals. Indeed, the anthropological literature on ritual inversions is substantial (see especially Turner 1969:166–203). Various scholars picked up the debate: among them Hodder (1980; 1982a; 1982b; 1984; 1991), Parker Pearson (1982;

1995; 1999), Shanks and Tilley (1982; 1987), and Thomas (1991) showed that such approaches fail to address the reality that societies rarely represent themselves in such clear-cut ways: "Societies, after all, 'do' a lot of other things beside being internally ranked" (Thomas 1991:104).

Despite the questionable link between living social structure and mortuary practices, many recent archaeological studies of cemetery data have insisted on the direct correlation between grave goods on the one hand and relative wealth and social status on the other (e.g., Wright 1987; Hallote 1995). One such study is Bietti Sestieri's (1992; 1993) analysis of the Iron Age communities of Osteria dell'Osa in central Italy. The essential theoretical premise on which the study was based is that there is "a substantial degree of interdependency between the overall funerary practices of a community and its structural and organizational principles" (Bietti Sestieri 1993:9). Nevertheless, in defining something as basic as the sex of the more than six hundred Early Iron Age and Orientalizing tombs, there is much confusion between biological sex on the one hand and social gender on the other (see various papers in Arnold and Wicker 2001). The poor survival rate of the human bone at Osteria dell'Osa led the excavator to postulate the sex of many of the individuals in the cemetery on the basis of grave goods: "Sex differences were clearly marked by the grave-goods. . . . As a consequence, gender could be determined with a rather high level of confidence even in those burials in which no skeletal material was preserved" (Bietti Sestieri 1993:81; the anthropological analysis of the human bone [by Becker and Salvadei] appears in Bietti Sestieri 1992; for a critical review of Bietti Sestieri's assumptions of sex and gender, see Toms 1994). As Toms (1994:450) was to quick to point out, an examination of the report of the human remains showed that, of the individuals assigned sex from the bone remains, twenty-five were assigned the opposite gender in the tomb catalogue on the basis of grave goods, and of these seven had been unequivocally sexed by the analysts. Such assumptions and problems as to age and gender are found at a number of other sites recently excavated, including Pontecagnano (d'Agostino and Gastaldi 1990; Vida de Navarro 1992), various cemeteries in early Anglo-Saxon eastern England (Fisher 1995; cf. Pader 1982), and the various Danish and Lombard cemeteries analyzed by Jørgensen, to mention only a few.

Beginning with Binford's (1971) synthesis of the use of quantitative analytical methods, Jørgensen (1987), in his study of Danish Iron Age family burial practices and inheritance systems, goes on to quote the crucial "energy expenditure" principle as developed by Tainter (1978:125) that "higher social rank of a deceased individual will correspond to greater amounts of corporate involvement and activity disruption, and this should result in the expenditure of greater amounts of energy in the interment ritual." With this as a basis, Jørgensen (1987:17) goes as far as to state that "Tainter's thesis has since been used as the point of departure for analyses of mortuary data, and his fundamental idea has been accepted by archaeologists who have worked with the analysis of societies on the basis of funerary finds. . . ." Following the earlier studies of Hodson (1977; see further Shephard 1979) and, to a lesser extent, Hedeager (1980), Jørgensen lays down his formula for the expression of wealth/social status. The formula concentrates on the isolation of artifact types that occur in rich graves. Whether a single grave contains one or ten examples of the same artifact is deemed unimportant. Rather, it is the number of graves that is relevant, so that the fewer the graves that contain the artifact type, the higher its value. This is expressed as a type-value. By combining the various type-values, a grave-value can be calculated. As Jørgensen concludes (1987:22): "A high grave value should thus express a corresponding high degree of wealth/social status." The same formula is used in Jørgensen's more recent analysis of the Lombard cemeteries of Castel Trosino and Nocera Umbra of sixth- to eighth-century A.D. Italy. Here, too, he concludes: "If several examples of a single [artifact] type occur in one grave, each one contributes a type-value to the total grave-value. A high grave-value should, then, express a high degree of relative wealth and social status" (Jørgensen 1991:19).

A close examination of this methodology, however, reveals a number of problems. First, the method can only be applied, as already stated, to cemeteries with individual burials. Second, the author makes some questionable assumptions as to

determination of sex. The latter is a common problem, and it is surprising that sex determinations on the basis of *osteological* study alone are still comparatively rare (cf. Strömberg 1993:21–22). More troublesome is the realization, as in the case of Bietti Sestieri's study, that even when osteological analyses have been done, the determination of sex has still often been based on the type of grave goods found with the deceased. A classic case was the study of the human remains and grave goods from several pagan Saxon cemeteries, where the original osteological observations of C. Wells did not always match up with the opinion of the excavators who were happier to sex the tombs by their grave goods. A second opinion on the osteological evidence many years later by Henderson (1989) found that there was full agreement between her results and those of Wells.

This problem is even greater when the method of disposal is cremation. Until quite recently, cremated bone was ignored, even discarded; this is equally as true for most of the cremation burials excavated earlier this century in the Athenian Kerameikos as it is for many more recent British cemetery studies, as McKinley (1994c) has shown.

A third problem is the acceptance of Tainter's "energy expenditure principle." Although I do not doubt that in terms of scale mortuary rites often make a statement about the social standing of the deceased and his or her close kin, there are many gray areas. One of these has been well treated by Metcalf (1981:571) as the "phenomenon of ritual economy." Metcalf's point deals with the question of the transfer of crucial resources, especially the fact that where "an emphatic claim is to be made, the events are held on a larger scale; where there is less at stake, a simpler affair serves the ritual function as well." This, together with other observations (cf. Ucko 1969; Chapman and Randsborg 1981:13; Jørgensen 1987; 39–43), tears apart the neatness of the "energy expenditure" principle.

A further, related, issue is that of visible versus invisible energy expended. In dealing with the burial customs of the Lodagaa of West Africa, Goody (1962:156–182) showed that wealth was not deposited in the tomb of the deceased in order to be found by an archaeologist at some later date, but distributed among, and consumed by, the living according to straightforward formulae of income and outlay. Similarly, Greek literature is full of references to *nekrodeipna*, funerary feasts and other forms of blatant consumption that leave little trace in the archaeological record (Stampolidis 1995:299–307; 1996:93–203). It is useful to remember that the Athenians on several occasions—post *aliquanto* Solon and again in 317 B.C. under Demetrios of Phaleron—had to legislate in order to stem expenditure on either the funerary ritual or the funerary monument (Alexiou 1974:14–23; Garland 1985:26, 107). Moreover, many aspects of funerary ritual, including those involving consumption of wealth, occur not at the tomb but during the wake, the *prothesis* (lying in state; **pl. 522**) and *ekphora* (procession; **pl. 523**) (Zschietzschmann 1928; Ahlberg 1971; cf. Ahlberg-Cornell 1992; Alexiou 1974:4–14). There are numerous modern analogies. Imagine trying to reconstruct the funerary procession of John F. Kennedy and the effect that his assassination had on the psyche of an entire nation from the physical remains of the tomb alone. The precept of this tomb in Arlington National Cemetery argues that in this case the location, tomb type, funerary marker, and quantity and quality of grave goods are less important to status differentiation than is having been buried in Arlington cemetery. To be sure, there is a hierarchy in the cemetery, but the ranking of the deceased within the burial ground is of less relevance than who was and was not buried there. Such burials are not limited to "big men," as the funerary ritual of Princess Diana attests. I return to this point in dealing with the people laid to rest in the Terrace V cemetery at Torone.

A fourth problem is that when looking at the totality of the grave—its configurations, artifacts, and variations—and expressing these as a *type-value* or *grave-value* (or any similar quantitative formula), what, exactly, is being measured? The result of Jørgensen's quantitative analysis of the burials on Bornholm, Denmark, was that the grave furnishings within family groups showed that each family contained a clear hierarchy in which the leading spouses were buried with the finest goods while children were ranked lowest (Jørgensen 1987; 1991:1). A similar result was reached in his analysis of family burial practices in sixth- to eighth-century A.D. Lombard Italy: "All of the families have a hierarchical structure with a male

head and his wife, the first deceased of whom is always buried with the richest grave goods. Below these comes a group of four or five adults who on the strength of the written sources seem to represent unmarried brothers and sisters and married brothers and sons with their spouses. The lowest ranked, in general, are the children. . . ." (Jørgensen 1991:48). Jørgensen goes on to note that with respect to both structure and the expression of status the situation in Lombard Italy was "almost identical" to that of contemporary northern Germanic families from Baekkegård on Bornholm, more than 2000 kilometers to the north.

Indeed, if one applies the same sort of quantitative analysis to single burial cemeteries the results are remarkably similar across both cultures and time. Thus the distribution of graves in the range of values as determined by Jørgensen for later first millennium Nocera Umbra, Castel Trosino, and Bornholm look remarkably similar to Early Iron Age Torone, as they do to the Archaic cemeteries of Morgantina in Sicily (Lyons 1996:129–133). Perhaps the most surprising aspect of this similarity is the relatively high status of women, or at least of leading women. Across a number of cultures, grave values appear to shed a particularly strong light on women (cf. Smithson 1968). Within the Greek world this recalls the often noted, although not fully appreciated, fact that female characters in literature, particularly in tragedy, attain a prominence that could not be predicted from what we know of women's status in the Classical period (cf. Rehm 1994:7). Two possible conclusions immediately suggest themselves. The first is that the later part of the first millennium A.D. in Europe, like the earlier first millennium B.C. north Aegean, is not only a comparatively egalitarian society, but also one that is remarkably free from gender bias or gives a disproportionate value to women in death. The second is that there is something wrong with the way social status is measured. Alternatively, the evidence of the grave, like that of Greek tragedy, is not "an undistorted map of the social relationships within the cemetery population," but rather a representation (cf. Thomas 1991:107).

In both his studies, Jørgensen (1987:20; 1991:2) stressed the importance of a finely tuned chronology as a prerequisite for a detailed quantitative analysis of graves, and more particularly the ability to distinguish groups of graves that are interments from within a single generation. The basis of this chronology is essentially the time-honored belief that individual classes of artifacts can be subjected to a rigorous typology, or seriation, and in so doing a neat, fine-grained chronology can be established. Jørgensen's division of the period into uniform forty-year phases may work for the Germanic peoples of northern Europe;[2] it is, however, something that scholars working in the Mediterranean cannot realistically maintain, although a number have tried. If, however, Jørgensen's chronological construct is not accepted at face value, then there is the problem of what is being measured.

The whole question of what is actually being measured in the structure of the archaeological record goes back to the most basic assumptions of processual archaeology and to Saxe's 1970 dissertation, never published but universally cited, more specifically to his Hypothesis 8, revitalized and slightly reformulated by Goldstein (1981). The "Saxe/Goldstein hypothesis" has become such a bulwark of processual archaeology that it has sometimes been referred to as the "Binford/Saxe hypothesis."[3] It has been effectively used in at least one prominent and innovative study of Aegean Early Iron Age burial customs (I. Morris 1987), and continues to be used (Morris 1991; Whitley 1995:44–49). Nevertheless, the Saxe/Goldstein hypothesis is not without its difficulties. One problem Humphreys immediately drew attention to is that the Saxe/Goldstein hypothesis is irrelevant to certain societies, such as Athens in the Classical period, as certain burial groups tended to be bilateral kindreds. Humphreys (1990; 263–264; for a rejoinder, see Morris 1991:158) also argued that the urge to identify kin groups in cemeteries is a product of the history of burial practices from the early nineteenth century in the West; it can also be argued that it is a product of anthropology's obsession with kinship. The most serious omission in the Saxe/Goldstein formula is time. Space and time are archaeology's frames of reference. The Saxe/Goldstein hypothesis is firmly rooted in space, much less so in time. The basic problem is well set out by Morris:

> The study of temporal variation is, after all, the greatest strength of archaeology; but diachronic approaches pose particular problems for the analysis of burials. Burial customs change through time, often rapidly, and ancient Greece was no exception in this. The changes themselves, and particularly the rate of change, can be of great interest, but various difficulties arise. *We must not confuse diachronic change with synchronic differentiation.* To do so would be disastrous. Fortunately, the relative chronology is very fine grained at Athens." (I. Morris 1987:117) [*emphases are mine*]

Morris, like Jørgensen, assumes the validity of the traditional chronology and in their various studies both scholars proceed to focus on synchronic differentiation. But can observed variation within a cemetery or grave plot be attributed to diachronic changes in symbolism or structure on the one hand, or to a conscious or unconscious status differentiation on the other? Whether variation is quantified using Jørgensen's grave-values, or the key diagram as used by Saxe (1970) and Brown (1971) and elaborated by Morris (1987:111–115), the basic problem remains. In the case of the Early Iron Age cemetery at Torone, the application of the key diagram (see below) quickly showed that the clustering of graves closely followed the typology and seriation of the pottery from the tombs, which constituted the main avenue of determining relative time. What was being measured, therefore, was not necessarily social status or differentiation, but straightforward changes through time and, more particularly, a combination of the two. It is significant that Saxe's (1971) published case study of his hypothesis that an individual's treatment at death is a reflection of the position occupied in a status system in life was based on data collected from a Mesolithic occupation and burial site in the northern Sudan. Similarly, Goldstein (1981; see further Papadopoulos 1993; Morris 1993b), in her study of the spatial components of cemeteries with its refurbished Saxian hypothesis, chose two Mississippian cemeteries in the lower Illinois river valley in west-central Illinois, both dating with remarkable precision to ca. A.D. 1100–1150. In both their independent studies, Saxe and Goldstein were careful—or lucky?—to choose cemeteries where diachronic changes in symbolism or structure were reduced to a minimum, thus enabling them to embrace status differentiation.

Quite apart from other concerns (e.g., Hodder 1982a:196–199; 1984:51–53; see also 1980; Bradley 1980; most recently Parker Pearson 1995; cf. 1999), another problem with the Saxe/Goldstein hypothesis is the whole question of resources. Essential to the Saxe/Goldstein hypothesis is the "use and/or control [of] crucial but restricted resources" (Saxe 1970:119), and more specifically the "critical resource" passing from parent to offspring (Goldstein 1981:61). The logic linking burials and property transmission has been well covered by Ian Morris (1991; 1992:22–23), and even earlier by Alexiou (1974), particularly with reference to the Classical Greek literary sources. In many accounts, however, the critical resource consistently assumed is land, to the virtual neglect of other alternatives. This has a pedigree that goes back ultimately to Meggitt who, working with the Mae-Enga in the Highlands of New Guinea, discovered that if land is important and scarce, then the group will be patrilineal and patrilocal. Meggitt's (1965a:279) hypothesis specifically states: "Where the members of a homogeneous society of horticulturalists distinguish in any consistent fashion between agnates and other relatives, the degree to which social groups are structured in terms of agnatic descent and patrilocality varies with the pressure on available resources." Elsewhere, Meggitt (1965b:131) elaborated that this explanation had a clear effect on ritual and religion, and it was this that was taken up and expanded by both Saxe (1970:121) and Goldstein (1981:59–60).

In their independent studies of Early Iron Age Athens, Morris (1987:175) and Whitley (1991:192) assume that the crucial resource is land. Although the strong agricultural base of early Greek society cannot be doubted, the view is too restrictive as it does not consider viable alternative resources. Moreover, this view does not take into account important economic factors that, in the case of Early Iron Age Greece, are well known from the material and literary evidence. A prominent example is the role played by the enterprising merchant—Greek or Phoenician—or the reality of "Oriental" immigrants to the Aegean, the progenitors of the

later metics of Athens and the Piraeus, who played their part in the formation of Early Iron Age Greek society, not least in the adoption of the alphabet (Burkert 1984; Coldstream 1988; Purcell 1990; Stampolidis 1990a; 1990b; S. P. Morris 1992a; 1992b; Kopcke 1992). Quite apart from the influences of metics and immigrants (Hoffman 1997; Papadopoulos and Smithson 2002)—well encapsulated in Purcell's (1990) model of mobility of people and ideas in the early Greek world—a very real commodity in the Early Iron Age, as it was in later times, was slavery (see especially Finley 1968; 1980; 1981a; 1981b; 1982; 1983; 1985; Ste Croix 1981; I. Morris 1987:173–179). Another is the role of technical input and foreign capital in the Mediterranean in the early first millennium B.C., as argued by Sherratt and Sherratt (1993; cf. 1991). Alternatively put, how the dead come to share the world of the living should be considered in terms of the whole environment rather than their relationship to a particular resource, most often food (Parker Pearson 1993):

> We should look at the placing of the dead in the landscape less as a social function to identify and control economic resources and more as a social and political strategy by which various groups compete, manipulate, resist and coerce each other, to establish relationships among the living by reference to relationships claimed by the living with the dead. (Parker Pearson 1995:1048)

Once it is conceded that the critical resource may be things as diverse as metal ores or slaves—and the control not only of the resource itself but also of its distribution—then the door is open to a whole new approach. In order to understand the grave or the cemetery, one has to understand the whole society within its landscape. This is exactly what a number of more recent studies have tried to do, with varying degrees of success (Hodder 1991: 121–155; various papers in Hodder 1987a; cf. Parkington 1989; Parker Pearson 1999). This is not the place to enumerate and assess these various approaches. The important point is that a variety of theoretical perspectives are needed to embark on any meaningful analysis of funerary remains. Together, the various theoretical perspectives discussed above (processual, post- and new-processual) have much to offer: together they have shown that a range of theories is needed because archaeology deals with a diversity of material commensurate with several frames of study. Moreover, the differences between these various perspectives are often very blurred. Without even attempting to address some of the concerns expressed by other archaeologists (e.g., Watson 1986), much of the debate has centered around the tendency to overgeneralize, thereby missing the multiplicity of points of view in any one culture or society. Rarely are different interpretations or different histories presented as probable in the case of a specific culture or when working with specific material remains, although there are important exceptions (e.g., Tringham 2003). Far more attention has been paid to the plurality of modern perspectives or agendas than in studying the plurality of ancient realities.

Perhaps the most important point is that changes or shifts in theoretical positions lead to changes in our sense or understanding of the evidence itself (cf. I. Morris 1993a:37). There is therefore never one interpretation that is correct, and the number of interpretations depends on the number of different perspectives from which the material is approached. In this respect the multiple analyses of the Early Iron Age burials in the Athenian Kerameikos are a classic case in point. I have summarized the history of scholarship on the Kerameikos cemeteries elsewhere (Papadopoulos 1993: 176–181). The numerous monographs and articles—not to mention careers—that have emerged out of these cemeteries are a tribute to the German excavators who both dug and published the Athenian Kerameikos. As they have shown so clearly, no single analysis of mortuary data at any given time can hope to represent the final word. My aim in this chapter is to provide a basic overview of certain patterns in the structure of the cemetery and to point to some others that have interested me most. It is hoped that the presentation of the data in Part I of this volume may allow others to review, restudy, and reinterpret the material from alternative perspectives.

Archaeology should continue to look at ways of exploring how several frameworks exist, or can coexist, and how they might resolve or contribute to an understanding of ancient realities as well as

present interests. In the case of Early Iron Age Torone, the material from a cemetery like that on Terrace V can tell many stories. This cemetery, and the society that produced it, did not exist in a vacuum. What preceded it helped form it, and what succeeded it helped mold it into what survives today. Within its own time, alternative or dissimilar versions coexisted. What survives at any given time can be looked at in many different ways.

LANDSCAPE AND THE VISIBILITY OF DEATH: THE CEMETERY IN ITS SPATIAL RELATIONSHIP TO THE SETTLEMENT OF THE LIVING

Landscape has long had something of a submerged presence in anthropology. It served on the one hand as a framing device, informing the way anthropologists bring their study into "view"; on the other hand, it served as the meaning local people impute to their cultural and physical surroundings (cf. Hirsch and O'Hanlon 1995). In this section I want to explore both these interconnected ways of considering landscape. In archaeology landscape has developed its own connotations, particularly in the sense of landscape archaeology, most effectively explored by Cherry, Davis, and Mantzourani (1991). Although cemeteries are often located around settlements in the Greek world, rarely do they occupy so blatantly visible a location—with regard to both land and sea—as does the Early Iron Age cemetery at Torone. As Parker Pearson has stated so well:

> The dead are everywhere, inhabiting our memories and forming our world. We read or retell their stories, live in their houses, and work and play in the places that they created and used. Where we put their remains is generally a conscious and carefully thought-out activity by which the dead are both remembered and forgotten, and through which we reaffirm and construct our attitudes to death and the dead and, through these, to place and identity. (Parker Pearson 1999:124)

For anyone who has visited Torone, the issue of landscape is all enveloping. **Plates 1–14** attempt to convey this landscape, and **plates 12–13** show more specifically the site of the Early Iron Age cemetery on Terrace V looming over the settlement of the living on Promontory 1. Both the promontory and the terraces are clearly visible even from high altitudes (see **pl. 1**). The relationship of the two is more conventionally mapped out on **figure 7**. Even without any surviving stone or other markers signaling the position of individual graves—the existence of some form of marker is assumed because of the close location of graves to one another and the fact that so few overlap vertically—the terrace enjoys a prominent place, clearly visible from any point on the later settlement, or plain, of Torone. Moreover, the fact that some of the cremations took place on the terrace—although it is clear that some, at least, were carried out on the beach (see appendix C)—would only have highlighted the process of setting a human body on fire on an open pyre. The physical prominence of the terrace, its location and height above the settlement, coupled with a raging pyre large enough to consume a body to the state of the cremated remains found in the cemetery (appendix A), amount to a funerary ritual, whether consciously orchestrated or not, of what can almost be described as great theatricality. Even in cases where the cremation was performed on the beach, the process of laying out a body, setting it on fire, gathering the surviving human remains, parceling them into an urn, and carrying that urn past, or through, the settlement and, presumably in a procession, up the hill to the terrace would have left an indelible memory on the living who performed and witnessed the ritual. The experience would have been all the more heightened by the ritual lament that was, and continues to be, such an enduring aspect of Greek tradition, as well as by any songs or music—haunting ephemera that tend to defy the archaeological record—that accompanied the ritual. Whether performed on the beach or on the terrace, here was the celebrated *prothesis* and *ekphora* so common in Greek Geometric art (Ahlberg 1971).

I have stressed the relationship between the cemetery on Terrace V and the settlement of the living on Promontory 1, but it is important to bear in mind the nature of the settlement itself. When, in 1984, the excavation of the cemetery was com-

plete, nothing of the contemporary settlement was known. This was uncovered, only slowly and partially, with the excavations on the Lekythos between 1986 and 1990 (Cambitoglou and Papadopoulos 1988; 1990; 1991; 1994). The excavations on Promontory 1 at Torone have uncovered a complex and long-lived settlement dating from the Final Neolithic period, through various phases of the Bronze Age, and into the Early Iron Age and the Archaic, Classical, Hellenistic, Roman, Byzantine, and post-Byzantine periods. A natural result of this long occupation of the promontory was several major structural changes, mostly during the Classical and Hellenistic periods and again in the Byzantine and post-Byzantine eras. The continuous opening of foundation trenches, cisterns, and rubbish pits, coupled with stone robbing or general clearance of earlier structures, involved considerable displacement of material, and many small finds were found out of original context. The excavations produced a textbook case where the later the level, the more likely it was to contain earlier material (Webster 1974:55–56). With earlier layers this dilution naturally decreased until, in the earliest layers of the first occupation, only material of that date was found (Webster 1974). This is well borne out by the fact that the earliest layers, especially those of the earliest stages of the Early Bronze Age, are remarkably well preserved. There is stratified Middle Bronze Age material, as well as material from the period of transition to the Late Bronze Age, or Shaft Grave period, which has yielded local and imported Minyan pottery and other small finds in the same context as Late Helladic I and II sherds from southern Greece (Papadopoulos 1992a; Cambitoglou and Papadopoulos 1993). There are good, but isolated strata of a developed stage of the Early Iron Age, a period conventionally referred to as Subprotogeometric and Late Geometric. Whenever encountered undisturbed, these levels yielded large storage pithoi in situ (**pl. 15**; see further Cambitoglou and Papadopoulos 1991: pl. 22.3–5; 1994: pl. 21.4–5). This is an interesting phenomenon, indicating that a large part, if not all of the promontory was devoted to storage, which itself suggests a highly organized community.

A similar pattern appears to be found also in the Early Iron Age levels at Assiros Toumba in the Langadas Basin of central Macedonia (Wardle 1989:447, with references to earlier work at the site), and there are storage pithoi also at Koukos and Kastanas, although not in the same quantity (Carington Smith and Vokotopoulou 1992:501, pl. 4; cf. Hänsel 1989:92ff for Kastanas). As a general rule, however, for the excavated parts of the promontory the occupation levels that have suffered the most damage by later building activity are the developed and later stages of the Late Bronze Age and the earlier part of the Early Iron Age horizons, as well as levels of the Archaic and earlier Classical periods, although isolated pockets were encountered at several points. This does not mean there is no material from these periods—on the contrary, there is quite a bit of it—only it is mostly found redeposited in later levels. The final publication of the excavations on Promontory 1, the study of which continues, will provide concrete evidence of a long and essentially successful continuity of occupation at the site across the Iron Age divide (for which see Papadopoulos 1993; 1996a; 1996b). However, the fact that so much of the promontory in the Early Iron Age thus far exposed was given over to storage raises a number of issues, foremost among them being the very nature of the settlement, and the question: where did the people who buried their dead in the Terrace V cemetery live?

Whether Promontory 1 in the Early Iron Age was a settlement, in the traditional sense, or an administrative nucleus for a larger, and conceivably more dispersed, community—including the settlement of Koukos (see chapter 8)—the physical landscape of Torone served as both a backdrop and a critical aspect of the funerary ritual. Before any further discussion of the relationship between the living and dead in Torone and southern Sithonia can proceed, however, it is important to extract from the cemetery itself as much information as possible. What is important here is that the place where the ritual of death was performed—whether terrace or seashore—together with the place of burial and its blatant *physicality* with respect to the living, exerted their own power over the living and their memory of the dead. The location of the cemetery above the settlement not only served as a constant reminder to the living, but provided something of a barrier, both physical and symbolic, enshrined in the landscape to separate the living

from the dead. When viewed in the light of a *performance* for the living, the setting of the funerary ritual at Torone offered a spectacular stage to act out the last of the rites of passage of any social being.

THE EXTENT OF THE CEMETERY

By the end of the 1984 campaign the overall extent of the cemetery area on Terrace V had been fairly clearly defined, and the excavations on the lower Terrace IV to the north yielded no conspicuous Early Iron Age material (see Cambitoglou 1981: 39; 1982:69–73; 1984). The north and west edges of the terrace were determined by the configuration of the natural rock with outcrops of bedrock visible on the slopes at various points, especially on the west side, indicating that in this part of the site the present-day lie of the land is much as it would have been in antiquity. This was verified by the excavation of the somewhat better preserved Classical structures on Terrace IV (**figs. 10–11**; **pls. 21–22**), where at some points along the slope of the embankment separating the two terraces bedrock was partially worked back and lined with plaster to form internal house walls, with the result that at these points a retaining wall was not considered necessary in the Classical period (**pl. 22c**).[4] Moreover, the layout of tombs on Terrace V was clearly predetermined by this natural aspect, with the north and west edges of the cemetery area terminating short of the present-day terrace edges.

There were no tombs encountered in Trenches 15, 55, and 57 and in the north part of Test Trench 1 in the NW quarter of the terrace. To the NE, only two tombs were located in Trench 43, with the presence of the kiln in the NW quarter of the trench and of a second possible kiln in the NE part of Trench 58 establishing the NE boundary of the cemetery. The excavation of Trenches 25 and 40 showed that bedrock in the west parts of both was unworked and at a slightly higher level, neatly defining the western edge of the cemetery. To the SW, the excavation of Trenches 44, 47, and 48 yielded no tombs. On the analogy of the degree of damage caused to tombs by the Classical building activity in Trench 22 and also with individual tombs (e.g., Tombs 53, 132; cf. also the case of Tombs 8, 119, 120, 121), it seemed highly unlikely the Classical walling encountered there could have been the cause of destruction of all remains of any possible tombs. The probable retaining wall in the form of Trench 47 wall *3* appeared to indicate further the SW boundary of the cemetery area as the bedrock dipped sharply to the SW. The SE extent of the cemetery was reached with the excavation of Trenches 27, 28, and 29, and the only southern concentration of tombs (all of which were cremations) was confined to the area of Trench 9, where of the thirteen tombs cleared the majority were grouped closely together in the NE quarter of the trench, tending to peter out toward the south scarp. It is worth noting that Tombs 130–131 and 133–134 were more or less strung out in line north–south. Although the possibility of further tombs located to the south of Trench 9 cannot be ruled out, any significant continuation seems improbable both on account of the bedrock falling away to the SW of Trench 47 wall *3*, and by the fact that in those parts of Trench 48 where bedrock was reached no tombs were encountered. Similarly, with the eastern edge of the cemetery, the possibility remained of tombs being located east of the excavated area of Trenches 58 and 59, although here, too, on the evidence at hand the edge of the cemetery appears to have been reached. Only two tombs were uncovered in Trench 59, both near the west scarp, and no tombs were revealed in those confined parts of Trench 58 where bedrock had been reached.

Assuming, then, no significant continuation of tombs to the south or east, the overall extent of the cemetery (**figs. 13**, **18**) defined a roughly oval-shaped area approximately 30 m NS × 25 m EW. These overall dimensions are not unlike those of several contemporary cemeteries in various parts of the Aegean. In the Athenian Kerameikos the so-called Pompeion cemetery north of the Eridanos (primarily inhumations) measured approximately 82 m EW × ca. 55 m NS (see Kraiker and Kübler 1939: Beil. 1), whereas the Precinct XX cemetery south of the Eridanos (primarily cremations) measured about 17 m NS × 27 m EW (see Kübler 1943: Beil. 1; for the location of the two burial fields in relation to each other see Kübler 1942:48, fig. 4; Müller-Karpe 1962: fig. 34; Krause 1975: pl. 1; Mountjoy and Hankey 1988; see also Schlörb-Vierneisel 1966:4–111, pl. 3). At Lefkandi the pre-

sumed area of the Palia Perivolia cemetery (Popham, Sackett, and Themelis 1979–80:103–104, pl. 76a) defined a roughly elliptical plan 30 m EW × ca. 18 m NS, dimensions very close to those of the Torone cemetery. The excavated part of the Skoubris cemetery (Popham, Sackett, and Themelis 1979–80:103, pls. 74–75) had a maximum length of about 20 m, although the full extent of the cemetery was not established. The excavated part of the Toumba cemetery presented in Popham, Sackett, and Themelis (1979–80:105, pls. 76, 79; and especially Popham, Touloupa, and Sackett 1982a:214, fig. 1), measured about 20 m NS × 17 m EW (see further Themelis 1976:32–33, plans 8a–b; 1983:145–160). In the Argolid the overall extent of the cemetery at Asine, as defined, measured just over 40 m NS × ca. 30 m EW (Hägg 1974:50, fig. 8; cf. Frödin and Persson 1938, figs. 42–43; Wells 1976:8, fig. 1; 1983a:122–123). At Tiryns the cemetery "im Hof der Phylaki" measured about 30 m NS × 12 m EW (Hägg 1974:81, fig. 13; Verdelis 1963: pl. 1).

One further point worth noting here is the presence of the modern path leading to Hill 2, and from there to the higher Hill 1, which traverses Terrace V in a north–south line along the east edge of the excavated area. Although no trace of a similar path of Early Iron Age date has been uncovered,[5] the existence of one might be assumed both to provide access to the terrace and as the most natural route to the higher ground to the south. Consequently, the possibility of another, distinct concentration of tombs further east cannot be overlooked, especially as the terrace continues for some distance in that direction. This is important to bear in mind, as the location of tombs on either side of well-worn paths and roads is a common feature of ancient Greek cemeteries.[6] At Lefkandi the graves of the Toumba cemetery were arranged on either side of "an empty strip, possibly a track or road" (Popham, Sackett, and Themelis 1979–80:105, pl. 76b; Popham, Touloupa, and Sackett 1982a:214, fig. 1); the graves of the Palia Perivolia and East cemeteries were separated by a distance of 18–24 m (Popham, Sackett, and Themelis 1979–80:104–105, pl. 76a). Geometric tombs on either side of an apparently ancient path also have been reported at Tsikalario on the island of Naxos (Catling 1984–85:52).

THE LAYOUT OF THE CEMETERY AND THE CHRONOLOGICAL DISTRIBUTION OF TOMBS

Although it is possible from the layout of tombs to discern some important general patterns of clustering and of movement within the area used, it is not straightforward to arrive at any very neatly defined chronological categories with any degree of conviction on the basis of "horizontal stratigraphy" alone. In reassessing the Kerameikos, Styrenius (1967:24–28, 55–58) used the principle of horizontal stratigraphy to draw conclusions about the relative chronology of tombs from their location in relation to each other. Although he felt it could be used as a potential control for conclusions based on criteria of style, he concluded it could not be used as an independent method of establishing chronological relationships.[7]

Krause (1975), following Hachmann (1963: 47–63), assigned the Submycenaean through Geometric graves of the Kerameikos in neat chronological categories (*Zeitstufen*) on the basis of variables in burial custom, and in so doing championed the cause of horizontal stratigraphy. Krause's variables included location of the grave, tomb type, orientation of the deceased, and a thorough analysis of tomb contents, including metal finds. Style of pottery played its part, but only as one component in a larger framework (see further Papadopoulos 1993:177–179). Over a decade later, Mountjoy (Mountjoy and Hankey 1988:1–37), on the basis of pottery style alone, reassessed the earliest tombs of the Pompeian cemetery in the Athenian Kerameikos and reassigned the earliest pots from "Submycenaean" to Late Helladic IIIC Late. Her conclusions tore apart Krause's neat rows of the earliest, previously labeled Submycenaean graves. An inevitable effect of such revisions was the polarization of thought on the subject and the insistence of using one method over another. Neither horizontal stratigraphy nor stylistic analysis are infallible, and both carry with them a number of significant underlying assumptions. Fundamental to the notion of horizontal stratigraphy as perceived by Hachmann (1963), Styrenius (1967:24–28, 55–58) and Krause (1975; cf. Clark 1960:130) is the assumption that variations in mortuary custom are the result of *diachronic change*, which

therefore lead to chronological conclusions. For the inherent difficulties of this assumption, Ucko (1969:276–277) provided several ethnographic scenarios that illustrate the potential shortcomings of horizontal stratigraphy.

Other scholars have used the same, or similar, variables to establish synchronic differentiation; that is to say, that two tombs sharing the same variables are not chronologically contemporary, but rather show that the two individuals interred share a similar social status in life (I. Morris 1987; cf. Papadopoulos 1993:185). In a similar vein, the logical principle of style and its development is a tool prone to elements of subjective arbitrariness (for style and Early Iron Age pottery see especially Desborough's comments in Popham, Sackett, and Themelis 1979–80:282). The use of stylistic criteria, especially when focusing on one class of material such as painted pottery in order to arrive at chronological distinctions, involves in part the basic assumption of the linear development of style. Although one may note similarities and differences among discerned stylistic groups, it remains difficult to establish whether such differences do, in fact, belong to successive stages of progressive development, or are part of parallel or concurrent development (for which see Davison 1961:101; Brokaw 1963:63–73). The assumptions involved in both methodologies boil down to one essential problem: are we observing in the structure of the archaeological record *diachronic change* or *synchronic differentiation*? (Some of the problems involved in stylistic analysis are addressed more fully in chapter 5).

The application of the principle of horizontal stratigraphy in the case of Torone is to a certain point hampered by several aspects that need to be outlined. These include the fragmentary nature of much of the tomb material, the lack of significant tomb groups, deficiencies of stylistic criteria specific to the site (especially in the case of tombs where the only material deposited consisted of local handmade wares), and sometimes by the fact that a later tomb—or tombs—was inserted within a concentration of evidently homogenous earlier tombs (cf. Popham, Sackett, and Themelis 1979–80:105, 379, n. 11).

Nevertheless certain patterns did emerge, and from the evident paucity of tombs stratigraphically interrelated *vertically*—although denying a fundamental means of establishing relative chronology—it was clear that in such a close concentration of tombs the precise position of earlier tombs was known from some kind of marker. The existence of crude stone markers and the possibility of pots of various shapes being used as markers have already been noted. The further possibility that some of the tombs that were stratigraphically interrelated were, in fact, intentionally laid out in that order was particularly highlighted in the case of Tombs 15, 101, and 102. Similarly, the vertical interrelation of Tomb 11 ➔ Tomb 10, and Tomb 14 ➔ Tomb 13 (in each case the earlier tomb is mentioned first) may have been intentional rather than inadvertent disturbance caused by the interment of the later tomb, presumably after a lapse of sufficient time for the (presumed) marker of the earlier tomb to have disappeared. In the case of Tombs 6 and 96,[8] the earlier Tomb 6 lay beneath but was undisturbed by Tomb 96; thus the only clear instance of one tomb violating the ground of another was Tomb 18 cutting across Tomb 3. This general respect for earlier graves may also be appreciated from the overall layout of tombs where, even in the most heavily concentrated areas, small gaps between tombs were evident, allowing access to any part of the cemetery ground (**figs. 13, 18**) (on this aspect see further Goldstein 1981:53–69).

The lack of preserved funerary markers denied yet another potential indicator of rank. In Classical Athens the funerary marker, if inscribed, represented both written testimony describing or explaining aspects of funerary ritual (as well as a most visible aspect of the material remains of a ritual itself), and sometimes even an artistic representation of the ritual—that is, three of four aspects in Ian Morris's hierarchy of sources for ancient rituals (Morris 1992:10, 156–173).

In order to facilitate the following discussion, the details of each tomb are presented in summary form in **table 4.1**. **Figure 192** shows each burial numbered, but undifferentiated from one other, in order to serve as a control. The two most conspicuous groupings in terms of layout are the position of inhumation tombs in relation to cremations (**fig. 18**), and of the tombs located in the area of the Early Iron Age cutting (**fig. 17**)—an area used for both inhumations and cremations—contrasting with those tombs elsewhere.[9]

The sixteen inhumation tombs were arranged in two distinct groups along the western edge of the cemetery to the north and south (**fig. 193**). This spatial distinction is interesting: the majority of inhumations are not lavishly equipped; most are extremely poor and none involved the energy and material expenditure of cremation, yet spatially they occupy a prominent aspect of the burial ground. The north group consisted of four very poorly preserved graves (Tombs 1–4), three simple pit graves and the fourth (Tomb 1) a pithos grave, presumably of a child.[10] The date of all four remains a problem as the only offering found was the small handmade kantharos **T1-2** associated with Tomb 1, a shape common in Macedonia from the Early Bronze Age through the Early Iron Age (see chapter 5 for a discussion of the shape). Tomb 3 was cut across and partially damaged by Tomb 18, but the ash-urn and only pot of the latter (**T18-1**) could not be precisely dated and thus the relative relationship of the two tombs could not be translated into absolute terms. However tempting it may be to regard the four inhumations as contemporary and among the earliest in the period of use of the cemetery, the only permissible statement based on hard evidence is that Tomb 3 is earlier than Tomb 18.

The south group of inhumation tombs (Tombs 5–16) was located in the west part of the Early Iron Age cutting and consequently formed a neatly defined group with many cremation tombs. The majority of these inhumations were again simple, usually single pit graves (Tombs 5–8, 10–11, 13–16), but with two instances of multiple inhumations (Tomb 5 [3 individuals], Tomb 16 [2 individuals]). Tomb 12 was a pithos grave similar to Tomb 1 (cf. also Tomb 7 where the large pithos rim fragment **T7-1** was used as bedding for the cranial region), and Tomb 9 was a cist grave containing as many as four individuals, which represents the largest number of deceased in any one tomb (for the distinction among single, double, and "several" burials, as opposed to true multiple tombs, see Snodgrass 1971:141). Two of the inhumations were stratigraphically interrelated with cremation tombs that could be stylistically dated. The ash-urn of Tomb 96 (**T96-1**), which overlay but did not disturb Tomb 6 (see above), could be assigned as Submycenaean. The more complex interrelation of Tombs 15, 101, and 102 has been detailed in chapters 2 and 3, and it is clear that in this case Inhumation Tomb 15 was slightly later than Cremation Tombs 101 and 102. The pottery associated with Tomb 102 could be broadly designated as Early Protogeometric, and the pottery from Tomb 101 is stylistically Submycenaean with many vessels, notably one-handled cups, burned and deposited around the ash-urn. Consequently, although it proved difficult to date many of the remaining inhumations, it could be stated that the rites of inhumation and cremation were practiced side by side in Early Iron Age Torone, but that on the evidence at hand, inhumation tombs were either earlier than cremations (Tomb 6 and with it Tomb 7 earlier than Tomb 96) or contemporary with the earliest cremations (Final Mycenaean/Submycenaean-Early Protogeometric). There was no clear evidence of an inhumation tomb contemporary with or later than a cremation tomb of the later period of use of the cemetery.[11]

The most significant horizontal grouping of tombs was that confined to the area of the large Early Iron Age cutting toward the SW of the cemetery ground (**figs. 17**, **193**). This was a carefully leveled surface, dug into bedrock to a maximum depth of 0.45 m, and prepared in order to receive the earliest tombs of the cemetery. The horizontal extent of the cutting is more fully outlined in chapter 2 (discussion under deposit type 4), but it was difficult at certain points to determine its edges due to later disturbance caused by the Classical building activity.[12] The cutting was deepest toward the east where the original level of bedrock was higher, whereas toward the west, especially in the area of Trench 25, it was considerably shallower (see **fig. 24b** [A-A], **fig. 29d** [north scarp], **fig. 37b** [north scarp]). Roughly elliptical in shape, the cutting had a maximum width of 8.0–10.0 m EW. It extended to the north scarp of Trench 40 but was not encountered in Trench 55, and only its south edge, into Trench 9, was difficult to determine; its southern limit was in the vicinity of Tombs 125 and 127. Consequently, it would have had a maximum length (north–south) of about 15.0 m and was characterized by a distinct fill (deposit type 4), normally overlaying the thin layer of bedrock chips (deposit type 5).

Table 4.1. Analytic table of all tombs, their contents and attributes

			Human Remains					Ceramics																			
								Local Wheelmade (LWM)								Local Handmade (LHM)											
Tomb Number	Tomb Type	Date	No. of Individuals	Age (in years); M = months		Age Class	Sex	Amphora	Amphoriskos	Skyphos	Lekanis	Krater	Other	Uncertain	Total LWM	Two-Handled Jar: Large and Small	Jug	Kantharos	Kyathos	Bowl With Square-cut Handles	Pithos	Pitharion	Tripod Cauldron	Other	Uncertain	Total LHM
1	Pil	IB	1	6+	Child?	IC								0			1			1					2
2	Pl	IB	1	13-14	Adol.	IC								0											0
3	Pl	IB	1	7	Child	IC								0											0
4	Pl	IB	1		Adult	F								0											0
5	Pl	IA	3	20-25	Adult	F								0											0
5				17	Adol.	U								0											0
5				10-12	Child	IC								0											0
6	Pl	IA	1	40	Adult	M								0		1						1			2
7	Pl	IA	1	30	Adult	F								0		1	1			1		1			4
8	Pl	IA	1	18-20	Adult	U								0											0
9	Cil	IA	4		Adult	F		1						1											0
9					Adult	F								0											0
9				35	Adult	M								0											0
9				18	Adol.	U								0											0
10	Pl	IA	1	45	Adult	M								0		1	3	1							5
11	Pl	IA	1	35	Adult	M								0											0
12	Pil	IA	1	6	Child	IC								0						1					1
13	Pl	IA	1	25-35	Adult	M							1	1		1									1
14	Pl	IA	1	45+	Adult	M								0											0
15	Pl	IA	1	25-30	Adult	M								0											0
16	Pl	IA	2	35	Adult	M								0											0
16				20+	Adult	F								0											0
17	UC	IV	?		N/P	U							A	1											0
18	UC	III/IV	1		Adult	U								0	A										1
19	UC	III/IV	1		Yng. Adult	F								0	A										1
20	UC	III	1		Yng. Adult	U	A			L/C				2											0
21	UC	III	1	7-8 M	Infant	IC				L/C				1	A	K									2
22	UC	IV	1		Adult	U		A						1							C/A				1
23	UC	III	1		Adult	U			A					1											0
24	UC	III	1		Adult	F	A							1						L/C					1
25	UC	III	1		Adult	M			A					1						L/C					1
26	UC	III	1		Adult	U	A			L/C				2		K									1
27	UC	III/IV	1		Adult	F		A						1						C/A					1
28	UC	III	1		Child	IC	C/A		A					2						L/C					1
29	UC	III	1	<2.5	Infant	IC	A							1											0
30	UC	III	1		Adult	U			A					1											0
31	UC	III	1		Adult	U								0							A				1
32	UC	III	?		N/P	U					A			1											0
33	UC	III/IV	1		Non-diag.	U					A			1											0
34	UC	III	1		Non-diag.	U			A					1						C/A					1
35	UC	III/IV	1		Adult	U					A			1											0
36	UC	III	1		Child/Adol.	IC			A					1											0
37	UC	III	1		Adult	U			A					1											0
38	UC	III	1		Adult	M								0		K					A				2
39	UC	III	1		Non-diag.	U							A	1											0
40	UC	III	1		Adult	M					A			1											0

Table 4.1. Analytic table of all tombs, their contents and attributes (continued)

	Ceramics Cntd.					Other Grave Goods													Other Grave Attributes										
	Imported					Terracotta		Bronze																						
Tomb Number	Wheelmade Painted	Black/Red-Slipped	Handmade	Total Imported	**Total Ceramic**	Spindlewhorl/Bead/Button	Other	Finger Ring	Hair Ring/Spiral	Anklet	Fibula	Other/Uncertain	Iron	Amber/Glass	Worked Bone	Stone/Disc/Lid	Whetstone	**Total**	Remains of Pyre in Tomb	Burnt Sherds in Tomb	Sea and Land Shells in Tomb Pit	Sea and Land Shells in Ash Urn	Sea Urchins in Tomb Pit	Sea Urchins in Ash Urn	Animal Bones in Tomb Pit	Animal Bones in Ash Urn	Fish Bones in Tomb Pit	Fish Bones in Ash Urn	Carbonized Seeds in Tomb Pit	Carbonized Seeds in Ash Urn
1				0	2													0											
2				0	0													0											
3				0	0													0											
4				0	0													0			x								
5				0	0													0			x								
5				0	0													0											
5				0	0													0											
6				0	2												1	1			?								
7				0	4	1			1	2								4											
8				0	0													0											
9				0	1													0			x								
9				0	0													0											
9				0	0													0											
9				0	0													0											
10				0	5	1			1					1	1			4			x								
11				0	0			1										1			x								
12				0	1													0			x								
13				0	2													0			x								
14				0	0													0			x								
15				0	0													0											
16				0	0						1							1											
16				0	0													0											
17				0	1													0			x								
18				0	1							1						1				x				x			
19				0	1													0											
20				0	2													0			x	x		x					
21			L/C	1	4													0											
22	K			1	3													0											
23				0	1													0				x			?	?			
24				0	2													0	x	x					x	x			
25				0	2													0	x	x									
26				0	3													0				x		x					
27				0	2													0											
28				0	3												1	1			x	x							
29				0	1													0											
30				0	1													0											
31				0	1													0											
32				0	1													0											
33				0	1													0			?	?							
34				0	2													0											
35				0	1													0			x								
36				0	1													0			x								
37				0	1													0											
38				0	2										1			1											
39				0	1													0			x								
40				0	1													0											

Continued on next page

Table 4.1. Analytic table of all tombs, their contents and attributes (continued)

			Human Remains				Ceramics																			
							Local Wheelmade (LWM)								Local Handmade (LHM)											
Tomb Number	Tomb Type	Date	No. of Individuals	Age (in years); M = months	Age Class	Sex	Amphora	Amphoriskos	Skyphos	Lekanis	Krater	Other	Uncertain	Total LWM	Two-Handled Jar: Large and Small	Jug	Kantharos	Kyathos	Bowl With Square-cut Handles	Pithos	Pitharion	Tripod Cauldron	Other	Uncertain	Total LHM
41	UC	III	1		Adult	U	A			L/C				2		K									1
42	UC	III	1		Adult	U	A							1		K; C/A									2
43	UC	III	1		Infant	IC								0		C/A		A							2
44	UC	III	1	8-10	Child	IC	L/C	A						2											0
45	UC	III	1		Adult	U						A		1											0
46	UC	III	1		Adult	U								0	A					L/C					2
47	UC	III	1		Adult	F				L/C				1								C/A			1
48	UC	III	1		Adult	U					A			1											0
49	UC	III	1		Adult	F								0							A				1
50	UC	III	1		Adult	U								0											0
51	UC	III	1		Adult	F	A;2 L/C			L/C				4											0
52	UC	III	1		Adult	U	A							1		K					L/C				2
53	UC	III	1		Non-diag.	U		A						1							C/A				1
54	UC	III	1		Adult	U								0											0
55	UC	IV	1		Non-diag.	U		A						1											0
56	UC	IV	1		Adult	U	A							1		K									1
57	UC	III	1		Infant	IC								0				A							1
58	UC	III	2		Adult	U					A			1		K									1
58					Adult	U								0											0
59	UC	III	1		Non-diag.	U	A							1											0
60	UC	III	1		Adult	M	A							1		K									1
61	UC	III/IV	?		N/P	U								0										A	1
62	UC	III/IV	1		Non-diag.	U					A			1											0
63	UC	III/IV	1		Adult	F	L/C							1	A										1
64	UC	III/IV	1		Non-diag.	U	A							1											0
65	UC	III/IV	1		Adult	U	A							1											0
66	UC	III/IV	1		Non-diag.	U								0				A							1
67	UC	III/IV	1		Adult	M	A							1		K			L/C						2
68	UC	III/IV	1		Adult	U	A							1		K									1
69	UC	III/IV	1		Non-diag.	U		A						1									K		1
70	UC	III/IV	1		Yng. Adult	M								0		K				C/A	A	C/A			4
71	UC	III/IV	?		N/P	U		A						1											0
72	UC	III/IV	1		Adult	U								0											0
73	UC	III/IV	1		Non-diag.	U	A							1		K									1
74	UC	III/IV	?		N/P	U	A							1		K									1
75	UC	III/IV	1		Adult	F	A							1		K	L/C								2
76	UC	III/IV	1		Adult	M					A			1											0
77	UC	III/IV	1		Adult	U	A							1		K									1
78	UC	III/IV	1		Adult	U	A							1											0
79	UC	III/IV	1		Non-diag.	U					A			1											0
80	UC	III/IV	1		Adult	U	A							1		K									1
81	UC	IV	1		Adult	U	A			L/C				2		2 K									2
82	UC	IV	1		Non-diag.	U	A		L/C					2		K	2 K								3

Table 4.1. Analytic table of all tombs, their contents and attributes (continued)

	Ceramics Cntd.					Other Grave Goods													Other Grave Attributes											
	Imported					Terracotta		Bronze																						
Tomb Number	Wheelmade Painted	Black/Red-Slipped	Handmade	Total Imported	**Total Ceramic**	Spindlewhorl/Bead/Button	Other	Finger Ring	Hair Ring/Spiral	Anklet	Fibula	Other/Uncertain	Iron	Amber/Glass	Worked Bone	Stone/Disc/Lid	Whetstone	**Total**	Remains of Pyre in Tomb	Burnt Sherds in Tomb	Sea and Land Shells in Tomb Pit	Sea and Land Shells in Ash Urn	Sea Urchins in Tomb Pit	Sea Urchins in Ash Urn	Animal Bones in Tomb Pit	Animal Bones in Ash Urn	Fish Bones in Tomb Pit	Fish Bones in Ash Urn	Carbonized Seeds in Tomb Pit	Carbonized Seeds in Ash Urn
41				0	3													0												
42				0	3													0			?	?								
43				0	2													0			?	?								
44				0	2													0												
45				0	1													0												
46				0	2	1												1												
47	A	L/C		2	4													0								x				
48				0	1											1		1			?	?								
49				0	1													0			x	x					x			
50		A		1	1													0			x									
51				0	4	1												1			x	x								
52				0	3								1				1	2			x					x				
53				0	2													0												
54			A	1	1		1											1				x								
55				0	1													0			?	?								
56				0	2								2					2			?	?								
57				0	1													0			x	x								
58				0	2							1						1				x								
58				0	0																									
59				0	1													0												
60				0	2													0	?		x	x								
61				0	1													0												
62				0	1													0								x				
63				0	2													0			?	?								
64				0	1													0												
65				0	1													0				x								
66				0	1													0			x									
67				0	3													0				x								
68				0	2													0			x	x				x				
69				0	2	1			1									2			x	x								
70				0	4													0	?			x								
71				0	1													0												
72	A			1	1													0												
73				0	2													0												
74				0	2													0												
75				0	3									1				1												
76				0	1													0												
77	L/C			1	3													0								x				
78				0	1													0				x								
79				0	1													0												
80				0	2													0												
81				0	4													0				x								
82				0	5													0												

Continued on next page

Table 4.1. Analytic table of all tombs, their contents and attributes (continued)

			Human Remains					Ceramics																			
								Local Wheelmade (LWM)								Local Handmade (LHM)											
Tomb Number	Tomb Type	Date	No. of Individuals	Age (in years); M = months	Age Class	Sex	Amphora	Amphoriskos	Skyphos	Lekanis	Krater	Other	Uncertain	Total LWM	Two-Handled Jar: Large and Small	Jug	Kantharos	Kyathos	Bowl With Square-cut Handles	Pithos	Pitharion	Tripod Cauldron	Other	Uncertain	Total LHM
83	UC	IV	2		Adult	U	A			L/C				2											0
83					Infant	IC								0											
84	UC	IV	2		Adult	F	A			L/C				2		2 K									2
84					Infant	IC								0											
85	UC	III	1		Adult	U			A					1											0
86	UC	IV	1		Adult	U	A							1		K									1
87	UC	III/IV	1		Infant	IC	A							1											0
88	UC	III/IV	1		Adult	U	A					C/A		2		K									1
89	PiC	III/IV	1		Adult	U								0						A					1
90	UC	III/IV	1		Adult	U			A					1											0
91	UC	III/IV	1		Adult	U	A							1											0
92	UC	III/IV	1		Adult	U	A							1											0
93	UC	III/IV	1		Non-diag.	U								0											0
94	UC	III	1		Non-diag.	U			A					1											0
95	UC	I/II	1		Non-diag.	U	A							1							C/A				1
96	UC	I/II	1		Adult	U		A						1											0
97	UC	I/II	1		Adult	U								0											0
98	UC	I/II	?		N/P	U			A					1											0
99	UC	I/II	?		?	U	L/C	A						2								L/C			1
100	UC	I/II	1		Adult	M	L/C							1	A										1
101	UC	I/II	1		Adult	M		A						1											0
102	CiC	I/II	1		Adult	U					A			1											0
103	UC	I/II	2		Adult	M			A					1											0
103		I/II			Adult	U																			
104	CiC	I/II	1		Adult	F	A							1						C/A					1
105	UC	I/II	1		Adult	U			A					1						L/C					1
106	UC	I/II	1		Adult	U			A					1											0
107	UC	I/II	1		Adult	U		A						1						L/C					1
108	UC	I/II	1		Adult	U			A					1						L/C					1
109	UC	I/II	1		Adult	U		A						1											0
110	UC	I/II	1		Adult	U			A					1											0
111	UC	I/II	1		Adult	U								0											0
112	UC	I/II	2	5-7	Child	IC		A						1											0
112		I/II			Child	IC																			
113	UC	I/II	1		Adult	U								0							A				1
114	UC	I/II	1		Adult	U	A							1						L/C					1
115	UC	I/II	1		Adult	U	A							1											0
116	UC	I/II	1		Adult	U					A			1											0
117	UC	I/II	1		Non-diag.	U			A					1											0
118	UC	I/II	2		Adult	U	L/C							1	A						A; C/A				3
118		I/II				U																			
119	UC	I/II	1		Non-diag.	U	A							1											0
120	UC	I/II	1		Adult	U	A							1											0
121	UC	I/II	1		Non-diag.	U	A							1								C/A			1
122	UC	I/II	1		Adult	F	A							1		K									1

Table 4.1. Analytic table of all tombs, their contents and attributes (continued)

	Ceramics Cntd.					Other Grave Goods														Other Grave Attributes										
	Imported					Terracotta		Bronze																						
Tomb Number	Wheelmade Painted	Black/Red-Slipped	Handmade	Total Imported	**Total Ceramic**	Spindlewhorl/Bead/Button	Other	Finger Ring	Hair Ring/Spiral	Anklet	Fibula	Other/Uncertain	Iron	Amber/Glass	Worked Bone	Stone/Disc/Lid	Whetstone	**Total**	Remains of Pyre in Tomb	Burnt Sherds in Tomb	Sea and Land Shells in Tomb Pit	Sea and Land Shells in Ash Urn	Sea Urchins in Tomb Pit	Sea Urchins in Ash Urn	Animal Bones in Tomb Pit	Animal Bones in Ash Urn	Fish Bones in Tomb Pit	Fish Bones in Ash Urn	Carbonized Seeds in Tomb Pit	Carbonized Seeds in Ash Urn
83				0	2													0			x									
83																														
84				0	4													0												
84																														
85				0	1													0												
86				0	2													0				x								
87				0	1													0												
88				0	3													0								x				
89				0	1													0												
90				0	1													0				x								
91				0	1													0												
92				0	1													0												
93	A			1	1													0												
94				0	1													0												
95				0	2													0	?											
96				0	1													0	?			x				x				
97			A	1	1													0	?											
98				0	1													0	x	x										
99				0	3													0	x	x										
100				0	2													0	x		x	x							x	
101				0	1							1						1	x	x	x	x		x					x	
102				0	1				1			1						2	x	x	x	x								
103				0	1													0	x	x		x				x				
103																														
104		L/C		1	3						1	2					2	5	x	x	x	x			x	x				
105				0	2													0	?	x	x	x								
106				0	1													0	x	x										
107				0	2													0	x		x									
108				0	2				1									1	x	x	x		x	x			x		x	
109				0	1													0	x	x	x	x	x						x	
110				0	1													0	x	x	x									
111		A		1	1													0	x	x	x		x						x	
112			A	1	2													0	x	x	x		x						x	
112																														
113				0	1													0	x	x	x									
114				0	2													0	x	x	x	x	x						x	
115				0	1						2							2	x	x	x		x							
116				0	1													0	x	x	x									
117				0	1													0	x	x	x		x				x		x	
118				0	4													0	x	x	x		x			x				
118																														
119				0	1													0	x	x		x								
120				0	1													0	x	?	x	x								
121				0	2													0	x	?	x									
122				0	2													0	?											

Continued on next page

Table 4.1. Analytic table of all tombs, their contents and attributes (continued)

			Human Remains				Ceramics																		
							Local Wheelmade (LWM)								Local Handmade (LHM)										
Tomb Number	Tomb Type	Date	No. of Individuals	Age (in years); M = months	Age Class	Sex	Amphora	Amphoriskos	Skyphos	Lekanis	Krater	Other	Uncertain	Total LWM	Two-Handled Jar: Large and Small	Jug	Kantharos	Kyathos	Bowl With Square-cut Handles	Pithos	Pitharion	Tripod Cauldron	Other	Uncertain	Total LHM
123	UC	I/II	2		Adult	F		A						1								4 C/A			4
123		I/II			Infant	IC																			
124	UC	I/II	1		Adult	U	A			L/C				2		K									1
125	UC	I/II	1		Adult	U	A							1		K									1
126	UC	I/II	1		Child	IC								0							A				1
127	UC	I/II	1		Adult	U								0											0
128	UC	I/II	1		Adult	U								0	A										1
129	UC	III	1		Adult	U	A							1											0
130	UC	III	1		Yng. Adult	U								0	A										1
131	UC	III	?		N/P	U	A							1											0
132	UC	III	?		N/P	U								0	A										1
133	UC	III	1		Yng. Adult	U								0	A										1
134	UC	III	1		Adult	U	A							1											0

In the east part of the cutting where most of the cremation tombs were located, deposit type 4 contained a greater quantity of ash and other burned debris than was the case to the north and west. In addition to the inhumation tombs (Tombs 5–16), the following cremation tombs were located within the area of the cutting: Tombs 95–121, and probably Tombs 122–128. The majority of these thirty-four tombs differed in points of detail from the remaining cremations in those areas beyond the cutting. First, the tomb pit was dug through deposit types 4 and 5, with the previously leveled bedrock below either left as it was or only partially reworked to create a shallow pit. Second, nearly all the cremations in the area of the cutting had their tomb pits filled with loose-textured blackened earth representing remains of the pyres, and from which was often recovered a quantity of fire-affected sherds from vessels burned during the funerary ritual. In other parts of the cemetery only two tombs (Tombs 24, 25) yielded fire-affected sherds (**fig. 194**).[13]

Chronologically, the cremations (along with the inhumations) encountered within the area of the cutting were on the whole earlier than most tombs in other parts of the cemetery, with most of the dated tombs being Submycenaean or Early Protogeometric, although occasionally a later tomb may have been inserted. The three tombs that could be designated Submycenaean with certainty on the basis of style (Tombs 96, 101, 109) were all within the area of the cutting. The majority of tombs beyond the cutting were later, and none was clearly of such an early date. Consequently, a general pattern of movement within the cemetery was established, beginning with the early use of the ground toward the SW, to a later use of areas to the north and east and also for a short distance to the south. The four northern inhumations may well be contemporary with the southern group, but this could not be established. I have attempted to show the chronological distribution of the tombs schematically on the scattergram, **figure 195** (the various groupings or phases are keyed with those given in **table 4.1)**. Although is it clear some inhumations are earlier than some cremations within the area of the cutting (Inhumation Tomb 6 is earlier than Cremation Tomb 96 and

Table 4.1. Analytic table of all tombs, their contents and attributes (continued)

	Ceramics Cntd.					Other Grave Goods												Other Grave Attributes											
	Imported					Terracotta		Bronze																					
Tomb Number	Wheelmade Painted	Black/Red-Slipped	Handmade	Total Imported	Total Ceramic	Spindlewhorl/Bead/Button	Other	Finger Ring	Hair Ring/Spiral	Anklet	Fibula	Other/Uncertain	Iron	Amber/Glass	Worked Bone	Stone/Disc/Lid	Whetstone	Total	Remains of Pyre in Tomb	Burnt Sherds in Tomb	Sea and Land Shells in Tomb Pit	Sea and Land Shells in Ash Urn	Sea Urchins in Tomb Pit	Sea Urchins in Ash Urn	Animal Bones in Tomb Pit	Animal Bones in Ash Urn	Fish Bones in Tomb Pit	Fish Bones in Ash Urn	Carbonized Seeds in Tomb Pit	Carbonized Seeds in Ash Urn
123				0	5													0	?			x				x				
123																														
124				0	3							1						1	?		x		x	x		x				
125				0	2													0	x	x		x				x				
126				0	1													0	?											
127	A			1	1													0	x											
128				0	1													0	x	x										
129				0	1													0												
130				0	1													0				x				x				
131				0	1													0			x									
132				0	1													0	?											
133				0	1													0			x	x								
134				0	1													0			x									

Key to Symbols

Tomb type 1: P = Pit
U = Urn
Ci = Cist
Pi = Pithos

Tomb type 2: I = Inhumation
C = Cremation

Ceramics: A = Ash-urn
L/C = Lid/Cover
K = Kterisma
C/A = Chocking/Associated sherd

probably Tomb 97), at least one cremation, the original Tomb 102, was earlier than Inhumation Tomb 15. Given that so few tombs in the Early Iron Age cemetery at Torone can be given a precise date—it is even impossible to state with any degree of certainty which is the *Ur*-burial at the site—I have preferred to render the chronological distribution of tombs with large brush strokes. Collectively, those tombs labeled IA, IB, and I/II include all the early tombs in the period of use of the cemetery.

As the burial ground expanded through time, new tombs (labeled Phase III) were placed both to the NE and south of the original cluster. Around the edges of this later cluster, in several discrete areas in the northern part of the cemetery, to the NE, and also in the area between the original cluster in the Early Iron Age cutting (IA, IB, I/II) and the northern cluster of Phase III, are tombs (labeled Phase IV) that may be assigned among the very latest of the cemetery (**fig. 195**). Another significant cluster of tombs, extending to the east and NE of the original cluster, is designated Phase III/IV. Although many of these tombs may be as late as those of Phase IV, they cannot be conclusively distinguished from the tombs of Phase III, and for this reason I have preferred to assign them as Phase III/IV.

The eighty-four cremation tombs excavated in the area outside the Early Iron Age cutting (Phases III, IV, III/IV) share much in common, but they are not homogeneous in numerous points of detail. Although in certain cases a group of tombs located close to each other shared a number of features in common, there was no clear-cut pattern of chronological progression and certainly no conclusive proof of tombs having been arranged according to

a predetermined scheme, as is the case, for example, with the rows of tombs in Athens and Salamis (Tsountas and Manatt 1897: app. C; Wide 1910: 17–36; Styrenius 1962:103–123; 1967:56–57, maps 1–2; Kurtz and Boardman 1971:32). The chronology of the tomb pottery is outlined in detail in chapter 5, and although many tombs could not be precisely dated, it is evident from those that were that tombs assigned to Early Protogeometric were scattered throughout an area containing mainly Late Protogeometric or slightly later tombs. The two tombs outside the area of the Early Iron Age cutting in which burned sherds were encountered (Tombs 24, 25) were located next to each other in the north part of the cemetery, not far from Inhumation Tombs 1–4; both appeared to be stylistically early. Similarly early tombs were also located, however, in the center of the cemetery (cf., for instance, Tomb 52).

In the east portion of Trench 12, in Trench 12 East Baulk, and in the SW quarter of Trench 6 a large proportion of tombs consisted of a skyphos or krater serving as ash-urn placed upright, with no *kterismata* (Tombs 30, 32–37, 39–40). Most of these tombs were poorly preserved and difficult to date accurately, but interspersed among them were two tombs where the ash-urns were handmade pitharia set on their sides (Tombs 31, 38); the nearby Tomb 45 had as its ash-urn the unique wheelmade "amphora/pyxis" [**T45-1**]). A little to the south four tombs located close to each other consisted of an amphora as ash-urn placed on its side, with an open vessel (also on its side) serving as lid/cover and one or more pots placed upright as *kterismata* (Tombs 81–84). These appeared to form a homogeneous group dating to the latest stages of the period of use of the cemetery; a similar tomb (Tomb 41) was found further north. In the east part of the cemetery area, Tombs 68, 73–75, 77, and 80 formed another related group characterized by an amphora as ash-urn placed on its side, and, usually, a handmade jug placed upright beside it. In exactly the same area, however, there were many cremation tombs that did not conform to this pattern (cf. Tombs 66, 67, 69–72, 76, 78, 79). In the far south of the cemetery area yet another possible grouping consisted of Tombs 128, 130, 132, and 133, where the ash-urn was a handmade two-handled jar placed upright. Apart from these similarities in the shape and placement of the ash-urn and of the existence (or lack thereof), of *kterismata* in tombs in close proximity, it was not possible to discern any clearly arranged distribution of tombs.[14]

Despite these reservations, a number of discrete, if tenuous clusters—more refined than those presented in **figure 195**—emerged. This was precisely because of the differences noted above. That is to say, that it was relatively common to find, in an otherwise homogeneous group of cremations or inhumations, an "odd-ball," a tomb different in some important respect—chronologically, or in terms of its content or type—from those immediately around it. This clustering, surprisingly, appears to cut across all traditional aspects in the study of mortuary remains. The clusters are not distinguished on the basis of inhumation and cremation, nor are they based on similarities or differences of tomb type or tomb contents. Moreover, their distribution is not determined or defined by age and sex identifications, nor is it based on the presence or absence of organic remains (animal bones, seashells, carbonized seeds, etc.). The clustering is above all else spatial, and I return to this in the final section of this chapter once tomb types, tomb contents, age, and sex identifications and burial customs are more fully analyzed.

TOMB TYPES

There are five basic types of tomb in the Early Iron Age cemetery at Torone (for useful definitions of certain tomb types see Dickinson 1983:55–67): the urn cremation in a rock or earth cut pit, which was by far the most common; the urn cremation within a cist; the simple inhumation pit grave; the inhumation cist; and the pithos grave.[15] There was also a solitary example of a pithos cremation, which is discussed below as a variant of the urn cremation. The spatial distribution of these different types of tomb is presented schematically on **figure 196**.

Urn cremations

Urn cremations, the most common type of tomb, accounted for 118 of the 134 tombs excavated in the Terrace V cemetery, although two—Tombs 102 and 104—are treated separately below as cremation cist tombs. The differences between the urn

cremations in the area of the Early Iron Age cutting and those elsewhere have already been noted, but in both cases the basic physical appearance of the tomb was similar. A circular or elliptical pit, normally 0.25–0.80 m in length, was cut into bedrock or deposits type 4 and 5 to a depth of ca. 0.10–0.40 m (occasionally deeper). Into this pit was placed the pot containing the cremated remains of the deceased, either set upright or laid on its side. In many cases the ash-urn was the only vessel to be placed into the tomb pit, often with the reused base of another pot (normally a skyphos, lekanis, krater, or amphora) serving as its lid. In some cases the broken body fragments of another vessel, usually a pithos but sometimes an amphora, were placed over the ash-urn as a covering, while above this, in the case of tombs encountered intact, a medium-size stone was laid flat in order to seal the tomb. In a few instances, an open vessel, most commonly a lekanis, was placed upside-down over the ash-urn as a covering (**fig. 14**, Tomb 51). In the majority of tombs the ash-urn contained the cremated remains of one person, but in a number of cases the remains of two or more individuals were deposited in a single ash-urn. The ash-urns of Tombs 58 and 103 contained at least two adults each (cf. Tomb 124), but in the case of many other cremation tombs the number of individuals was impossible to determine given the poor state of preservation. The ash-urns of Tombs 83, 84, and 123 each contained the cremated remains of an adult and an infant (see appendix A). In the case of Tomb 112 two ash-urns were placed in the same tomb pit, and in Tomb 118 two, and possibly three, ash-urns shared the same pit.

In tombs where the ash-urn was laid on its side there was no general rule observed concerning orientation. The mouth of the vessel faced east in Tombs 31 and 82 (cf. Tomb 80); west in Tombs 41 and 77; NNE in Tombs 56 and 68; south in Tomb 55; SSE in Tombs 74, 75, 81, and 113; and SW in Tomb 38. In two cases only, Tombs 57 and 96, the ash-urn was placed in a more or less upside-down position, whereas for the remaining tombs the vessel was set upright or in a slightly tilted position. In many tombs a second vessel, most commonly a handmade jug, was placed upright beside the ash-urn; in a few tombs several vases were thus placed around the ash-urn, but never more than three or four. Offerings other than pots, whether encountered in the ash-urn or in the fill of the tomb pit, were rare.

With the tomb pot or pots having been set in place, the pit, in the case of tombs located outside the area of the Early Iron Age cutting, was filled with either bedrock chips or larger, fist-size stones hewn from the natural rock, sometimes with an interleaving of earth. In tombs in the area of the cutting the fill normally comprised loose-textured blackened earth representing remains of the pyre. In the latter, burned sherds were normally recovered, and sometimes a small quantity of cremated human bone. This indicated that in such cases the process of collection of the cremated remains in order to deposit them into the ash-urn was not thorough; this aspect of the funerary ritual is fully discussed in appendix A. Rarely, as in the case of Tomb 105, was the pit filled with earth. Few tombs were sufficiently well preserved to determine the exact type of tomb covering, but, as already noted, a single stone was normally laid flat over the tomb, although seldom covering the tomb pit entirely. Occasionally, several stones were used (cf. Tomb 111), many in some cases (cf. Tomb 112), while in others a variety of small or medium-size stones (either schist, limestone, granodiorite, conglomerate, or any admixture of the above) were set around the ash-urn in order to protect it (cf. especially Tombs 25, 81, 109). It would have been above these cover stones that the presumed markers were placed, none of which have survived. There was nothing at Torone resembling the heavy cairn of rocks piled over the inhumations of the Early Iron Age cemetery at Tsaousitsa (Casson 1923–25:3). In a few cases (notably Tombs 28, 105) a more substantial body fragment of a pithos was used to cover the ash-urn and pit, and in the case of several tombs broken fragments of pottery, almost invariably of handmade vessels, were used as chocking sherds in order to better set the ash-urn, and other tomb pots, in place (cf. Tombs 47, 70, 87, 95, 104).

Variations on this basic system were exceptional. Apart from the cremation cist tombs discussed below, the only variation is Tomb 89, which, although in a poor state of preservation, evidently comprised the large body fragment of a pithos (**T89-1**), not the complete pot, as container for the cremated remains and thus it resembles the

Pithos Inhumation Tombs 1 and 12. The occurrence of ash-urns placed into tombs in a semibroken state, normally with damaged bases or handles, and sometimes vessels actually mended in antiquity, is well attested at Torone, but in no other case was only a body fragment employed as ash-urn (Tomb 89 also represents the only instance of a pithos—or fragment thereof—employed as ash-urn). Tomb 110 was also exceptional in that the ash-urn, or presumed ash-urn (**T110-1**), was itself subjected to fire.

The cremation cist

Although, strictly speaking, cremation cists are urn cremations, the rarity and hitherto exceptional nature of this type of tomb warrants its separate treatment here. There are only two examples: Tombs 102 and 104. Essentially, both were cremations that were set in a pit and subsequently enclosed within a stone-constructed cist. Tomb 102 was partially dismantled for the interment of Inhumation Tomb 15 (see above), which was preserved intact. Tombs 102 and 104 were located within the area of the cutting, both yielded a good quantity of fire-affected sherds, and both may be dated early (Early Protogeometric). A larger than normal pit was cut into bedrock, into which was placed the ash-urn (**T104-1**, a belly-handled amphora; **T102-1**, a krater) and the pits were filled with remains of the pyre (in the case of Tomb 104 the enormous krater **T104-2** was placed upside-down over the ash-urn). The tombs thus arranged were subsequently enclosed within cists, which, in the case of the better preserved Tomb 104, was built of four worked slabs of schist set on edge to define a square approximately 0.60 m to the side and covered by a fifth slab. Although cist tombs for inhumations are well known throughout the Greek world at this time, the only similar urn cremations within cists are those recently excavated at the nearby cemetery of Koukos at Sykia (Carington Smith and Vokotopoulou 1988; 1989; 1990), and perhaps a few examples in Crete (Maria Liston, personal communication). It is worth stressing that although some of the Attic "trench-and-hole" cremation tombs are more boxlike, the Athenian system is notably very different (Styrenius 1967:29–36; Popham, Sackett, and Themelis 1979–80:200, 210, pl. 202d–f).

The pit grave (inhumation)

There are thirteen inhumation pit graves: Tombs 2–8, 10, 11, and 13–16. These were simple shallow cuttings normally into rock (Tombs 2, 3, 4, 5, 10, 11, 13, 14, 16), sometimes into deposit type 4 (Tombs 6, 7, 8, 15). In the case of Tombs 6, 7, and 8, the rock in the vicinity had been previously leveled as part of the large Early Iron Age cutting (**fig. 17**), and the tomb pits were subsequently dug through the earth of deposit type 4 (as were all the inhumation tomb pits in the Early Iron Age cutting) and the inhumations placed on the flat surface of the natural rock below; the latter was not subsequently reworked as it was for Tombs 5, 10, 11, 13, 14, and 16.

Most of the pits were roughly oval to rectangular in shape, with the shorter ends usually slightly curved, and normally only fractionally larger than the body of the deceased placed within; only the pit of Tomb 5 was somewhat larger and more irregular (**fig. 37a**). The edges of the pit of the poorly preserved Tomb 4 could not be determined, and in the case of Tomb 2 the rock-cut part of the pit may have been smaller than the overall pit dug into earth.

Of the thirteen tombs of this type, eleven contained single adult or child (but never infant) inhumations, whereas Tombs 5 and 16 each contained two or three individuals. In the case of Tomb 5 three skeletons, slightly disturbed, were encountered one on top of the other. In Tomb 16 the grave was reopened, the bones of the earlier inhumation gathered and neatly placed to one side of the pit, and the later inhumation interred. In most cases the body of the deceased was laid out in a fully extended supine position, although the possibility of a contracted position, which seems unlikely, has been noted in the case of Tomb 2 (see chapter 3).

The orientation of tombs varied, even though there was a tendency to lay out the dead SE–NW, with the head toward the SE (Tombs 6, 7, 10, 11, 13, 14, and the later skeleton of 16); Tombs 2 and 3 were oriented SE–NW, but with the head toward the NW; Tomb 15 and perhaps also Tomb 4 were oriented SW–NE, head to the SW; all three skeletons of Tomb 5 and that of Tomb 8 were basically oriented east–west, heads to the west. The orientation of the inhumation burials is presented sche-

matically on **figure 197**. It is interesting to note the similar orientation of Tombs 2 (a child or adolescent) and 3 (a child), and the fact that the two pithos inhumations, each of which probably contained a child aged about 6 years at death, may have been similarly oriented, although it is important to stress that the orientation of both is uncertain. If the orientation of Tombs 1 and 12 as given on **figure 197** is correct, then consequently, the orientation of the majority of the children inhumed in the Terrace V cemetery clusters in the lower right quadrant, whereas the orientation of the majority of adults is in the upper left. This observation did not hold true for all tombs, however: the orientation of the adult in Tomb 8 fell precisely between those of Tombs 1 and 12 on the one hand, and those of Tombs 2 and 3 on the other.

The poor state of preservation of Tombs 2, 3, 4, 8, and 16 was such as to leave no surviving trace of a tomb covering.[16] The best preserved, and most substantial, covering was that of Tomb 15, which consisted of a number of flat slabs, mainly schist, laid neatly in line over the skeleton (**pls. 110–111**); it was on one of these slabs that the ashurn of the earlier Tomb 102 was placed. Further to the north, Tomb 10 had at least three flat stones laid over the cranial region of the skeleton (**pl. 95a**) but no cover was encountered over the rest of the body. Similarly, in the case of Tombs 13 and 14 stones were revealed over the upper parts of both inhumations but none over their lower bodies (**pls. 101–104**).[17] No tomb covering was encountered for Tomb 11, and in the case of Tomb 5, although no covering was preserved over the grave itself, a number of stones were found on the higher bedrock immediately to the west, perhaps part of the post-Byzantine deposit type 2 but possibly representing the remains of a displaced stone covering. As already noted, in Early Iron Age Tsaousitsa inhumations in simple pits were covered by a cairn of stones, believed by the excavator to have been piled over the body to "preserve them from wolves" (Casson 1923–25:3). There was no such evidence at Torone, and the general dearth of suitable stone on Terrace v would appear to preclude any such cairns.

The situation with the fairly well-preserved Tombs 6 and 7 was interesting. That there was no stone covering in the case of the former was clear from the location of the later cremation Tomb 96, which overlay the inhumation but caused no damage to it (cf. the location of Tomb 97; if Tomb 96 represents an earlier cremation lifted and replaced above Inhumation Tomb 6, then it is clear there was never any stone covering). Similarly, no trace of a stone covering was observed for Tomb 7, although here an added feature was the large fragment of the pithos **T7-1** placed under the cranial region of the deceased as a sort of bedding or cushion, in much the same way as the larger pithos fragments were used in Tombs 1 and 12. Significantly, although the lower jaw (mandible) of the skeleton of Tomb 7 was preserved in situ, along with the articulated upper vertebrae, no trace of the upper jaw and cranial vault was preserved. This raised the possibility that the skull may have been intentionally severed or removed. Although the skull was probably dislodged by later disturbance (see chapters 2 and 3), the possibility of a severed or removed skull cannot be categorically dismissed. Boardman (in Kurtz and Boardman 1971:193) notes the case of the missing skulls at Myrina (cf. Pottier and Reinach 1888), as well as for some of the western colonies, and suggests the possibility that these were burials of visitors, part of whose body (the skull) was returned home! (For earlier burial customs in the Near East involving the removal of the upper cranium see Marinatos 1973:3–18, especially 8–9; on the subject of disturbed burials generally see Parrot 1939). Moreover, a greater than normal quantity of loose-textured dark-colored earth surrounded this inhumation indicating some form of decayed organic cover, conceivably wood and perhaps little more than branches, but no evidence of a constructed coffin. Similar dark earth was noted to a lesser degree in most of the better preserved inhumations indicating the presence of some form of organic material, most reasonably timber or cloth.[18] The use of wood in tomb contexts other than as coffins, whether in the form of planks, logs, or branches, has been noted at Lefkandi (Popham, Sackett, and Themelis 1979–80:198–199; cf. Bessios and Krachtopoulou 1994 for Macedonia), and cloth shrouds are well represented in Late Geometric figured vase-painting (Ahlberg 1971:40–42, 55–63). Both Rohde (1925:209, 360) and Lawson (1910 [1964]:498–

499) discuss the use of olive foliage for the dead, whether on the bier that conveyed the deceased to the grave or on the funeral pyre.

The use of cloth in tombs is elsewhere indicated or suggested by the disposition of dress fasteners, such as fibulae, pins, and buttons (Mylonas 1948:73; cf. Iakovides 1977:113–119). The wrapping of cremated bone is well attested in Homer (*Iliad* 24, 770–804; see further Wace and Stubbings 1962), although no trace of such has been encountered in Torone. The discovery of the purple and gold cloth shrouding the cremated bones in the so-called tomb of Philip II provides a good illustration of the practice (Andronikos 1977b: color pl. 1; 1987:195, figs. 156–157). A similarly useful and earlier illustration is the decorated cloth inside the cinerary-urn of the burial shafts in the Protogeometric Toumba building at Lefkandi (Popham, Sackett, and Coulton 1993: pl. 17). Further, the necessity of a bier to transport the deceased to the site of burial should not be overlooked; this was perhaps little more than a simple plank of wood or stretcher of cloth, which may or may not have been buried with the dead (for biers and coffins in Mycenaean and Late Minoan tombs see Hägg and Sieurin 1982:177–186; Vermeule 1972:301, 349, n. 11). Apart from a thin layer of bedrock chips in most of the pit graves, no other type of intentional flooring was encountered.

The cist grave (inhumation)

The cist tomb, so common in the Greek world during the Early Iron Age (Desborough 1965:216–219; 1972:268–277, fig. 28; Snodgrass 1971:140–212, figs. 66–67; Dickinson 1983:56–57; see further Styrenius 1962:121; 1967:161–162; Sandars 1964:261; Deshayes 1966:241–243; Sourvinou-Inwood 1973:221), is exceedingly rare at Torone. Apart from Tombs 102 and 104 being urn cremations in stone-constructed cists (see above), only one cist grave, Tomb 9, was found. Oriented SE–NW and measuring approximately 1.70–1.80 m in length, the cist was constructed of thin worked slabs of schist set on edge and partially covered by similar stones laid flat; the worked surface of the bedrock served as the floor. The tomb contained the inhumed remains of four individuals found in virtual disarray. There was, however, sufficient articulation noted among the various bones to indicate that most, if not all, were primary burials and that the tomb had been opened on several occasions in antiquity for the interment of the later burials, which accounted for the disturbance caused to the earlier skeletons. The possibility, however, of at least one of the inhumations representing a secondary burial, although unverified, cannot be ruled out. Evidence for secondary inhumation elsewhere in Greece at this time is negligible,[19] and even during the Christian era when the practice of exhuming skeletons and placing the remains in charnel houses becomes more common, it remains difficult in the case of larger, multiple tombs to distinguish between a secondary burial and one disturbed. This difficulty was particularly noted in the case of some of the larger stone-constructed multiple tombs on Terrace IV at Torone of Late Roman date (see Papadopoulos 1989b; cf. H. S. Robinson 1959:121; Catling and Smyth 1976: 25–47). The length and rectangular shape of Tomb 9, which was consistent with the more common pit graves, suggests it was originally intended for a single adult inhumation (the average internal length of the fifty-nine cist graves excavated at Lefkandi was 0.75–1.00 m: Popham, Sackett, and Themelis 1979–80:197).

The pithos grave (inhumation)

Another rare variation at Torone is witnessed by only two examples, Tombs 1 and 12, both encountered in a rather poor state of preservation. In the case of Tomb 1 no human bone was preserved in situ, but fragments of unburned human bone, evidently of a child, were noted in the immediate vicinity (see appendix A). In the case of Tomb 12 only a small quantity of bone of a child aged ca. 6 years at death was encountered (a human tooth found in the vicinity of Tomb 1 was probably of a child aged 6+ years at death). In both cases it was evident these tombs were not pithos graves in the normal sense—that is, where a complete or near complete pithos was used as a burial container; rather, they were variations of the pit grave, where a pit was dug through earth and partially into bedrock and subsequently lined by a large fragment of the body of a pithos, not a complete vessel, on which the deceased was laid. A partial cover of small stones was noted over Tomb 12 (see **fig. 31c**, east scarp). Although it was not possible to deter-

mine the exact orientation of the bodies, it appears both were oriented roughly east–west, with Tomb 12 slightly more SE–NW. Similar to these was cremation Tomb 89 (see above), where a body fragment of a pithos was used as the container for cremated bone, and also Tomb 7 where a large rim fragment of a pithos was laid below the cranial region of the deceased. Although pithos graves are not uncommon during the Bronze and Early Iron Ages[20] and are prominent in the Early Iron Age tumuli at Vergina (Petsas 1961–62a:218–288; Andronikos 1969:164; Radt 1974:101), I know of no exact parallel for pithos fragments used as a bedding or lining for the tomb.

ANALYSIS OF TOMB CONTENTS

The following notes on tomb contents are on the basis of tomb types (for the widely differing reasons for the offering of objects to the deceased, or for the placement of objects in the grave, see especially Nilsson 1955:40–42, 174ff, 374ff, 714ff; Dodds 1951:136; Kurtz and Boardman 1971:206–217; for offerings generally see Stengel 1910; Eitrem 1915; Burkert 1972; Kurtz 1984:314–328). The analysis of tomb contents in the light of age and sex identification is considered more fully below.

Inhumations (pit, cist, and pithos graves)

With the exception of those possibly displaced, there were no offerings encountered in Tombs 2–5, 8, 14, and 15, although of these only Tomb 15 and perhaps Tomb 5 were sufficiently well preserved as to make it fairly certain that the grave was originally empty of *kterismata*. In Tomb 11 only the fragments of a bronze finger ring were found in the tomb pit fill, and in Tomb 16 only the fragmentary bronze fibula **T16-1** was encountered among the piled-up bones of the earlier inhumation. Similarly poor in offerings were the two pithos graves, with only the small handmade kantharos (**T1-2**) clearly associated with Tomb 1; the jug **46** was perhaps displaced from Tomb 12. Only one pot (**T9-1**), broken and beyond restoration, was found in the cist, Tomb 9.

Of the remaining tombs (Tombs 6, 7, 10, 13), pots normally thought to contain food, drink, or oil (Andronikos 1968:92) were deposited in all four, with jewelry and other small finds also found in Tombs 7 and 10. A handmade jug (**T6-1**) was placed immediately to the right of the cranium of Tomb 6, and a whetstone (**T6-2**) was found directly over the left temple region of the skull (**fig. 24c**); the tomb pit also yielded the leg fragment of a tripod cauldron **T6-3**. A similar tripod leg fragment, **T7-4**, was found over the right thigh of Inhumation Tomb 7; the handmade kantharos **T7-2** was placed upside-down over the left elbow and a handmade jug (**T7-3**) placed upright beside the left knee (**fig. 24d**). In the case of Tomb 10 (**figs. 32c, f**), the handmade jug **T10-2** and kantharos **T10-3** were placed next to the left foot and lower leg of the deceased, and along with these was the fragmentary cup/kyathos **T10-4**, perhaps offered in a broken state. Fragments of two more kantharoi (**T10-1**, **T10-1a**) were found level with the three cover slabs of the tomb, with scattered fragments also encountered slightly to the north of the tomb pit. These kantharoi were perhaps used for pouring libations, or for some other ritual after the tomb was sealed (cf. Andronikos 1968:94–95). A wheelmade kantharos (**T13-1**) and handmade jug (**T13-2**) were placed in the area over the left hand and forearm of Inhumation Tomb 13. It would seem, then, that there was something of a tendency to place pots deposited in tombs as *kterismata* toward the lower parts of the body of the deceased, or by the head. Wells (1976:22) notes the general pattern of pots deposited by either the head, feet, or both among the Asine inhumations and cites Protzmann's unpublished dissertation (1966:150–151), where it is noted that this appears to be common practice during the period (cf. Styrenius 1967:38, 100; Kurtz and Boardman 1971: 38, 204), although it is perhaps worth stressing that the range of possibilities of where a pot may be placed in relation to the body of the deceased is not infinite.

As for offerings other than pots, the most richly furnished inhumations were Tombs 7 and 10, although even here *kterismata* were comparatively meager. In Tomb 7 a bronze spiral ornament (**T7-6**), probably a hair ring, was found on the pithos cushion where the missing cranium should have been, a bronze anklet was worn on each leg (**T7-7**, **T7-8**), and a terracotta spindlewhorl, bead, or button (**T7-5**) was found near the outstretched fingers of the left hand. A similar, but somewhat

larger, terracotta (**T10-5**) was found beside the skull of Tomb 10 and, as such, the possibility of **T7-5** and **T10-5** being buttons for the attachment of clothing seems unlikely in both cases (cf. Mylonas 1948:73; Iakovides 1977:113–119). In addition, the deceased of Tomb 10 appears to have worn a bronze hair, or ear, ring (**T10-8**), as well as a bead of glass paste and one of bone (**T10-6**, **T10-7**). It is therefore clear that some, but not all the objects other than pots found in tombs were worn by the deceased (cf. Catling 1985:19–23). It is worth noting here that a very small quantity of seashell material was recovered from the fill of Tombs 5, 6, 10, and 13 (see below).

Urn cremations

The contents of tombs are tabulated on **table 4.1**, and a quantitative representation of shapes used as ash-urn is provided in **fig. 198**. The use of specific pot shapes for particular functions as tomb furniture is a feature of the urn cremations (cf. Scheibler 1983:29–44; Orton, Tyers, and Vince 1993:5, 11, 192). The preferred shape for use as ash-urn was the wheelmade amphora (of which there were forty-one examples: twelve belly-handled, eight probably neck-handled, ten belly-and-shoulder-handled, eleven undetermined type), although many other shapes were also popular. Common as ash-urn among the wheelmade vessels was the skyphos (eighteen of local manufacture, one [**T127-1**] imported), the amphoriskos (sixteen local, two [**T47-1**, **T50-1**] imported), and the krater (eleven examples, all locally made); the "amphora/pyxis" (**T45-1**) and the wheelmade two-handled jar (**T17-1**) were also used. Among the local handmade vessel forms the most common as ash-urn was the two-handled jar (eight belly-handled, two neck-handled, one smaller variety), followed by the pitharion (seven examples), the cup/kyathos (three examples),[21] and the one example of the pithos body fragment (**T89-1**) already discussed. Of imported vessels, in addition to those already noted, a wheelmade jug (**T72-1**), an open vessel (**T93-1**), and the red-slip stemmed kylix (**T111-1**) were used as ash-urns, as were three of the four imported handmade vessels (**T54-1**, **T97-1**, **T112-1**) found in tombs (for the use of various shapes as ash-urns in Crete see especially Brock 1957:2–3; Desborough 1972:226–227). Common Early Iron Age shapes not used as ash-urn were the wheelmade lekanis, the handmade jug, the kantharos (the single example of a wheelmade kantharos, **T13-1**, saw service as *kterisma* for Inhumation Tomb 13), the bowl with square-cut handles, and the tripod cauldron. Hence, although a variety of shapes of both open and closed forms were employed as ash-urn, others were excluded. It is important to note that the size of the vessel itself was evidently not prohibitive, as both very large vessels (see for instance **T104-1, T48-1, T116-1**) and diminutive ones (for instance **T112-1** and many of the amphoriskoi) could be used as receptacles for cremated remains. In this respect the situation at Torone contrasts with that at Athens where the amphora was almost always used as ash-urn (Desborough 1952:5; Styrenius 1967:87–121; Kurtz and Boardman 1971:37, 53; cf. the few urn cremations in Popham, Sackett, and Themelis 1979–80:200, but contrast the situation in Crete [Desborough 1972:226–227], where different shapes could be used).

In the case of cremation tombs, where the state of preservation was such that the system of tomb covering could be determined, there was a general preference for particular shapes serving as lids/covers (for the covering of tombs with pottery in Athens see Styrenius 1967:94). Commonly used as lids were the broken bases of pots, normally a single fragment, chipped and worked around the edge in order to fit the mouth of the ash-urn. Of these **T20-2**, **T21–2**, and **T26-2** are lekanis bases; **T47-2** is the base of a black-slip krater; and **T51–2**, **T99-2**, and **T100-2** (cf. **T63-2**) are amphora bases. In many instances, a broken body fragment of a large pot was placed over the ash-urn as lid or generally over the tomb as covering; to this end body fragments of pithoi were, naturally enough, most favored (**T24-2**, **T25-2**, **T28-2**, **T46-2**, **T105-2**, **T107-2**, **T108-2**, **T114-2**), although amphora fragments (**T44-2**, **T51-4**, **T118-2**) and pitharion fragments (**T52-3**; cf. **T22-3**, **T53-2**, **T118-4**) could also be used (cf. the use of the handmade tripod cauldrons in Tombs 99 and 123). In the case of Tomb 27, the very small body fragment of a pithos, **T27-2**, was used as a setting on which the ash-urn was placed.

The other popular method of covering an ash-urn was to place a whole pot, invariably of open

form, upside-down over the mouth of the ash-urn that was set either upright or on its side.[22] The most common shape used in this capacity was the wheelmade lekanis (**T41-2**, **T47-3**, **T51-3**, **T81-2**, **T83-2**, **-4**, **T124-3**), a shape never employed as ash-urn. The fact that lekanides were never used as ash-urns must have been a conscious distinction based on shape, as their size and proportions are not unlike skyphoi. Other shapes used to the same end include the handmade kantharos (**T75-3**), the handmade bowl with square-cut handles (**T67-2**) (neither the handmade kantharos nor the bowl with square-cut handles were ever used as ash-urns), an imported handmade bowl (**T21-3**), and also the only two pendent semicircle skyphoi found in the cemetery (**T77-2**, **T82-2**). Perhaps the most extraordinary example of a vessel placed upside-down over an ash-urn was the large black-slip krater **T104-2** in Tomb 104. Curiously, the only vessel found in any tomb that appears to have been made specifically as a lid (**T88-2**) was probably too small to serve as lid for the ash-urn **T88-1**. Particularly noteworthy is the case of Tomb 51 (**figs. 14, 22; pls. 155–157**) where most of the methods used to cover ash-urns were encountered in the one tomb. The subsequent use of stone to seal a tomb has been outlined above, but worth noting is the worked schist disk **T28-2** used specifically as lid for the ash-urn of Tomb 28.

Offerings of whole pots placed into the tomb pit were encountered in at least twenty-seven cases (**table 4.1***;* cf. Andronikos 1968:92; see above for pots in inhumations), although in 66 of 118 urn cremations there were no pots in the tomb beyond the ash-urn itself. Including lids/covers, but excluding burned sherds, no tomb group comprised more than five pots. The number of pots placed in individual tombs is shown schematically on **figure 199**, which includes both cremation and inhumation burials. The most common shape deposited as *kterisma* was the handmade jug with cutaway neck: **T21-4**, **T26-3**, **T38-2**, **T41-3**, **T42-2** (cf. **T42-3**), **T52-2**, **T56-2**, **T58-2**, **T60-2**, **T67-3**, **T68-2**, **T70-2**, **T73-2**, **T74-2**, **T75-2**, **T77-2**, **T80-2**, **T81-4**, **T82-3**, **T84-2**, **T84-3**, **T86-2**, **T122-2**, **T124-2**, **T125-2**, and **T81-3** (cf. **T43-2**, **T88-3**). Other shapes were rare—in Tomb 82 two handmade kantharoi (**T82-4**, **T82-5**) as well as the jug **T82-3** were offered, in Tomb 69 the only example to date of a double vase (**T69-2**) was found, and in Tomb 22 the wheelmade amphoriskos **T22-2**, of Euboian origin, was placed on its side next to the ash-urn (the distribution of offerings in contemporary Attic graves is tabulated and discussed in Styrenius 1967:38–48, 68–71, 80–84, 99–110).

The pairing of vases deposited as *kterismata*, considered by some scholars to have ritual significance (Young 1939:20, 50, 55; Kübler 1943:5; 1954:31; Åkerström 1943:66, 70, 138, 152; Styrenius 1967:113), was observed in three instances: Tombs 81, 82, and 84, all located close to each other and dating to the latest stages of the period of use of the cemetery. Of these three tombs, Tomb 81 was that of a single adult (described as not very old), the cremated remains recovered from Tomb 82 were nondiagnostic, whereas the ash-urn of Tomb 84 contained the cremated remains of probably two individuals, an adult and an child (appendix A). The pairing of vases in the case of Tomb 84 may therefore be for the two individuals cremated, though such a pattern was not established for the cemetery.

As for what these vases carried, if anything, there is little *direct* evidence from the cemetery itself. The evidence, primarily literary, for offerings of food, drink, and oil in the form of whole pots placed into both inhumation and cremation tombs in the Early Iron Age has been collected by a number of scholars (see especially Andronikos 1968:92). Although evidence for various foods in the form of carbonized and noncarbonized seeds was abundant in those tombs where substantial remains of the pyre were deposited into the tomb pit (see appendix D), information on what the pots themselves carried was lacking, especially as there has been no residue analysis carried out on any of the Torone Early Iron Age pottery. The soil that had accumulated inside the majority of better preserved pots (other than ash-urns) was water-sieved but yielded no obvious evidence for contents. Only in the case of the handmade jug with cutaway neck (**T70-2**) from Tomb 70 were any organic remains retrieved. In addition to a very small quantity of charcoal, **T70-2** yielded six seeds of sun spurge (*Euphorbia helioscopia*) and one possible seed of dwarf spurge (*Euphorbia* cf. *exigua*); all seven seeds were noncarbonized and all are considered modern intrusions (appendix D).

In addition to these offerings and to vessels or fragments used as lids/covers, associated sherd material (not affected by fire) was encountered in several other instances (**table 4.1**). In the case of disturbed tombs many of the recovered fragments were no doubt displaced *kterismata*, and in some cases fragments of common handmade shapes were used to chock or set the ash-urn more firmly in place (see especially **T47-4**, **T70-3**, **T95-2**, **T104-3**, and Tomb 87). In a number of tombs, however, the recurrence of handmade tripod cauldrons was noteworthy since such vessels were always found in a broken state (never complete), and usually in positions that were neither consistent with pot offerings nor with lids/covers, indicating some other function. Their possible uses in terms of ritual are considered more fully below (see especially Tombs 99, 121, 123, and cf. Tombs 25, 47, 70, 101, 104, 113–118, and Inhumation Tombs 6, 7; cf. Kurtz and Boardman 1971:38–39). It is worth adding that all the tripod cauldrons that may be dated on the basis of associated finds belong to the earlier part of the period of use of the cemetery.

There was also ample evidence, especially from well-preserved tombs, that a good many ash-urns and pot offerings were deposited into tombs in a broken, damaged, or worn state (especially **T22-1**, **T26-1**, **T26-3**, **T32-1**, **T40-1**, **T67-1**, **T89-1**, **T90-1**, **T93-1**, **T113-1**). In some cases the damage was confined to the handles or base of the vessel, and in other instances pots previously broken and mended in antiquity were also used (**T20-1**, **T43-1**, **T67-2**, **T79-1**, **T86-2**, **T116-1**, **T129-1**; cf. also the burned sherds **T101-15**, **T113-7**). In addition to these, a number of open vessels displayed clear signs of use/wear as a result of cleaning. Some of the better examples of use/wear as a result of standard use and cleaning, conceivably with sand and water—or even pumice, as has been suggested for the cooking wares at Zagora (Richard Green, personal communication)—include **T13-1**, **T23-1**, **T93-1** (an import), **T98-1**, **T102-1**, **T106-1**, **T108-1**. The list is probably greater, as it does not include more heavily weathered or fire-affected pottery (full details are presented in chapter 3), and it is worth noting that some vessels, such as **T103-1**, were placed in the tomb in a more or less pristine state. The examples of use-wear indicate that an older, well-worn pot could suffice as container for cremated bone (cf. Iakovides 1969–70, vol. 2:64). In the majority of cases the damage is best described as wear, such as use or cleaning; a few examples may represent damage sustained during the production and/or firing of the pot. There is no clear evidence at Torone of a pot having been intentionally broken, or "killed," as part of the funerary ritual.

INHUMATION AND CREMATION TOMBS

In both the inhumation and cremation tombs the quantity and variety of offerings other than pots was not great. The distribution of pottery deposited in tombs has already been discussed (**fig. 199**). Offerings other than pottery could be deposited either inside the ash-urn, along with the cremated remains, or in the tomb pit. Among the former were a number of bronze objects, probably items of jewelry worn by the deceased at the time of cremation or burned as part of the rite, which were misshaped by burning (**T18-2**, **T58-3**, **T124-4**, and cf. **T104-7**, **T102-7**, the latter encountered in the tomb pit fill).[23] Such minuscule fragments are often overlooked in excavation reports, and the examples at Torone were recovered because the contents of all the ash-urns were carefully sieved. Other objects deposited inside ash-urns but evidently unaffected by fire include the fragmentary worked bone handle **T38-3**; an iron knife found together with a whetstone, **T52-4** and **T52-5**; an arrowhead and blade, both of iron, **T56-3** and **T56-4**; a pierced terracotta disk and bronze spiral ornament, **T69-3** and **T69-4**; and an amber bead, **T75-4**. From the tomb pit fill of the most richly furnished cremation, Tomb 104, came two whetstones (**T104-4**, **T104-5**); the shaft of a bronze pin, probably of a fibula (**T104-8**); and two fire-affected fragments of bronze (**T104-6**, **T104-7**). Terracotta spindlewhorls, beads, or buttons (**T46-3**,**T51-5**) were found in the pits of Tombs 46 and 51, a bronze spiral ornament (**T102-6**) was encountered in the fill of Tomb 102, and two almost complete bronze fibulae (**T115-2**, **T115-3**) were associated with Tomb 115. The distribution within the cemetery of terracottas is presented schematically on **figure 200**, the bronzes on **figure 201**, and the other grave goods (iron, worked bone, amber/glass, whetstones, stone disks) on **figure 202**. In the majority

of cases no clear pattern of distribution emerged, except that there was something of a tendency for bronzes to be found in earlier tombs, although this was by no means a rule.

AGE AND SEX IDENTIFICATION

Dr. J. H. Musgrave has studied the human remains from the majority of tombs and the following identifications of age and sex are based on his conclusions (see appendix A). The identifications of sex in the case of some of the cremated remains must be viewed as tentative (for the difficulty of discerning sex in the case of cremated human remains see appendix A; see further Paidoussis and Sbarounis 1975:132).

Infant and child graves

The distinction between infants and children/adolescents disposed of in a cemetery is not always clear and the dividing line between them often arbitrary. In ancient Greece, however, the distinction between the various phases of life can sometimes be quite precise. In Classical Athens, for example, when a child was no longer a baby, at the age of three, it was presented to the family clan, the phratry, and subsequently participated in the Choes festival for the first time that same year (van Hoorn 1951; Burkert 1972:221, with references; Hamilton 1992; see also Green 1971). The essential stages in the development of a young Athenian are recorded in an inscription (*IG* II/III^2:1368.130; see Burkert 1972:221, n. 28; Papadopoulos 2000b:111) dating to the second century A.D.: γάμων, γεννήσεως, χοῶν, ἐφηβείας ("marriage, birth, choes, adolescence"). Add death as the last in a long chain of social transitions (Metcalf and Huntington 1991:108), as well as death before choes (or amphidromia), then an interesting pattern emerges in the study of Greek burial customs. Such a distinction between "infant" and "child" at the age of three can be conveniently applied to the Terrace V cemetery, as there is something of a division between those diagnostic remains of infants aged less than 2 1/2 years at death and those aged between five and 17 years. The phases of birth, choes, adolescence, marriage, and death have a very particular social meaning, and discerned differences in the manner of disposal of individuals in any of these categories should be a priority of archaeological investigation. The list of infants and children/adolescents interred in the Terrace V cemetery is given in **tables 4.2** and **4.3** (in all cases determination of sex was not possible).

Table 4.2. Infant tombs

Tomb 21	7–8 months
Tomb 29	Less than 2 1/2 years
Tomb 43	"Baby"
Tomb 57	Less than 1 year
Tomb 87	"Baby"
Tomb 123	Fetus/neonate (one of two cremations)

Table 4.3. Child tombs

Tomb 1?	Perhaps ca. 6 years?
Tomb 2	13–14 years
Tomb 3	ca. 7 years
Tomb 5	Individual 2 ca. 17 years
Tomb 5	Individual 3 ca. 10–12 years
Tomb 12	ca. 6 years
Tomb 28	Less than 12 years
Tomb 36	Child or adolescent
Tomb 44	ca. 8–10 years
Tomb 83	Child? (one of two cremations)
Tomb 84	Child or infant (one of two cremations)
Tomb 112 Ash-urn I	ca. 5–7 years
Tomb 112 Ash-urn II	Child less than 12 years
Tomb 126	Child less than 12 years?
Tomb 133	Adolescent 12–17 years?

The distribution of adults as opposed to infants and children in the Early Iron Age cemetery at Torone is shown schematically on **figure 203**. Beginning with the infants aged three years and under, a number of important features emerge to distinguish them from both children and adults. The most obvious feature is the very low percentage of infants, and indeed of children, disposed of in the Terrace V cemetery. The total number of infants accounts for a mere 4.1 percent of the total population of the cemetery, based on a total count of all individuals in the cemetery—that is, twenty-

two individuals in sixteen inhumation tombs and a minimum of 125 individuals in 118 cremation tombs (the population of the cemetery is discussed more fully below). The total number of infants and children represents only 14.3 percent of the population.[24]

Of the six infants discerned, five were disposed of as fully fledged individuals cremated and buried in their own tombs. The fetus or neonate in Tomb 123 was cremated along with a female young adult aged 18–25 years at death, surely the mother who died in pregnancy or during childbirth. In terms of burial custom and funerary rites it is clear, first of all, that infants were cremated and buried, but never inhumed, in the Terrace V cemetery. This may well represent a chronological distinction, rather than indicating any status differentiation as, with the exception of the fetus/neonate in Tomb 123, all the infants were located in the area beyond the Early Iron Age cutting and not one of them can be shown with certainty to date to the earlier stages of the period of use of the cemetery. Apart from this horizontal distinction, which is significant in its own right, there was no obvious pattern in the location of infant cremations within the cemetery ground (**fig. 203**). The fact that none of the infant cremations can be shown to be early suggests that the disposal of infants within the burial ground was prohibited in the earlier part of the period of use of the cemetery. In terms of synchronic differentiation, the most significant distinction is not between individual infant tombs within the burial ground, but rather between infants given formal rites in the Terrace V cemetery and those disposed of elsewhere.

In terms of tomb contents, a variety of shapes were used as ash-urns for infants. A handmade two-handled jar of small variety served as the ash-urn of Tomb 21, and handmade cup/kyathoi (Type 1) were used as ash-urns in Tombs 43 and 57; the ash-urns of Tombs 29 and 87 were both wheelmade amphorai, that in Tomb 87 being a small amphora. Of these shapes, the use of the handmade cup/kyathos is noteworthy. There are only three examples of this shape in the cemetery, all three used as ash-urns (the one example of a handmade cup/kyathos of Type 2 [**T10-4**] was placed as *kterisma* in Inhumation Tomb 10), two of them specifically for infants; the third example, **T66-1**, was placed in the tomb pit on its side and contained only one small fragment of cremated human bone (not analyzed). The details of Tomb 66 were particularly close to those of Tomb 57 and it is possible, if not likely, that it too is an infant cremation. If the latter is correct, then this represents the clearest instance of the use of a particular shape to distinguish age: a sort of *proto-chous* of the Early Iron Age. In Tombs 29, 57, and 87 the ash-urn was the only item placed in the tomb pit. A fragmentary jug with cutaway neck accompanied the ash-urn of Tomb 43, and only Tomb 21 contained any number of pots. The ash-urn of the tomb was covered with the base fragment of a wheelmade lekanis (Type 1), worked in order to serve as lid. The ash-urn was accompanied by a fragmentary jug, probably with cutaway neck (**T21-4**), and by an imported handmade bowl (**T21-3**). There were no small finds other than pots deposited in infant graves, nor was there any clear evidence of animal bone, seashell, or plant remains in any tomb other than Tomb 123, which yielded a small quantity of seashell, although this may equally have been associated with the adult cremated in the same tomb.

The child/adolescent population of the cemetery, that is those aged between ca. five and 17 years at death, is perhaps as high as 10.2 percent of the total population. This figure includes the deceased of Tomb 1, listed as a child on rather spurious evidence, as well as one of the three inhumations interred in Tomb 5 (Individual 2), aged ca. 17 years at death, which might be better classed as an adult. The age identifications of a number of cremated individuals, particularly those of Tombs 83, 126, and 133, are assigned as children or adolescents with varying degrees of certainty, while the younger of the two individuals in Tomb 84 may be an infant rather than a child. Nevertheless, the sample of child/adolescent graves is sufficient to determine several important features both in terms of the horizontal position of child graves within the cemetery ground and distinctions of tomb type and content. Unlike the infants, children/adolescents were both inhumed and cremated, and whether or not this is the result of diachronic change, the pattern is significant. The ratio of child inhumations to cremations is 6:9—that is, about 40 percent of the total number of children/adolescents was inhumed. Of the inhu-

mations the most significant grouping is that to the north of the burial ground, near the Terrace edge (**fig. 18**). Three of the four inhumations in this area are children/adolescents; the fourth, Tomb 4, is probably the inhumation of an adult female. Tombs 2, 3, and 4 are simple pit inhumations, whereas Tomb 1 is a pithos inhumation. The only other pithos inhumation, Tomb 12, was located in the area of the Early Iron Age cutting (cf. the pithos cushion in Tomb 7, also the pithos Cremation Tomb 89). Although the human remains thought to be associated with Tomb 1 are problematic, enough human bone was recovered from Tomb 12 to allow for an age estimate. In both cases the individuals inhumed appear to be children aged ca. 6 years at death. The precise chronology of the four inhumation tombs to the north of the burial ground remains problematic, but all four are probably early (see above). Despite this problem, it is likely that both pithos inhumations are early, and it seems reasonable to conclude that this distinctive form of inhumation was used only early in the period of use of the cemetery, and only for children.

Returning to the four inhumations clustered together in the northern part of the burial ground as a group, it is significant that they are separated from the main group of inhumations in the Early Iron Age cutting, particularly if the two groups are contemporary or near contemporary. The fact that three of the four are children/adolescents must surely be significant, and it is unfortunate that all four were found in such a poor state of preservation; the only *kterisma* clearly associated with any of these tombs is the small handmade kantharos **T1-2** found with Tomb 1. The paucity of *kterismata*, however, need not necessarily be the result of survival, but may well have been intentional. Nevertheless, the most obvious distinction between the three children/adolescents on the one hand and the solitary adult on the other is orientation (**fig. 197**). The exact orientation of Tomb 1 is unclear as no human bone was recovered in situ, but the manner in which the pithos bedding was laid suggested an east–west orientation. The better preserved Tomb 12, although problematic, appears to have had a similar orientation, either east–west or SE–NW, head to the west or NW. The orientation of Tombs 2 and 3 was the same: SE–NW, head to the NW, whereas the adult inhumation, Tomb 4, was clearly distinguished with a SW–NE orientation, head to the SE. It would appear, therefore, that all the child/adolescent graves (including Tomb 5) share a similar orientation, either SE–NW or east–west, head to the NW or west.

In many ways Tomb 5 (fully described in chapter 3) is unique. Within a larger than normal tomb pit two of the three individuals interred were children/adolescents, one aged ca. 17 years (Individual 2), the other ca. 10–12 years at death (Individual 3); Individual 1 is probably a female aged 20–25 years at death. All three skeletons were oriented east–west, heads to the west. This was one of only three multiple inhumation tombs, the other two (Tombs 9, 16) are quite different in many points of detail. Although Tomb 5 contained three individuals, one an adult, and its tomb pit was larger than usual, it resembled many of the child/adolescent graves, particularly in orientation and the paucity of *kterismata*.

There are at least nine cremations of children/adolescents. Of these, Tombs 83 and 84 each contained the cremated remains of a child or infant and an adult, and Tomb 112 was exceptional in containing two ash-urns, both of children, in the same tomb pit (cf. Tomb 118 which contained as many as three ash-urns, all probably of adults, in the one tomb). Tombs 83 and 84 are chronologically among the latest tombs of the cemetery and were located next to each other. Tomb 112, located in the area of the Early Iron Age cutting may be dated early in the period of use of the cemetery. Unlike infants, therefore, children/adolescents could be both cremated and inhumed throughout the period, more or less, of use of the cemetery. In the selection of ash-urns there does not appear to be any clear preference for the use of specific shapes. The ash-urns of Tombs 28 and 36 were skyphoi (Types 3 and 2, respectively); vertical-handled amphoriskoi were used in Tombs 44 and 112 (Ash-urn II); belly-and-shoulder-handled amphorai in Tombs 83 and 84; a small handmade pitharion and a handmade two-handled jar (belly-handled) were used as ash-urns in Tombs 126 and 133, respectively; and a handmade pyxis (**T112-1**) served as one of two ash-urns in Tomb 112. Among these shapes there is something of a tendency toward smaller vessels (the two comparatively larger amphorai in Tombs 83

and 84 were used for double cremations), although this is by no means standard; it should be stressed that similarly small vessels were also used for adults. As in the majority of infant graves, *kterismata* deposited in tombs are not numerous. In the case of Tombs 36, 126, and 133 the ash-urn was the only item deposited in the tomb; in Tomb 112 burned sherds were recovered from the pyre debris placed in the tomb pit, but there were no other small finds. Lids or tomb covers are fairly common: in Tomb 44 a large body fragment of an amphora was used as a cover and the fragmentary lekanis lid (**T83-2**) in Tomb 83 probably originally served as a lid/cover (a similar, but smaller, lekanis rim fragment recovered from Tomb 84 may have once served as a lid/cover, although this could not be proved with certainty). A double cover was used in Tomb 28: the skyphos **T28-1**, which served as ash-urn, was covered by a worked schist disk (**T28-2**), above which was placed the body fragment of a pithos (**T28-3**); the tomb also yielded at least one other sherd (**T28-4**), which was not fire affected.

The only exceptional child/adolescent grave in terms of offerings was Tomb 84, which yielded two handmade jugs (**T84-2**, **T84-3**), recovered in fragmentary state; the tomb also yielded a rim fragment of a lekanis (**T84-4**) and small fragments of a handmade kantharos (not catalogued). The jugs deposited in the tomb represent the only clear instance of the "pairing of vases" in the case of a double cremation; a similar pairing was noted in the case of Tomb 81 (single adult) and Tomb 82 (cremated remains nondiagnostic). In the case of the two other double cremations containing an adult and an infant or child/adolescent (Tombs 83 and 123) no such pairing was observed. In Tomb 123 fragments only (intentionally broken) of as many as four tripod cauldrons were associated with the ash-urn. Consequently, there is no clear pattern of the pairing of vases on the basis of age or the number of individuals cremated.

Organic remains associated with child/adolescent tombs were not common. Seashell fragments were recovered only from Tomb 133 (appendix C) and plant remains in the form of carbonized and noncarbonized seeds were retrieved only from Tomb 112 (appendix D). It should be noted that the latter is the only cremation tomb of children/adolescents in the area of the Early Iron Age cutting that yielded any quantity of pyre debris. No animal bone remains were recovered from any of the child/adolescent tombs. The incidence of faunal and floral material in individual tombs of all ages is discussed more fully below.

Although there are a number of very clear patterns in terms of burial custom for children/adolescents and infants, such as the specific use of pithos burials for children/adolescents, the use of the cup/kyathos as the preferred ash-urn for several infants, as well as certain important chronological patterns, there is also a good deal of variety in the disposal of younger Toroneans. This, coupled with the fact that only a fraction of the child and infant population of Torone received formal burial in an extramural cemetery such as the Terrace V burial ground (see below),[25] shows there is no standard method of burial for children as there was, for instance, in Athens in certain periods (cf. Kurtz and Boardman 1971:36; Desborough 1972: 270). Moreover, some children/adolescents and infants are not differentiated in terms of burial custom in any significant way from adults, a feature that is more prevalent, for instance, in the Argolid (see especially Snodgrass 1971:151–153; cf. Frödin and Persson 1938:129–145; Hägg 1974; Wells 1976:21–23). For other regions of Greece the material is best summarized in Snodgrass (1971:147–176), where differentiation between the location or type of burial for children as opposed to adults is noted in the case of Attika, Thessaly, perhaps the Cyclades, Phokis, and also Eretria, as well as in some of the western colonies. The lack of differentiation between child and adult graves other than in the Argolid is noted for Kos (see further Popham, Sackett, and Themelis 1979–80:203–205).

Adult (male and female) graves

The majority of inhumation and cremation tombs were of adults, including sixteen individuals distributed among twelve inhumation tombs and a minimum of seventy-nine adult individuals among seventy-seven cremation tombs; in the case of twenty-eight cremation tombs the human remains were either nondiagnostic or were not preserved. With regard to the sex distribution of the cremated remains, Dr. Musgrave writes (appendix A:250): "Because it is unwise to place too great reliance upon sex determinations made on fragmentary and

incomplete material, no attempt has been made to estimate sex-ratios. Unreliable data are best not published."

Despite their poor state of preservation and, in certain cases, very fragmentary state, the determination of sex in the case of the inhumation tombs is on a somewhat surer, although not always secure, footing. The breakdown of age and sex determinations of the inhumation tombs is given in **table 4.4**.

Table 4.4. Inhumation tombs.

Tomb	Age at death	Sex
4	—	Female?
5 (Individual 1)	20–25?	Female?
6	ca. 40	Male
7	ca. 30?	Female
8	18–20?	—
9 (West)	Adult	Female?
9 (East)	Adult	Female?
9 (North)	35+	Male?
9 (Immature)	ca. 18	—
10	45 (at least)	Male
11	35?	Male
13	25–35	Male?
14	45+	Male?
15	25–30 (upper limit 35)	Male
16 (Skeleton 1)	ca. 35	Male
16 (Skeleton 2)	20–35	Female

Of the sixteen inhumed adults in twelve tombs, Dr. Musgrave was able to determine the sex of fourteen with varying degrees of certainty; of the eighty-three cremated adults, tentative determinations of sex were proposed for eighteen. Although statistically small (roughly 27 percent of the established adult population), the sample determined on the basis of sex provided a useful control for the interpretation of tomb furniture in relation to sex. On account of the general paucity of *kterismata*, however, the attribution of graves as adult male, female, or even of adult as opposed to child, on evidence other than the anthropological remains highly tenuous (for the problems of attributing graves to sex on the evidence of associated finds, see Popham, Sackett, and Themelis 1979–80:205–207). The distribution of tombs according to sex is shown schematically in **figure 204**.

Identified as male were the individuals in Tombs 6, 10, 11, 13, 15; one of the inhumations in cist Tomb 9; one of the two individuals in Tomb 16; and probably the individual in Tomb 14 and Cremation Tombs 25, 38, 40, 60, 67, 70, 76, 100, 101, and 103, giving a total of eighteen males. Identified as female were Inhumation Tomb 7, two of the individuals in cist Tomb 9, one of the two in Tomb 16, probably one of the individuals in Tomb 5, and perhaps also the poorly preserved skeletal remains in Tomb 4; and Cremation Tombs 19, 24, 27, 47, 49, 51, 63, 75, 84, 104, 122, and 123 (Tomb 123 also contained the cremated remains of an infant), for a total of eighteen females.

Turning to the offerings found in these tombs only, it was difficult to establish consistently recurring or common features on the basis of sex. Items of jewelry encountered in established male and female graves were scanty: one ring with Tomb 11 (male), one hair ring and two anklets with Tomb 7 (female), an amber bead with Tomb 75 (female), and one fibula and two fragments of bronze with Tomb 104 (female). Although the preponderance of jewelry tended to be associated with female graves, such items were too rarely encountered in other tombs to make them sure indicators of sex. It has been demonstrated elsewhere that certain items of jewelry, including fibulae, finger rings, and pins, although more commonly associated with female burials, could also be worn by males (Lorimer 1950:339; Jacobsthal 1956:95; Styrenius 1967:46–48, 70–71, 105–110; Smithson 1968:100, 109; Andronikos 1969:154–161; and generally Higgins 1969:144; 1980:90, 205). In this regard, a number of Torone tombs provide classic warnings. Without anthropological analysis, and following traditional notions of gender and burial, it would be tempting to regard Tomb 10 as female given the presence of a hair ring, a glass paste and a bone bead, as well as a terracotta spindlewhorl, bead, or button, although Dr. Musgrave pronounced the individual as male on the basis of the physical anthropology. Tomb 7, identified by Musgrave as female, yielded the only terracotta spindlewhorl, bead, or button clearly associated with a female (for the association of "spindlewhorls" with female graves see

Styrenius 1967:109–110; Popham, Sackett, and Themelis 1979–80:206). Here it is worth noting that Casson (1923–25:12–14, 21) found a terracotta spindlewhorl in each of Graves 19 and 20 at Tsaousitsa, both of which he regarded as tombs of (male) warriors on account of bronze shield bosses; in both he also found bronze armlets, pottery and, in Tomb 20, a gold plaque. The presence of tools or weapons, long regarded as the surest indication of a male burial (see Styrenius 1967:109–110; Andronikos 1969:154–156; Kurtz and Boardman 1971:53; Popham, Sackett, and Themelis 1979–80:205), also proved inconclusive in the case of Torone (compare various papers in Arnold and Wicker 2001, particularly Crass 2001; Doucette 2001; Hollimon 2001; Weglian 2001). A worked bone handle of an iron blade was found with the male Cremation Tomb 38 (similar objects were also encountered in Cremation Tombs 52 and 56), whereas two whetstones were encountered with the female Cremation Tomb 104 (the occurrence of whetstones only in male graves was a feature discerned already for the period of the Shaft Graves at Mycenae: see Karo 1930–33:223; cf. Mylonas 1972–73, 80–89, 347, tomb Δ, no. 448). Similarly, no pattern was observed with the presence or absence of pot offerings, and because of the long- and well-established tradition of local handmade wares, the placement of "coarse" or handmade pots in a tomb could not be considered as an indicator of sex as has been the case in contemporary Athens and Lefkandi (Smithson 1961:171; cf. Bouzek 1966:65–71; Styrenius 1967: 105; Popham, Sackett, and Themelis 1979–80: 206).

As for the shape of vase used as ash-urn, it was clear that the Athenian rule of thumb of neck-handled amphora for males and belly-handled amphora for females (Desborough 1952:5–6; but contrast Smithson 1961:171, n. 17; Styrenius 1967:99) did not apply at Torone, where most of the commonly used shapes could contain the cremated remains of males or females—and indeed children. Of the human remains recovered from neck-handled amphorai (**fig. 205**) none could be definitely identified as male or female, but in the case of belly-handled amphorai both female (**T24-1**, **T51-1**, **T75-1**, **T104-1**) and male (**T60-1**) remains were encountered. Male and female remains also were recovered from belly-and-shoulder-handled amphorai: **T67-1** (male), **T122-1** (female), and cf. **T83-1** and **T84-1**, each containing an adult and an infant. The same was also true for amphoriskoi (**fig. 206**): **T27-1**, **T47-1**, **T123-1** (female), **T101-1** (male); and pitharia (**fig. 207**): **T38-1**, **T70-1** (male); **T49-1** (female). In the case of skyphoi used as ash-urns (**fig. 208**), two instances of male cremation were noted (**T23-1**, **T103-1**), but no female. The same was true for kraters used as ash-urns (**T76-1**, **T40-1**; **fig. 209**), whereas with the handmade two-handled jar two females (**T63-1**, **T19-1**) and one male (**T100-1**) were identified (**fig. 210**). With regard to the latter, it is worth adding that **T63-1** (female) and **T100-1** (male) were the belly-handled variety of the shape, **T19-1** neck-handled. Age and sex frequencies are also provided for other local wheelmade shapes and various handmade wares, as well as for imported wheelmade, handmade, and black- and red-slip pottery (**fig. 211**). As with many other vessel forms, these were too infrequent to permit any meaningful statistical sample.

The faunal and flora remains associated with adult graves are discussed more fully below.

BURIAL CUSTOMS AND FUNERAL RITES

Cremation

As already stated, 118 of the 134 certain tombs so far excavated were cremations and of these, thirty-four were located in the area of the Early Iron Age cutting (**fig. 17**). The differences between the tombs in the area of the cutting and those beyond have been outlined, but in both cases the body (or bodies) of the deceased was burned prior to burial. The actual place where the cremation was performed remains unknown for many of the tombs, although there is good evidence by way of seashell and pebble material that the deceased in a number of tombs were cremated on the beach at Torone and subsequently transported to the Terrace V burial ground (see above and appendix C). Despite the fact that the majority of tombs within the area of the cutting, and a few elsewhere, contained blackened remains of the pyre (**fig. 194**), the tomb pits themselves were not the actual pyres, attested to by their size and by the fact that in most cases

the quantity of burned remains was insufficient to indicate the cremation took place in situ (the only possible, though highly unlikely, exception is Tomb 110: see chapter 3). The well-recorded pyres at Lefkandi were characterized by both a good depth of ash deposit and a thick, hard-fired crust of earth or rock around their edges. They were normally built over large rectangular or spool-shaped pits with dimensions close to those of the human body (1.00–1.80 m long),[26] unlike the circular or elliptical Torone tomb pits, the diameters of which never exceeded about 0.70–0.80 m, and were normally less.

The possibility, however, suggested itself that the area of the large cutting, providing as it did a carefully leveled surface, may at one time have been connected with the preparation and perhaps even the process of cremation, although the heavy concentration of early tombs in the area (including inhumations) indicated that such was questionable, at least for the majority of later tombs. Further, there was no evidence of any feature, whether in the form of cuttings or constructed, that would suggest the actual place of, or preparation for cremation, as has been uncovered at Lefkandi and at several of the later cemeteries on Rhodes and elsewhere. For example, the area of flattened rock in the Toumba cemetery at Lefkandi, bordered by a wall and containing cuttings thought to be for the legs of a large tripod, was used for funeral preparation and ritual activities (Popham, Sackett, and Themelis 1979–80:214). There was also the area of rock scorched by fire and containing a circle of postholes in the so-called Heröon (Popham, Touloupa, and Sackett 1982b:173; Popham, Sackett, and Coulton 1993: pl. 9). The cremation pits of Rhodes, rectangular-shaped with four cuttings at the corners, are well known at several sites on the island (Kinch 1914:53–55, fig. 22 [ca. 600 B.C.]; Friis Johansen 1958:9, fig. 4 [Late Geometric]; for Ialysos see Maiuri and Jacopich 1928:66, fig. 47; Jacopi 1929:54, fig. 45; Laurenzi 1936:10–14, fig. 2; Maiuri 1923–24:257–341 [seventh century B.C.]; Gregoriadou, Giannikouri, and Marketou 2001; for Kameiros see Jacopi 1931:347, figs. 383–384 [seventh century B.C.]; cf. Gates 1983), and there are similar examples from nearby Kos (Bosnakis 2001; Skerlou 2001). Not unlike the cremation pits of Rhodes and Kos are two Neolithic "crematoria," one lined with mud brick and equipped with holes for a scaffold at Souphli in Thessaly (Gallis 1982: pls. 3a, 11a, 15–16, 17a; cf. Blegen, Caskey, and Rawson 1953:391–396, figs. 281–287). And different types of cremation tombs and pyres are assembled in the recent volume edited by Stampolidis (2001).

Consequently, the situation at Torone was not unlike that of the majority of cremation tombs in Athens where the actual burning of the body took place elsewhere, the collected remains deposited in a vessel, and the vessel subsequently buried in the cemetery area, a process referred to by Kurtz as "secondary cremation" (Kurtz and Boardman 1971:33, 36; cf. Iakovides 1969–70, vol. 2:31–43). The fact that the cremation tombs located in the area of the cutting contained in their tomb pits remains of the pyre, and usually a small quantity of cremated human bone along with fire-affected sherds, strongly suggests that the place of cremation was located near enough for these remains to be collected and transferred to, or swept into, the tomb pit. The general lack of such remains in the case of tombs located beyond the area of the cutting may more reasonably be the result of the pyre having been at some distance, and there is clear evidence that the pyres of some tombs were located on the beach (appendix C). As already noted, in many of the tombs located within the area of the cutting the blackened fill also yielded varying quantities of cremated human bone, indicating that in these cases the collection of the cremated remains was not thorough. Although some of the bone was collected and deposited inside the ash-urn, some was overlooked and was subsequently placed or swept into the tomb pit along with the burned sherds and other pyre debris (see appendix A; Parker Pearson 1999:6–7; for similar incomplete gathering of cremated bone at Perati see Iakovides 1969–70, vol. 2:38, table; Paidoussis and Sbarounis 1975:144). In a few of these tombs small pieces of charred wood also were recovered (see appendix D). In the case of the tombs located outside the area of the cutting, cremated remains were rarely met in the tomb pits (see **fig. 194**), although here too the process of collecting the human bone does not appear to have been thorough.

The fragments of cremated human bone from all cremation tombs were found in a brittle and

calcined condition. They were mostly small pieces or tiny scraps with the largest postcranial fragments rarely more than 6 cm long and normally less (see appendix A). Their state of preservation and general condition indicate the process of cremation was thorough, with temperatures of 900°C or more consistently reached,[27] and that in nearly all cases the bone had been crushed while still in the pyre or soon after the fire had been extinguished, in order for it to be placed in the ash-urn. Similar crushing of bone was also noted at Perati (Paidoussis and Sbarounis 1975:130, 143), where it was further elaborated that the practice, in an updated version, is performed in modern crematoria (see appendix A for the modern use of the "cremulator" [crushing machine]). In contrast, however, are the cremated remains of the person thought to be Philip II, which were so well preserved that a sort of "cremation oven" is believed to have been used (Prag, Musgrave, and Neave 1984:78; cf. Xirotiris and Langenscheidt 1981:142–160; also Popham, Sackett, and Themelis 1979–80:429).

The deliberate crushing, fractionation, and pounding of the human bone following cremation is well known in various cultures (Gladykowska-Rzeczycka 1974:112; Wilkinson 1980:221; Hazzledine 1982:24–26; Holck 1986:44–45). Alternatively, some scholars have drawn attention to the effects on the human remains of the natural collapse of the pyre and of the process of stoking by the mourners (see, among others, Paidoussis and Sbarounis 1975:143; McKinley 1989a:72). Only in rare instances, such as Tomb 104, was a fragment of human bone (in this case a toe) left unburned. It should be noted that the fact that the bone was unburned was not necessarily the result of an extremity poking out of the fire. Human hands and feet are generally surrounded by less fat than are other parts of the body, so they do not burn as thoroughly as other body parts such as the head—the human brain is a great source of fat—that are more naturally endowed. The general appearance of the cremated bone, in keeping with the evidence of the literary sources and of representations in later vase-painting, indicates that the burning was performed on an open pyre (see especially Prag, Musgrave, and Neave 1984:77, n. 47 for some representations in South Italian red-figure; for the literary evidence see Lorimer 1933:161–180; D. Robinson 1942:144–157; Mylonas 1948:56–81; Kirk 1960: 193–195; Wace and Stubbings 1962: 478ff; Andronikos 1968:1–37; Kurtz and Boardman 1971: 186–187).

One of the earliest representations of a pyre, albeit an execution pyre, in Greek art is found on an Athenian red-figure amphora by Myson, dating to the early years of the fifth century B.C., showing the Lydian king Kroisos on the pyre (**pl. 524**; Beazley 1963:238, no. 1). The pyre itself consists of logs laid out in a system of headers and stretchers, with what are conceivably bricks, square in section, laid between individual logs. The same basic type of pyre is shown in the Classical period. One of the most evocative illustrations shows Trojan captives put to the sword at the funeral pyre of Patroklos on an Apulian red-figure krater in Naples that dates to the third quarter of the fourth century B.C. (**pl. 525**; Stampolidis 1996:125, fig. 174). The pyre itself consists of logs laid out in a manner similar to that on the Athenian amphora, but without the square elements thought to be bricks. All around and on top of the pyre are the various elements of Patroklos's armor: helmet, shield, greaves, body armor, etc. A very similar pyre is shown on a Paestan red-figure krater in the British Museum (inv. F 149) signed by Python and dating to around 350–325 B.C. (**pl. 526**; Trendall 1966: pl. D). The pyre itself is surmounted by an elaborately decorated bier, on which Alkmene sits in a manner appropriate for the theater. Two men are lighting the fire with torches, and above two women pour oil from amphorai to fuel the flames. The same basic type of pyre, without the more elaborate accoutrements of Alkmene's pyre, is illustrated by Parker Pearson (1999:8, fig. 1.1; **fig. 212**) as a schematic diagram of an experimental pyre with the body of a pig, and its collapse. As Parker Pearson (1999:6) states: "cremations can be outrageously extravagant affairs."

Many of the physical aspects of the pyre in Greek art and in material culture are verified by the extant literary sources, especially Homer, who details everything from the gathering of wood for the fire, the construction of the pyre and laying down of the corpse, to the funerary feast, the quenching of the fire, and the gathering of the bones (Stampolidis 1995:302–306). Verification that the cremation pyres at Torone reached temperatures in excess of 900°C was provided in the

case of Tombs 18, 58, 102, 104, and 124, where minuscule fragments of bronze, misformed beyond recognition by heat, were encountered either in the ash-urn or tomb pit, and which almost certainly represent items of personal decoration or dress fasteners worn by the deceased at the time of cremation. According to Hodges (1964:97), pure copper melts at 1083°C, while a 12 percent tin bronze requires a temperature of 1000°C. Related evidence was encountered in the case of Skoubris Pyre 2 at Lefkandi, where two gold rings were melted out of shape, the lowest melting point of native gold being 1000°C (Popham, Sackett, and Themelis 1979–80:380, n. 18).

Inhumation

The rite of inhumation is well attested at Torone, but is far less common than cremation; its practice and vicissitudes have been described above. Even though an inhumation may be found in a poor state of preservation, often due to later disturbance, the skeletal remains were usually sufficient to determine the salient features of the tomb and there was none of the substantial decay encountered that was prevalent, for example, at Lefkandi and Vergina (cf. also the case of Tomb Θ2 in Erechtheion Street, Athens: Brouskari 1979:10). The latter led Themelis (in Popham, Sackett, and Themelis 1979–80:211–214, with discussion including Vergina and Assarlik; cf. the case of Olous: Desborough 1964:188; Catling 1985:19–23) to argue for a ritual involving the combination of cremation with the subsequent burial of a token collection of bones. Particularly instructive in this context is a comparison of the various states of preservation of Late Roman, Byzantine, post-Byzantine, and Early and Middle Helladic graves at Zygouries, which provide some interesting differences and all at the one site (Blegen 1928:39, 42, 69–74). It is worth adding that in general, many of the Late Roman inhumations on Terrace IV at Torone (**fig. 11**) were much more poorly preserved than were the Early Iron Age inhumations on Terrace V.

Organic offerings: Funeral feast, evidence for eating, libations, and sacrifices

A number of indications provide some idea of aspects of funeral ritual performed at or near the grave. A good deal has been written on rites and cults connected with death and dying (see especially Wiesner 1938; Kurtz and Boardman 1971; Vermeule 1979; I. Morris 1992). Several pieces of evidence combine to provide a fleeting glimpse of some of these aspects at Torone, many of which are closely paralleled in other contemporary cemeteries, especially Athens (Kraiker and Kübler 1939: 4–5; Karo 1943:6–16; Styrenius 1967:110–121; Kurtz and Boardman 1971:31–40, 343–351; Thompson and Wycherley 1972:9–14; Krause 1975; Brouskari 1980:13–31; Kurtz 1984:314–328).

Offerings of food and drink, in the form of whole pots placed into both inhumation and cremation tombs, have already been noted and were common in Greek tombs of various periods, including the Early Iron Age (Andronikos 1968:92). The occurrence in deposits type 1 through 4 of a good deal of fragmentary Early Iron Age pottery (chapter 2) of various shapes associated with mixing, pouring, eating, and drinking has already been noted in relation to the possibility of such pots serving as grave markers (for the situation in Athens see especially Poulsen 1905:18). However, the variety and number of vessels recovered, especially in deposit type 4, may provide further evidence of funeral libations poured after the grave was sealed (Andronikos 1968:94–95; for further discussion on libations in relation to a cult of the dead see Deonna 1939:53–77; Burkert 1977:121ff; 1982:42), and even of a funeral feast. With regard to libations, perhaps the most conspicuous instance was that of two fragmentary kantharoi (**T10-1**, **T10-1a**) found level with the cover slabs of Inhumation Tomb 10. To what extent this evidence suggests something along the lines of a farewell toast to the dead as, for instance, described by Blegen (1937, vol. 1:238), or of some continued cult of the dead, is uncertain, although the fact that the majority of the fragmentary pottery from deposit type 4 is contemporary with that of the tombs seems to point to the former explanation as the more likely (conspicuous instances of continued tomb cult are discussed by Nilsson 1968:600–611; see also Blegen and Wace 1930; and especially Antonaccio 1992; 1994; 1995; Whitley 1988; 1994; 1995).

More solid evidence that some form of feast, perhaps even sacrifice or ritual killing, took place during the funeral ritual is provided by the presence

in a number of tombs of burned and unburned animal bones (appendix B), marine mollusks (appendix C), floral remains (appendix D), and also, more indirectly, by fire-affected sherds. The distribution of faunal, floral, and marine remains in the Early Iron Age cemetery at Torone is shown in **figure 213**. Ritual eating and drinking is well established in various parts of the Greek world, before, during and after the Early Iron Age (see especially Burkert 1977:297, with references; also Andronikos 1968: 15–18, 106–107; Kurtz and Boardman 1971:64–67; Snodgrass 1971:190–192). At Torone, small fragments of animal bones were encountered in sixteen cremation tombs, always inside the ash-urn along with the cremated human remains (Tombs 18, 24, 47, 52, 62, 68, 77, 88, 96, 103, 104, 118 [Ash-urn I], 123–125, 130), and in the vicinity of a further tomb (Tomb 23). The material is presented and discussed in appendix B, and although the sample is small it is of interest for the variety of species present, particularly for the domesticates. Caprovines, including individual bones that can be identified as sheep or goat with certainty, account for over 50 percent of the sample (cf. Kraiker and Kübler 1939:258; Styrenius 1967:110). Other domestic species include cattle and pig, the latter primarily of juvenile animals. The fragment of bone of a small carnivore in Tomb 118 may be of a domestic species such as dog or cat, although the possibility of a wild animal such as fox or badger cannot be ruled out. The evidence of dog burials and of dog sacrifice in the Greek world has been collected and presented by L. Day (1984:21–32; see also Gesell, Day, and Coulsen 1983), although not all the examples she cites are verified, and some have been eliminated as unlikely or as later intrusions. Similarly, the bird in Tomb 130 could not be identified with certainty as domestic or wild. It is worth elaborating that among the entire sample of animal bones studied from Torone during all periods (Final Neolithic through post-Byzantine), there are four established domestic bird species: hen, goose, duck, and pigeon. Some of these, such as the hen, were first introduced to Greece during the early first millennium B.C. (for the early literary and iconographic evidence of the chicken in the Aegean see Papadopoulos 1992b). It is clear, however, that the Toronean diet was in no small measure supplemented by the hunting of game, and Dr. Dénes Jánossy has identified at least thirty-seven species of wild bird from the site.

Similar evidence of animal bone, both inside the ash-urn and in the tomb fill, is documented for several contemporary Attic graves and is normally interpreted as animals *sacrificed* and burned on the pyre, a ritual associated with a chthonian cult (to the list given in Styrenius 1967:110; now add Brouskari 1980:19, tomb A; 24, tomb I; 25, tomb K; on the subject generally see Kurtz and Boardman 1971:37; Krause 1975:41). This line of reasoning has been taken in various directions. For example, Themelis (in Popham, Sackett, and Themelis 1979–80:215–216) interprets the well-known centaur from Lefkandi—which was broken and found in two separate tombs some three meters apart—as a death daemon with chthonian features (for the centaur see Desborough, Nicholls, and Popham 1970:21–30; Vermeule 1974:75–76). Kübler (1943: 5; 1954:27ff) sees the horse, which is represented on a few Attic Protogeometric vases, in a similar light (the chthonian character of the horse is discussed by Malten 1914; cf. Andronikos 1968:84–91; Yavis 1950:263; see further Papadopoulos 1990; 1994:471–473, 491).

Distinguishing, however, between an animal sacrificed and one slaughtered and eaten at the grave on the evidence at hand raises some interesting questions. There is no evidence at Torone of animals buried with their master or mistress, as there is in other parts of Greece at various times (see Day 1984:21–32 for animal burials). In all cases at Torone, only very small fragments of animal bone were retrieved from the ash-urn and in no instance was any substantial part of an animal recovered. Some of the animal bone fragments, such as the pig bone from Tomb 52, were burned to decalcination and were clearly subjected to the same level of burning as the human cremated in the tomb. Other animal bones were burned to various degrees of decalcination. Among the most interesting of these is the goat bone recovered from Tomb 24, where the medial part of the radius and ulna fragment was burned to different grades of decalcination, whereas the lateral part was unburned. Other animal bone fragments recovered from tombs, including those found inside ash-urns, showed no clear signs of having been subjected to fire. Animal bones were not encountered

in inhumation tombs at Torone. In discussing pig sacrifice specifically, Burkert (1972:259) states: "Greek mythology in fact explains the pig-sacrifice as the maiden's descent into the underworld" (the sex of the person cremated in Tomb 52 is not known).

In discussing the later, Archaic and Classical, evidence for eating at the grave, Burkert (1972:51) notes that the practice was customary. In Athens, for example, Solon was the first to forbid the slaughter of cows at the grave (for a social analysis of Solon's reforms of Athenian burial customs see Alexiou 1974). Burkert (1972:51) goes on to note that there was no thought of burning or burying the animal whole, for the meat belonged to the living, while the dead man "took his fill" of the blood. Elsewhere in his analysis, Burkert (1972: 221) discusses the psychology of ritual eating, although some scholars continue to reject his theory of guilt incursion: "By eating food, one incurs guilt which must be distributed equally among all. And only those who receive their share can belong, band together by the act they have committed."

An important feature of the animal bone fragments from the Early Iron Age cemetery at Torone noted in appendix B is that the majority of the material is not only fragmentary, but primarily from those parts of animals yielding little meat. If this observation is an accurate reflection of what happened—and the case is certainly not watertight owing to the statistically small quantity of the sample—then it may well be that the dead received only a very small portion of the animal butchered, sacrificed, or ritually killed. Alternatively, the small fragments of animal bones recovered from graves may represent little more than chance discards by the living of food consumed at the cremation and not an offering specifically for the deceased.

In a number of cremation tombs edible marine mollusks were encountered both inside the ash-urn and in the tomb pit fill, and sometimes in both (see appendix C; cf. the shell material in Popham, Sackett, and Themelis 1979–80:215). These could hardly be sacrificed, and may have been eaten by the living performing the funerary ritual, or else offered to the deceased. In the case of Tombs 28, 60, 68, and 114, seashells were recovered from both ash-urn and tomb pit. In Tombs 18, 20, 49, 54, 65, 69, 96, 104, 105, and 130 they were found only inside the ash-urn, whereas in Tombs 35, 50, 52, 66, 111, 112, 116–118, 120, and 121 they were found only in the tomb pit fill (in the case of Tombs 56, 70, 108, and 115 seashells were noted in the general vicinity of the tomb). A very small quantity of seashells was also found in the tomb pits of Inhumation Tombs 5, 6, 7, 10, 11, and 13, but in all such cases it could not be established with certainty whether the mollusks were clearly associated with the grave or with part of the surrounding fill. In several instances, particularly Tomb 124, many small fragments of sea urchin (*Echinodermata*) were encountered inside the ash-urn, and smaller quantities of sea urchin were also noted inside the ash-urn of Tombs 26, 101, and 108. The local sea urchin of Torone is briefly mentioned by Pliny (*Nat. Hist.* 9.51.100), along with other marine species. Sea urchins are still found in large numbers at Torone, particularly near the northern shore of the Lekythos. In the excavation report for Neolithic Saliagos, Shackleton (1968: 138) remarked on the edibility of Echinodermata, and noted that they are still eaten today on Antiparos. Sea urchin are, in fact, eaten to this day all over Greece (note also the many fragments of sea urchin found in a *bothros* at Palamari [Skyros] in an Early/Middle Bronze Age context [Parlama 1984: 89 (with n. 16), 318–319, pl. 36]).

Other creatures of the sea that were consumed as part of the funerary ritual at Torone include one example of tuna (*Thunnus thynnus*) and at least two other unidentifiable species. The fishing of tuna continues to this day at Torone, with the harbor at Kophos used as the base for the seasonal commercial fishing. Most modern textbooks give January through April as the primary migration season for tuna (Renfrew, Greenwood, and Whitehead 1968: 119). According to Aristotle (*Hist. An.* 571a15–20), however, tuna, after they had spawned in the Black Sea, came out in the autumn and swam back in again in the spring. Although Aristotle theorized that bluefin tuna spawned in the Pontos, most modern experts agree that bluefin spawn only in the Mediterranean and the Gulf of Mexico (Maggio 2000:137). Nevertheless, Aristotle's testimony matches almost exactly the modern pattern of tuna migration in this part of the north Aegean, and the fact remains that tuna are still caught today off Chalkidike, beginning in the autumn months. The

antiquity of seasonal tuna fishing in the Aegean can be traced back to the Neolithic period at Franchthi Cave and Saliagos. In Stage 4 of occupation at Franchthi Cave, tuna vertebrae account for at least 95 percent of the fish bones (Jacobsen 1976:86; 1981:307) and at Saliagos Scombriodae (tunny and albacore) account for 97 percent of the fish bones identified (Evans and Renfrew 1968: 118–121; see also Bintliff 1977). The tuna bones found at Saliagos are from fish measuring 2–6 feet in length (a 5-foot tuna can weigh up to 800 lbs.), and thus represent a substantial source of food (Renfrew, Greenwood, and Whitehead 1968:119). The story of the annual fishing of tuna by the tonnaroti of Favignana, a small island off the coast of Sicily close to one of the most intense areas of tuna spawning, is dramatically brought to life by Maggio (2000) in her account of the *mattanza*. The testimony of Aristotle, together with the modern pattern of tuna fishing in Chalkidike, raises the question of what species of fish did Athenaios and Archestratos have in mind when referring to Torone. In his *Deipnosophistai* 7.310a–c, Athenaios, quoting Archestratos of Gela, refers to the tasty slices of "dog shark" (κύων καρχαρίας) that were available at Torone. Might this *karcharias* refer to tuna?

The plant remains recovered from tombs provide further direct evidence of items either eaten at the grave or deposited in tombs as offerings. The retrieved sample (presented in appendix D according to tomb) must represent only a minimum number of plant remains associated with Early Iron Age tombs, as only those tombs with substantial remains of the pyre deposited in the tomb pit yielded sufficient floral remains for analysis. Plant remains were recovered and analyzed only from Tombs 100, 101, 108, 109, 111, 112, 114, and 117, all located within the area of the Early Iron Age cutting and all dating to the earlier part of the period of use of the cemetery. In addition to these, organic samples also were retrieved and analyzed from Tomb 9 (dark earth directly below the West Skull in Inhumation Tomb 9), and from the handmade jug with cutaway neck placed as *kterisma* in Tomb 70. Other samples include a part of deposit type 4 in Trench 22 North Baulk, and material from the fire-mouth/stoke hole of the Early Iron Age kiln on Terrace V. In all cases the soil sample was water sieved; many of the seeds were recovered by flotation (>1 mm mesh flot), and the remainder were gleaned from residue sorting. The total occurrence of plant species from all tombs (including Tomb 70 and deposit type 4) is given in **table 4.5** (the list does not include the material recovered from the Early Iron Age kiln).

The table yields some interesting results. It is clear, first of all, that the domesticated or cultivated plants, such as *Fabaceae* (fava bean), *Hordeum vulgare* (cultivated barley), *Lens culinaris* (lentil), *Vicia ervilia* (bitter vetch), *Vicia faba* sp. *minor* (broad bean), *Vicia* sp. (vetch), and *Vitis vinifera*, together with *Vitis* sp. (grape) were all found burned. Uncultivated plants, such as *Arenaria serpyllifora* (thyme, leaved sandwort), *Euphorbia helioscopia* (sun spurge), *Euphorbia* cf. *exigua* (dwarf spurge), *Fumaria officinalis* (common fumitory), *Gymnospermae*, and *Stachys annua* (annual woundwort) were noncarbonized. The only exception to this rule is the blackthorn or sloe (*Prunus spinosa*) in Tomb 108, a member of the plum family collected from the wild. The carbonized seeds of the cultivated varieties can hardly have been eaten, although it is unclear whether these floral remains were placed or thrown into the fire as an offering or, alternatively, represent the discarded remnants of a funerary meal. The noncarbonized seeds are almost certainly recent and entered the tomb, or associated deposit, well after the event. If these are omitted from the list, then the material can be tabulated as shown in **table 4.6.**

Although the total quantity of domesticated species is not great, it should be remembered that the figure presented above (fifty-nine identified; twelve unidentified; *Prunus* not counted) represents a bare minimum of instances where the possibility of survival was ideal. Nevertheless, the variety of species preserved from such a small sample is revealing, particularly as it derives from a funerary and not a settlement context: three fava beans, two seeds of cultivated barley along with three other cereal seeds (*Cerealia*), some forty lentil seeds, one instance of bitter vetch, one broad bean, one generic vetch, and some eight examples of grape (*Vitis vinifera* plus *Vitis sp.*). In the light of the little that survives of domesticated species from so-called Dark Age sites, this is an important addition.[28] A comparison of the Torone sample with samples from Kastanas and Iolkos provides some

Table 4.5. Tombs yielding carbonized and noncarbonized floral remains

Species	Occurrence of individual seeds	Context and state [a]
Cerealia	3	T111 (3X)
Euphorbia helioscopia	16	T70 (6⊥); T108 (2⊥); T109 (5⊥); T112 (3⊥)
Euphorbia cf. *exigua*	7	T70 (1⊥); T108 (1⊥); T109 (5⊥)
Fabaceae	3	T108 (2X); T117 (1X)
Fumaria officinalis	10	T100 (3⊥); T109 (3⊥); T112 (1⊥); T114 (3⊥)
Gymnospermae	2	T109 (2⊥)
Hordeum vulgare	2	T109 (1X); T109 (1X)
Lens culinaris	40	T101 (40X)
Prunus cf. *spinosa*	2	T108 (2X)
Stachys annua	22	T108 (1⊥); T109 (21⊥)
Vicia ervilia	1	T108 (1X)
Vicia faba subsp. *minor*	1	T112 (1X)
Vicia sp.	1	T108 (1X)
Vitis vinifera	3 (+ 3 frr.)	T109 (1 [+ 3 frr.] X); T114 (2X)
Vitis sp. frr.	2	T109 (2X)
Unidentified	12	T100 (3X); T101 (1X); T108 (1X); T109 (1X); T112 (1X); T117 (3X); deposit type 4 (2X)

[a] x = carbonized; ⊥ = noncarbonized

Table 4.6. Tombs yielding carbonized floral remains

Species	Occurrence of individual seeds	Context and state[a]
Cerealia	3	T111 (3X)
Fabaceae	3	T108 (2X); T117 (1X)
Hordeum vulgare	2	T109 (1X); T109 (1X)
Lens culinaris	40	T101 (40X)
Prunus cf. *spinosa*	2	T108 (2X)
Vicia ervilia	1	T108 (1X)
Vicia faba sp. *minor*	1	T112 (1X)
Vicia sp.	1	T108 (1X)
Vitis vinifera	3 (+ 3 frr.)	T109 (1 [+ 3 frr.] X); T114 (2X)
Vitis sp. frr.	2	T109 (2X)
Unidentified	12	T100 (3X); T101 (1X); T108 (1X); T109 (1X); T112 (1X); T117 (3X); deposit type 4 (2X)

[a] x = carbonized

interesting results (see appendix D). For example, the bitter vetch (*Vicia ervilia*) was by far the most common seed recovered from both Kastanas (Kroll 1983:48) and Iolkos (1030 Protogeometric samples and five Geometric samples: G. Jones 1982). This difference need not reflect fundamentally different subsistence strategies, but rather that Torone represents funerary material, not the settlement debris of Iolkos and Kastanas. In other parts of the Greek world, carbonized fruit is well known in a number of contemporary cremation graves, such as the grapes in Tomb D 16:4 (Blegen 1952) and the figs found in Tomb D 16:2 in the area of the later Athenian Agora (Young 1949a; S. Immerwahr 1971:268; cf. the carbonized figs from Kos in L. Morricone 1972–73:228, fig. 155; and the seeds, dried fruit, etc., in the Classical pyres at Salamis [Cyprus]: Karageorghis 1970:170–202, 225–226, 306–312). In describing the Athenian cremation with the figs, Young wrote:

> [A]mong the charcoal was found a number of charred and carbonized figs which had kept their shape well enough so that they were readily identifiable despite their burned state. The figs had been used, obviously, at the funeral rites and were thrown into the pyre either as offerings to the dead or as remains left over from the banquet or possibly after use for purification. The fig was noted in antiquity for its cleansing qualities [*RE* VI, 2148; Rohde 1925:588], and figs may have been used here to remove any possible contamination accruing as a result of contact with the dead. (Young 1949a:280–282)

Many of the species of flora recovered from the Early Iron Age cemetery at Torone continue to be important resources in southern Sithonia throughout the historic period. Of these the most famous is the wine of Torone, the commodity boldly alluded to on the coinage struck by the city in the Archaic and Classical periods, and one that is still produced in the region (see Papadopoulos and Paspalas 1999).

Further evidence of some form of ritual eating and drinking was provided in cremation tombs where remains of the pyre were encountered in the tomb pit, and which yielded a quantity of fire-affected sherds. A selection of these vessels is presented in the catalogue and are tabulated in **table 4.7**. In most cases the catalogued fire-affected sherds represent only a fraction of the material actually recovered from each tomb.[29] The degree of burning varied in individual cases from intense, usually discoloring the sherd gray throughout, to slight. Sometimes individual sherds recovered were apparently not affected by burning, while with the material from some tombs it was not uncommon to find one fragment much affected by intense burning joining with a fragment less affected or displaying no signs of having been burned. Similar circumstances were noted with much of the material associated with the pyres at Lefkandi (Popham, Sackett, and Themelis 1979–80:200–202; cf. Noble 1988:157); and Hampe (1960:74), interpreting the burned and unburned sherds of the same vase associated with some Protoattic graves, explained the process by alluding to an "offering table" set on fire. In the case of Torone, however, the pyre itself may have sufficed, and there was certainly no evidence for the long channels referred to as "offering ditches" (*Opferinnen*) found in the Athenian Kerameikos. These ditches, averaging 0.60 m in width and occasionally 12 m in length, are thought to have allowed a large community of mourners to make offerings to the dead at the same time (Kübler 1959:87–88; Knigge 1988:26–27; Kistler 1998). Perhaps rather than Hampe's offering table, one might visualize that the vessels at Torone were either placed on the pyre or thrown into it, the vase (in both cases) breaking, with some sherds falling into, and others slightly beyond, the fire.

The pot shapes represented among the burned sherds were consistently predictable, and even among the selected fragments tabulated on **table 4.7** the preponderance of drinking vessels, notably skyphoi, was marked; in most cases fragments of a pouring vessel, almost invariably a handmade jug, were also recovered. Other common shapes include the lekanis, the tripod cauldron, and the bowl with square-cut handles (the latter a shape rarely encountered as unburned tomb furniture), which could be associated with eating. In several cases fragments of larger vessels were also noted, principally amphorai (used presumably for storage and transport of liquids, usually wine and oil) and kraters (traditionally used for mixing water and

Table 4.7. Analytical table of tombs yielding fire-affected pottery

	FIRE-AFFECTED SHERDS																								
	Local Wheelmade								Local Handmade									Imported							
Tomb Number	Amphora	Amphoriskos	Skyphos	Lekanis	Cup	Krater	Other	Uncertain	Two-handled Jar: Large and Small	Jug	Kantharos	Cup/Kyathos	Bowl With Square-cut Handles	Pithos	Pitharion	Tripod Cauldron	Other	Uncertain	Wheelmade Painted Open Form	Wheelmade Painted Closed Form	Black/Red-Slipped	Handmade	Fragments not catalogued	Total
24						1															1		+	2+
25				1												1								2
98								1																1
99																							+	+
101	1		2	1	5					1			1			1	1		1				+	14+
102	1									1			1									1	+	4+
103			1	1		1				1													+	4+
104	2		3	1		1				2					1	1							+	11+
105	1	1	2			1																	+	5+
106			1							1													+	2+
108	1		3	1																			+	5+
109			2					1		1													+	4+
110																							+	+
111			1					1														1	+	3+
112	1		2	1									1										+	5+
113	2		5	1					1				4			1		1		1			+	16+
114	1		1							1			1			1							+	5+
115	1		1	2		1		1		1						2							+	9+
116			1	1												1							+	3+
117	2		6	2		1		1		1			2			1	1		1	1			+	19+
118	1		1			1										1			2	1			+	7+
119			2																				+	2+
125										1													+	1+
128	1		3																				+	4+
TR9 D.4	1		1	2				1		2			1			2		1					+	11+

wine). Shapes met either rarely or not at all were amphoriskoi, kantharoi, cup/kyathoi, two-handled jars, pithoi, and pitharia. A more elaborate instance of ritual eating and drinking connected with stone-constructed circular structures near tombs—usually associated with numerous drinking vessels—and interpreted as a cult honoring ancestors (compatible with hero cult) is described by Hägg (1983c:189–194, with references). Much has been recently made of similar circular stone platforms at Mende dating to the third quarter of the eighth century B.C. (Vokotopoulou 1990c:399–401, 405, fig. 2; Snodgrass 1994a; Papadopoulos 1996a:164), and thereby postdating the Early Iron Age cemetery at Torone. Although there is some evidence of hero cult in the Classical period at Torone, primarily by way of terracotta plaques (see Papadopoulos 2000a), stone-constructed circular platforms have not been found to date on Terrace V or anywhere else at Torone.

To what extent other perishable items were subjected to fire as part of the funerary rite is difficult to determine. Certainly a number of bronze objects, most probably items of jewelry worn by the deceased, were found, usually deformed or misshapen beyond recognition (see chapters 3 and 7), but apart from these nothing could be verified with certainty, and the burning of personal objects, such as clothing, can only be assumed. The psychology or ritual significance of the burning of personal objects of the deceased, and of other objects used in the funeral rites, has been commented on at length by a number of scholars, sometimes on the basis of indirect evidence (Bruck 1926:28; Nilsson 1936:92ff; 1955:174–198; 1968:599; Bowra 1962:144–145; Leach 1976:83; Kurtz and Boardman 1971:215–216; Griffin 1980:3, 44–49, 160–161, 337–338).

The occurrence of handmade tripod cauldrons in a good many tombs, both inhumations and cremations, has been noted. The shape whenever encountered was always found in a broken state, never complete; moreover, the positions of individual tripods were consistent with neither pot offerings nor lids/covers. Some were recovered among the burned sherds deposited in some cremation tombs (see **table 4.7**; the list includes **T25-4**, **T101-11**, **T104-18**, **T113-17**, **T114-7**, **T115-12**, **T115-13**, **T116-4**, **T117-19**, **T118-11**), but many were found in tombs, including inhumations, yielding no fire-affected debris, and were either unaffected by significant burning or only slightly fire affected (see **T6-2**, **T7-4**, **T47-4**, **T70-3**, **T99-3**, **T121-2**, **T123-3**, **T123-4**, **T123-5**). A number were also found in various other contexts on Terrace V: **20**, **22**, **23**, **76**, **77**; the fragmentary **88** was found in a later deposit at the Gate Area during the 1975 campaign). All the tripod cauldrons that can be dated on the basis of associated pottery are early, and the majority was found in tombs located in the area of the Early Iron Age cutting. The shape itself is a common cooking pot in many periods and in its bronze, monumentalized form is well known at Olympia during the Geometric period (Willemsen 1957; Schweitzer 1971:164–185; Snodgrass 1971: 281–286; Coldstream 1977:333–339; Maass 1978; 1981; for the earlier cauldrons of Cyprus, see Catling 1964:169–170, 190–223; Matthäus 1980; 1985). It is a standard Late Helladic form (Furumark 1972a: Shape 320), the ancestry of which may be traced back to Early Minoan times (Warren 1972:178–179, figs. 62–63; Popham and Sackett 1984:174, n. 125; Wilson 1985:341–343; cf. Lacy 1967:183–184; Furumark 1972a:76).[30]

The shape is closely related to another Late Helladic type of tripod with perforated body generally considered an incense burner or brazier (Furumark 1972a: Shapes 315 and 316; Furtwängler and Loeschcke 1886:6, 9, 15, pls. III, X; Forsdyke 1925:139–141, nos. a801–811; Lacy 1967:183–184; L. Morricone 1972–73:284–285, figs. 248–249; cf. Melas 1985:136–138) found almost exclusively in Mycenaean tombs—often in association with traces of fire but rarely itself burned—and normally thought to be used for purposes of fumigation and/or purification. Although traces of fire in Mycenaean tombs—not connected with cremation—together with the use of the perforated brazier have been often discussed (Xanthoudides 1924: xii; Evans 1929:3; Persson 1931a:18, 39; 68; 1942: 23; Wace 1932:8, 113, 140–141; Blegen 1937: 250ff; Mylonas 1951b; 1966:176–186; Deshayes 1966:32–34, pl. 48, nos. 6–7; Nilsson 1968: 589ff; Furumark 1972a:77; Pelon 1976:113; M. Morricone 1979–80:313–314, figs. 177–178, nos. 121–122), Wells (1990:137) has suggested that the role of fires and burning in Mycenaean tombs has been exaggerated. No traces of organic material were found with the tripods at Torone, as for instance the carbonized seeds of juniper, coriander, and fennel with the saucerlike brazier at the Palace of Mallia (see especially Coldstream and Huxley 1972:288, with references).[31]

Nevertheless, the circumstances of their finding and their fragmentary state would indicate some connection with funerary ritual, conceivably in the preparation of food or the burning of incense. A useful ethnographical analogy is provided by Bowra (1962:215–216), who described the burning of incense over the body of the dead (already in the grave), a ritual associated with the lament, prevalent in the funeral rites of the Semang. Burkert (1972:83–134, especially 122), in discussing "werewolves around the tripod kettle," notes that sacrificial meat was both roasted and boiled, thus the need for the tripod cauldron.

Perhaps the most important aspect concerning the tripod cauldrons in the Early Iron Age cemetery

at Torone is that the largest single group of fragmentary examples (**T123-2–T123-5)** was recovered from Tomb 123. The tomb also yielded a number of marine shells and two possible, though uncertain, animal bone fragments, but no plant remains. Only one other tomb, Tomb 115, yielded more than one tripod cauldron, in this case two fragmentary fire-affected cauldrons (**T115-12**, **T115-13**). The number of tripod cauldrons in Tomb 123 is unusual, and the circumstances of the tomb are certainly unique. The cremated remains deposited inside the ash-urn, a small wheelmade vertical-handled amphoriskos, were of a young adult female and a fetus/neonate. The tomb represents the clearest instance in the Terrace V cemetery of a mother dying in pregnancy or childbirth (see Liston and Papadopoulos 2004), and the tripod cauldrons may have been used in some purification ritual—a scenario associating the tripod with taboo, and its elimination. The importance of purification in Greek religion is an enduring aspect of Greek literature (Parker 1983). The tripods associated with the mother and child in Tomb 123 at Torone suggest that the manner of death may have contributed to the unusual burial treatment, and that the tomb represents one of a growing number of burials throughout the Greek world that express the importance of social role, and perhaps even deviancy in mortuary behavior (Binford 1971; Shay 1985; Little and Papadopoulos 1998; Papadopoulos 2000b). Unfortunately, such a pattern at Torone could not be established on a firm statistical basis on account of the fragmentary state of many of the human remains and the fact that certain types of death leave no physical trace on the skeletal remains. Such burials, however, are not unique to Torone, and perhaps the most celebrated example of a mother and child (fetus/neonate) cremated and buried together in the same cinerary urn is the tomb of the so-called rich Athenian lady (Smithson 1968; Coldstream 1995; Liston and Papadopoulos 2002; 2004).

In addition to the tripod cauldrons, several other vases were clearly placed into the tomb in a broken state and unaffected by fire (see above), and some of the objects other than pots offered to the dead were found in a fragmentary state. In this respect, the two whetstones (**T104-4**, **T104-5**) recovered from the fill of the well-preserved Tomb 104 are perhaps among the most notable, although the broken state of both may have been the result of partial burning. To what extent this represents intentional "killing" of the object we may never know (cf. Kurtz and Boardman 1971:215–216; Desborough 1972:138, 142, 312).

Blackened earth, burned sherds, and a quantity of seashells were also recovered from the feature designated Trench 15 Pit 2 (see chapter 3). Significantly, it differed somewhat from all other tomb pits and, being located slightly to the NW of the main cemetery area, may represent an area where some aspect of funerary ritual was performed.

The changes in rite

As early as 1910, Lawson (1910 [1964]:485–486) stated that in "no period of which we have any cognizance have the Greeks regarded inhumation and cremation as means to different religious ends; but that, whichever funeral method has been employed, one and the same immediate object has always been kept in view, the dissolution of the dead body." The only exceptional circumstances were the scare of *vrykolakes* or vampires (Barber 1988). Some sixty years later Snodgrass (1971:145, 187) convincingly argued that the significance of the change from inhumation to cremation in eleventh-century Attika may be far less profound than was once supposed and, following R. M. Cook (1960:178), notes that the continuity in time and in population of the Athenian community need not be questioned. As Ian Morris (1992:34) elaborates: "In 1885, only three cremations are known to have taken place in Britain. By 1909, thirteen crematoria were operating. . . . In 1976, 62% of all corpses were cremated" (see further I. Morris 1992:34–42). Desborough (1972:273), too, stresses the need for caution in drawing conclusions about the changes in rite from the evidence of tombs alone.

The very existence of 118 full-fledged cremation tombs in a cemetery where 134 tombs have been cleared to date, and in a part of the Greek mainland where the rite of cremation is not common, is itself exceptional. Of the cemeteries and tombs in Macedonia that may be assigned to the period roughly 1200–700 B.C. (Late Helladic IIIC to the end of Late Geometric), few have yielded any number of cremation tombs. Among the exceptions are the excavations at Koukos (Sykia) in southern Sithonia (Vokotopoulou 1987:284–285;

Carington Smith and Vokotopoulou 1988; 1989; 1990; 1992), an area that in Classical antiquity belonged to the *chora* of Torone, and which in the Early Iron Age maintained a special link with Torone (Papadopoulos 1996a). Elsewhere in Macedonia there are only four verified instances of cremation among the hundreds of tombs of the 107 burial mounds investigated by Andronikos and Petsas at Vergina (Andronikos 1969:164, n. 1 [tomb Δ, ash-urn Δ10; tomb E, ash-urn E5]; Petsas 1961–62a:262, 266 [tomb LXIV, burials A, H]).[32] The site of Palaio Gynaikokastro in the nome of Kilkis in northern Macedonia has yielded both inhumations and cremations (Savvopoulou 1987; 1988; 2001), but in other parts of the region inhumation is the prevalent burial type (for cremation in Macedonia in the earlier Bronze Age see Asouchidou 2001; for cremation in Macedonia in the Classical period see Kottaridi 2001). In Epiros the situation is much the same with inhumation being the rule (Snodgrass 1971:187–191, 212; Desborough 1972:378–379; T. J. Papadopoulos 1976:271–338). In other parts of Greece the sporadic appearance of cremation in the Mycenaean world and earlier is well documented (Lorimer 1950:102; Mavriyannaki 1967–1968; Andronikos 1968:51–52; Vermeule 1972:301–302, 349–350, n. 12; Davaras 1980; for Neolithic cremations see Snodgrass 1971:189, n. 3; and especially Gallis 1982; Asouchidou 2001), as is the apparent spread of the rite in certain locations during the Early Iron Age, which, as both Iakovides (1969–70, vol. 2:43–47) and Snodgrass (1971:157–158, 187–190) have argued, probably reached the Greek mainland from Asia Minor through the Dodekanese to Crete and to sites on or near the east coast of Greece. Indeed, it has generally been assumed for some time that the custom of cremation originated in Anatolia and from there, whether directly or via the Dodekanese or the Cyclades, reached the Greek mainland and Crete (Mylonas 1948:80; Lorimer 1950:107; McFadden 1954:134; Audin 1960:312–322, 518–532; Styrenius 1967:154; Vermeule 1972: 301–302, 349–350, n. 12; Desborough 1972:266–277; 1952:306–307; 1964:32–40; Syriopoulos 1983:395–399, table IV; 1984:543–545, table VI; 675–679, table IX; 895–900, table XII; cf. Hood 1967:127; Dietrich 1970:19; Melas 1984; 2001; for a brief mention of a twelfth-century funerary tumulus with urn cremations near Mycenae see Catling 1984–85:21; cf. Strøm 1985; for cremation in Anatolia see further Seeher 1993).

Once established, however, the picture that emerges from the distribution of Early Iron Age cremations is one in which uniformity is lacking and the adoption of cremation by several communities reveals a great variety of different types and customs. This is a feature particularly stressed by Desborough (1972:270–271), who begins his survey of cremation with Athens and notes that although some aspects of the Athenian pattern are observed elsewhere, never are they all found together, and at other sites where cremation is practiced the system is quite different. Desborough goes on to cite the few instances of urn cremations at Lefkandi, where cremation in open pyres serving as tombs was the rule (along with inhumation), and concludes, as do the excavators, that the similarity of these few exceptional burials with those of Athens may even relate to Athenian immigrants (Desborough 1972:196, 271; Popham, Sackett, and Themelis 1979–80:210). A number of scholars have recently turned to the similarities between the burial customs of Euboia and those at Torone in order to argue for cultural influence of the former over the latter (Popham 1994; Snodgrass 1994a). The pattern at Torone, however, does not resemble that at Lefkandi, or any known site in Euboia. If anything, the closest parallels for the Torone cremations are the early, and simple, circular cremation tomb pits that contained the ash-urn found in the Submycenaean tombs of Athens (Kraiker and Kübler 1939:10–11; Styrenius 1967: 33, 91; Kurtz and Boardman 1971:33, 37; Desborough 1972:137–138). The similarities of the Torone cremation tombs with those of Athens are marked and perhaps the only feature lacking is the Athenian "trench and hole" (Smithson 1961:151–152; Styrenius 1967:66, 91–96; Kurtz and Boardman 1971:37), which is unattested at Torone. Although it may be tempting to see influence from other regions in the burial customs of Torone and Koukos, the evidence of burial by itself can be a misleading indicator of cultural influence and ethnic affiliation (Hall 1997; S. Jones 1997).

Any number of theories may be postulated concerning the difference between cremation and inhumation and possible social implications. On

the evidence from cemeteries where the two rites are practiced side by side, however, the weight of the evidence would indicate social differentiation, social fashion, or personal preference rather than racial differentiation or variances in religious belief (see above and Snodgrass 1971:146–147), and here perhaps the different cemeteries of Lefkandi provide the most useful illustration. The distinction between inhumation and cremation at Torone is to a certain measure a chronological one; although the two rites were performed side by side for a time early in the period of use of the cemetery, the inhumation tombs were on the whole earlier than the vast majority of cremations. Here, too, the evidence at Torone recalls that of Athens, where a few cremations in circular pits were found in cemeteries mainly containing single inhumations, replaced in the course of the Protogeometric period by the whole-scale adoption of cremation, at least for adults (Kraiker and Kübler 1939:89–108, Beil. 1; Kübler 1943:1–5, Beil. 1).

A further point that has sometimes been raised in the literature is that cremation is, to a certain extent, controlled by fuel supply and is an operation requiring some expertise and expense (Mylonas 1948:81, n. 98, cites the quantity of timber used in Ghandi's pyre; see further Robinson 1942: 148; Blum and Blum 1970:317; Kurtz and Boardman 1971:195). During the fifth and fourth centuries B.C., and continuing well into Hellenistic times, many southern city-states looked for timber supply to Macedonia and Thrake, whose silver firs and pines were considered among the finest timber for shipbuilding.[33] Be that as it may, it must be stressed that timber supply and cremation do not necessarily go hand in hand. Indeed, the rite of cremation is rare in many well-forested regions (greater Macedonia, for instance), whereas the occurrence of cremations on some Aegean islands (Thera, for example) would indicate that cremation was not heavily reliant on major timber sources (for Cycladic burial practices see, most recently, Papadopoulos and Smithson 2002).

THE POPULATION OF THE CEMETERY

The number of individuals cremated and inhumed in the 134 excavated tombs can be fixed at a minimum figure of 147. This figure is based on a count of all certain remains plus one for each cremation tomb where the human remains were either not preserved or analyzed, or were evidenced only by scraps (see **table 4.1**). The chronological limits of the use of the cemetery may be estimated at something between 200 and 275 years, depending on the absolute chronology of the so-called Submycenaean period (see chapter 5). The chronological distribution of the tombs into neatly divided phases within this time span cannot be attempted with any conviction because so many tombs are not precisely dated. A very broad outline of the chronological distribution of tombs is presented above (see **fig. 195**). For our purposes here it can be said that the extant minimum number of 147 individuals covers a period of roughly 200–275 years.

The assignment of these human remains into broad age groupings according to Dr. Musgrave's analysis of the physical anthropology is as follows:

Infants (under ca. 3 years of age)	6
Children and younger adolescents	15
Adults	99
Undetermined (minimum)	27
Total	147

On the basis of the information presented above and in appendix A, the total number of *infants* accounts for a mere 4.1 percent of the total population of the cemetery. This figure is based on a total count of all individuals in the cemetery: that is, twenty-two individuals in sixteen inhumation tombs and a minimum of 125 individuals in 118 cremation tombs. If one subtracts the twenty-seven undetermined cases, then infants account for 5 percent of the total number whose age at death can be determined with reasonable clarity. The number of children laid to rest in the Terrace V cemetery accounts for 10.2 percent of the total population, and 12.5 percent of the same population minus those tombs of uncertain age. Depending on the manner of calculation, the total number of *infants and children* represents only between 14.3 percent and 17.5 percent of the population of the cemetery.

Clearly a burial place of a social group, especially in the case of a complete or near-complete cemetery, must bear some numerical relationship

to the size and demographic composition of that group (cf. Reece 1982:353). But to what extent the number of burials in a cemetery reflects—or is an accurate gauge of—the actual size of the social group remains difficult to determine. Without the independent evidence of the settlement area to provide something of a control for the population estimates of the cemetery, any conclusions of overall population must remain tentative. This said, population estimates even for the Classical period, where evidence from settlement, cemetery, and a number of independent literary sources may be combined, remains a speculative and controversial field; this is particularly true for the population of Athens in the fifth century B.C. (see especially Gomme 1933; 1946; 1959; A. Jones 1957:161; French 1964:135; I. Morris 1987:128–167). Moreover, there is the very real possibility that this is not the only cemetery attached to the Early Iron Age settlement at Torone, as is the case, for instance, at Lefkandi or Athens. There are at least four cemeteries known at Early Iron Age Lefkandi (Popham, Sackett, and Themelis 1979–80:101) and even more in contemporary Athens (Kurtz and Boardman 1971:31–32, 34–36, 49–51; I. Morris 1987).

Bearing these problems in mind, the figure of 147 in the Terrace V cemetery at Torone compares roughly to that of Lefkandi and would seem to support, at least superficially, Snodgrass's view of Early Iron Age depopulation, for which he uses the evidence from the cemeteries of Lefkandi to argue for a population at that site of not much more than fifty (Snodgrass 1983:167–169; see also Popham, Sackett, and Themelis 1979–80:202–203; cf. Green 1990 for a related population estimate for Zagora). Such a figure seems, on first impression at least, excessively low, but whether or not a true reflection of the size of that settlement, the figure when compared relatively with population estimates from the periods immediately before and after, as Snodgrass has done using the evidence from Perati and eighth-century Attika, this particular line of reasoning for depopulation gains some support (Snodgrass 1977; 1980a:18–23; 1983:169–171; cf. Coldstream 1968:360–361; Camp 1979; also Carpenter 1966). The evidence from the West cemetery at Eleusis, in use from Middle Helladic through Roman times, would seem to support Snodgrass's view, in that the most conspicuous break in the use of the ground for burial occurred between the end of the Bronze Age and the beginning of the Geometric period proper (Mylonas 1975:203–300; cf. Desborough 1972:19–20, 118, 166, 238, 256, 334, 342). It is worth noting here that the number of tombs in the two Classical cemeteries of Chalkidike that have been extensively explored—Ierissos (Akanthos) and Olynthos—are 11,818 and 598, respectively (Robinson 1942:ix, 164; Touchais 1984:803; Trakosopoulou, personal communication); these figures are considerably larger than those for any one Early Iron Age cemetery in Greece.

More exact information concerning the ages at death of the inhabitants, their biological character and health are outlined in appendix A; however, several points are here worth noting. Generally, the average life expectancy appears to be quite short, probably to be fixed at an average age at death for the adult population of between 20 and 35 years. Among the better preserved inhumation tombs (e.g., Tombs 6, 9 [North Skull], 10, 14) several somewhat older individuals and a few "mature adults" were identified among the cremations (e.g., Tombs 58, 127, 134), but very few of them lived much beyond 45 years or so (appendix A). The life expectancy at Early Iron Age Torone was not unlike that for contemporary populations in other parts of the Greek world. For example, Angel, in his report for Eleusis (Mylonas 1975:308, table III), gives the average age at death for Greece as follows: Middle Helladic 33.7 years; Late Helladic 36.6; Early Iron Age 35.2; Classical 41.7. Angel's study of the inhumations of Grave Circle B at Mycenae indicated an average age at death of 36 years (Mylonas 1972–73:391; cf. Angel 1951). The age at death in Early Iron Age Lefkandi is given as "between 17 and 40 years" (Popham, Sackett, and Themelis 1979–80:439), although Snodgrass (1983:168) argued for an average life expectancy of 20 years for the souls of Lefkandi. In contemporary Athens, of the sample of eighteen studied by Breitinger (Kraiker and Kübler 1939:223–255), at least three individuals were aged 60 years or over, four between 50 and 60, four between 30 and 40, three between 20 and 30, one adolescent ca. 16 years, and two children, which would indicate a relatively older age at death of the specific sample studied, although the Kerameikos was used almost exclu-

sively for adults (see further Snodgrass 1971:145; Krause 1975:10–13, 17–19, 41, 90–93, 98–99, 102–105, 139; for comparative material from Argos see Charles 1958).

Although adults tended to die young in Early Iron Age Torone, the number of individuals designated infants/children was very low. To what extent the number of infants/children laid to rest in a cemetery reflects the rate of child mortality is beyond the scope of this discussion. It is, however, interesting to note that in most contemporary cemeteries in other parts of Greece where infants/children were buried in the same cemetery as adults, the normal proportion of children to adults is usually around 50 percent or more. In this context, the evidence from tombs at Eleusis (Mylonas 1975:208, 224, 256, 268–270) is particularly worth noting:

Period	Children	Adults
Middle Helladic	23	43
Late Helladic	11	39
Geometric	11	9
Archaic (seventh to sixth century B.C.)	20	1
Classical (fifth century B.C.)	82	33
Hellenistic (fourth to first century B.C.)	3	10
Roman	2	9

The figure of twenty-one infants/children among the distinguished human remains at Torone would give a proportion of only 14.3–17.5 percent of the total population of the cemetery, compared to 47 percent at Asine (Wells 1976:21) and an estimated 62–77 percent preadult population at Lefkandi (Popham, Sackett, and Themelis 1979–80: 205). It establishes that infants and children, at least, were also buried—or otherwise disposed of—elsewhere at Torone. It is worth adding that in Crete during 1935 one-half of all deaths were children aged under five years, while in Mexico infants and children accounted for 75 percent of all deaths in the period 1939–1943 (cited in Popham, Sackett, and Themelis 1979–80:381, n. 27; cf. Snodgrass 1983:168).

SOCIAL IMPLICATIONS

As outlined at the beginning of this chapter, there are many ways to draw inferences of a social nature about a community represented on the basis of a cemetery, especially as the evidence of a burial ground does bear a significant relationship to the community of the living with which it is associated. My aim in this section is not to exhaust the numerous avenues that can be pursued, nor is it to cover any number of them. Rather, I wish to draw attention to several of the more blatant patterns that emerge from the material record and to leave to others the many alternative avenues of enquiry that the material evidence permits.

The general paucity of *kterismata*—whether jewelry, other personal items, or pottery—has been repeatedly noted. It is a feature of the cemetery that would argue that the inhabitants of Torone were either materially less prosperous than some of their neighbors (compare, for example, the contemporary cemeteries at Lefkandi and Vergina especially) or, equally, that they felt no need or desire to furnish the dead more lavishly. Coupled with this was the evident lack of *significant* or *clear-cut* distinction among graves, so although different tomb types existed side by side, there was little difference in the quantity or quality of offerings and it was not possible to discern the age or sex of individuals on the evidence of any feature or features other than the study of the human remains themselves. This was common to all tombs and there was no outstanding indication of social differentiation based on the evidence of tomb type, tomb contents, or burial custom (see further Brown 1981; O'Shea 1981), as for instance in eighth-century Argos (Hägg 1983b:27–31), and certainly no specific case of an individual or group of individuals blatantly singled out like the so-called Hero and Heroine of Lefkandi (Popham, Touloupa, and Sackett 1982b; see further Farnell 1921; T. Price 1973; Coldstream 1976; 1977:341–357; Snodgrass 1982c; Mazarakis-Ainian 1985; Strøm 1985:144–146, who interprets the structure excavated by Schliemann [1878:248, pl. F] in terms of a sacrificial closing of the cult of the dead; Calligas 1988; Lambrinoudakis 1988) or, to a lesser extent, the "warrior inhumation" in the East cemetery at Lefkandi (Popham, Sackett, and Themelis 1979–80:160–161, 206). Despite the fact that a number of tombs in the Early Iron Age cemetery at Torone did stand out, either in terms of tomb type or quality and quantity of the grave goods—such as Tombs 7, 9, and 104—these were hardly extraordinary.

Any number of conclusions may be drawn from this evidence, none of which is either wholly supported or negated by the evidence at hand. It may be that the cemetery on Terrace V represents the burial ground of a particular group within the community, say a family, who used the cemetery over a number of generations and who disposed of their dead in a similar manner whether they were adult males, females, or infants/children (for family burials see Thompson and Wycherley 1972:10–11; Hägg 1980; Humphreys 1980; Sourvinou-Inwood 1983:44, n. 66). Such a view presupposes the existence of other burial grounds at the site, which is supported by the low percentage of infant/child burials. But whether or not there were other cemeteries, a more traditional and straightforward explanation might be to regard the cemetery as representative of the whole community and, consequently, the paucity of *kterismata* and lack of social differentiation in burial custom as reflecting a small village where every individual, including the very young, was important for its survival (cf. Sourvinou-Inwood 1983:42; Bowra 1962:143).

Whatever truth there may be in such statements, they are only part of the picture. The discussion of the Early Iron Age cemetery at Torone in terms of tomb type, analysis of tomb contents, age and sex identifications, as well as burial customs and funeral rites represents specific viewsheds into certain aspects of the funerary ritual, but not of the overall structure of the cemetery. To measure structure better, particularly with a view to a comparative approach with other contemporary cemeteries, I adopted a quantitative approach based on the technique of componential analysis, first adopted by scholars such as Saxe (1970), Brown (1971b) and Tainter (1975; 1977; 1978) and elaborated by Ian Morris (1987) in the context of Early Iron Age Greece. Following Morris, I laid out a key diagram (**figs. 214a–b**). Each of the columns a–f represents an important dimension of funerary ritual in which the burials differ. The variables identified here are (a) the method of disposal of the corpse (inhumation versus cremation), (b) single as opposed to multiple tomb, (c) the presence/absence of burned debris in the tomb pit, (d) tomb type, (e) orientation, and (f) grave goods. There are therefore six dimensions of variability, with the mode being a2/b1/c2/d4/e9/f1. The measurement of variability is tabulated on **figure 215**.

Any comparison with contemporary cemeteries elsewhere in the Greek world where similar analyses have been carried out was hampered by the fact that the relative chronology of the Torone cemetery was not fine grained (see above and chapter 5). Although some form of chronological distribution of tombs was discernible (see **fig. 195**), this was nothing like what was possible in the contemporary cemeteries of, for instance, Athens (Krause 1975; Morris 1987) and Lefkandi (Popham, Sackett, and Themelis 1979–80). Moreover, there were several distinct cemeteries at both Athens and Lefkandi and only one known Early Iron Age cemetery at Torone. Because of these problems, it was difficult at Torone to distinguish, through a key diagram, what exactly was being measured, and it was soon clear that a combination of both synchronic differentiation and diachronic change was the visible result of this exercise. Nevertheless, taking the measurement of variability (V score) at Torone at face value, and comparing it with the results obtained for the various burial grounds at Athens, produced some interesting results. This is, of course, bearing in mind that the Torone cemetery covers a period of more than two hundred years, whereas the Athenian cemeteries cover considerably shorter and more chronologically refined time spans.

The relatively low V score of .1673 at Torone was closest to (in chronological order), Kerameikos Zeitstufe 4 (V = .1425), Zeitstufe 10 (V = .1667), Phase 4 (V = .1720), and South Mound Phase 8 (V = .1667) (Morris 1987:118). The V score for Zeitstufe 4 was based largely on the position of the urn hole in standard Athenian trench-and-hole tombs, and the contrast between the last of the Early Protogeometric cremations of Zeitstufe 3 and those of Zeitstufe 4 was treated by Morris (1987:121) "as a purely chronological process." With regard to Zeitstufe 10, Morris writes:

> Only three adult graves survive from Zeitstufe 10 in the Agia Triada area (V = .1667). This is very unfortunate, as Zeitstufe 10 is surely one of the most important stages in the development of the cemetery, linking the Late Geometric diversity and the Archaic

> homogeneity. The trends . . . might be indicators of a real decline in diversity in the closing years of the eighth century, but the Zeitstufe V score cannot be used to support the argument. (Morris 1987:126)

The low V score of Morris's (1987:130–131) Phase 4 (?ca. 610–590 B.C.), a wonderfully precise period of twenty years, represents a dip between two periods of high variability (Phases 3 and 5, ca. 630/625–610 B.C. and 590–570 B.C., scored .3225 and .2740, respectively). The relatively low V score for Kerameikos South Mound Phase 8 (.1667) is at odds with the high score of Phase 8 (ca. 525–500 B.C.) generally (.3220), which Morris (1987:134) characterizes as "the time of the most radical transformation since 700 B.C." and the final transformation, around 510 B.C., as a revolutionary one (cf. Stupperich 1977:82; Knigge 1976:14). It is worth adding that this transformation fits in with the reforms of Kleisthenes and the development of radical democracy in Athens, known from the literary sources, and that the preceding period (Phase 7, ca. 550–525 B.C.) enjoyed an even higher V score of .3755. Although Morris was able to discern notable changes or shifts in structure and variability, the measurement of variability did not produce a wholly undistorted map of structure, nor was it completely free of the impact of diachronic changes in symbolism, but then again, the archaeological record rarely provides such precision.

Using this evidence as a base, and going against other explanations of variability (e.g. Braun 1981; O'Shea 1984:256–285), Morris discounted alternative scenarios, such as increases in social complexity, diachronic changes in funerary symbolism, and leveling ideologies, and argued "that restrictions on formal burial constitute the best explanation of the patterns" (Morris 1987:139). Oddly enough, this rang very true for the Early Iron Age cemetery at Torone, where it was clear at least that a significant proportion of the preadult population were excluded from the Terrace V burial ground.

In attempting to apply versions of the key diagram to each of the discerned chronological phases of the cemetery outlined in **figure 195—**an exercise that ultimately proved futile (see above)—an interesting pattern emerged in the structure of the cemetery simply by looking at the tombs (cf. Goldstein 1981). As I noted above, a number of discrete, if tenuous, clusters of tombs could be discerned. It was relatively common to find, in an otherwise homogenous group of cremations or inhumations, an "odd-ball": a tomb different in some important respect—whether chronologically or in terms of its content or type—from those immediately around it. This clustering cut across all traditional aspects in the study of mortuary remains. The clusters are not distinguished on the basis of inhumation and cremation, nor are they based on similarities or differences of tomb type, tomb contents, or any of the other variables identified in a key diagram. Moreover, the distribution of these clusters was not determined or defined by age and sex identifications, nor was it based on the presence or absence of organic remains (animal bones, seashells, carbonized seeds, etc.). The clustering is above all else *spatial* and is based on the location of tombs in relationship to one another; it is represented schematically on **figure 216**.

Cluster A. Beginning in the northern part of the cemetery, thirteen tombs, including several that were stratigraphically interrelated, as well as tombs that could be dated early and relatively late in the period of the use of the cemetery, formed what appeared to be a discrete cluster. Tombs 1–4, 17–25, shown as cluster A on **fig. 216**, were spatially distinct from the tombs further south, and comprised four inhumations and nine cremations. Of these thirteen tombs, the inhumations stood out, as did two of the cremations (Tombs 24, 25), both of which contained pyre debris in their tomb pits (**fig. 194**). The tomb most exceptional to the ideal modal type was Tomb 4, the solitary adult inhumation in this north group of otherwise child or adolescent inhumations and urn cremations. Although the tomb was very poorly preserved with no surviving *kterismata*, Musgrave was able to suggest that the deceased was probably a female (appendix A). The two exceptional cremations, Tombs 24 and 25, contained a female and a male, respectively. Moreover, the pottery from both these cremations was stylistically earlier than that in other cremation tombs in the cluster, such as Tomb 22, which could be dated as Late Protogeometric on the basis of the imported Euboian amphoriskos

T22-2. The pattern seemed to suggest that an individual such as the deceased in Tomb 4, or a group such as those in Tombs 4, 24, and 25, were both earlier and of a higher status than the deceased in the other tombs of the cluster. These individuals—or the individual of Tomb 4—were the leading, and as it turned out older, members of a discrete group who were buried first and around whom other members of the same group were laid to rest. Whatever this group represents demographically, it included males and females, adults, adolescents, children, and an infant (Tomb 21) aged 7–8 months at death. Moreover, this burying group included individuals who spanned several generations, covering Phases I–IV of the cemetery (**fig. 195**) and virtually the entire period of use of the cemetery. It is also worth noting that, according to the key diagram (**fig. 214b**), the two outstanding cremations in this cluster, Tombs 24 and 25, were of the same type as a number of early tombs in the area of the Early Iron Age cutting further south, including Tombs 95, 97, 98, 105–107, 109, 111, 114, 116–117, 119, 126–128 (cf. **fig. 194**).

Cluster B. Immediately to the south of cluster A, and extending to the SW, was a larger cluster of tombs consisting of Tombs 26–46 and perhaps the poorly preserved Tomb 53, which belonged either with this cluster or else with cluster C. Centered in the area of Trench 6 (**fig. 21a**), this cluster, with the possible exception of Tomb 53, was separated from cluster C by what seemed an area kept intentionally free of tombs that, although partially obscured by domestic walls of the Classical period, was quite clear. The westernmost tomb of cluster B (Tomb 43) was separated by a distance of almost 1.5 m from the easternmost tomb of cluster C (Tomb 52), and Tombs 28 and 48 were separated by a distance of almost 2.5 m. As was the case with cluster A, cluster B included a variety of adults, adolescents, children, and at least two infants (Tombs 29, 43). Unlike cluster A, however, cluster B was chronologically more homogeneous (largely restricted to Phase III), and no one tomb or groups of tombs could be distinguished from the remainder. It is worth stressing, though, that many of the tombs in this cluster were encountered in a very poor state of preservation. Although it is possible that several tombs (e.g., Tombs 26, 38, 41, 46) stand out from the rest, their state of preservation was such that no firm conclusion was possible.

Cluster C was located to the south of cluster A, extending to the SE, and immediately east of cluster B. It consisted of eleven tombs (Tombs 47–52, 54, 56–59), all of which were cremations. Largely comprised of adults, the cluster did include at least one infant cremation (Tomb 57). Smaller than clusters A and B, cluster C was chronologically fairly consistent, although the difference in absolute time between individual tombs such as Tombs 47, 51, and 52, on the one hand, and Tomb 56, on the other (Phases III and IV), may have been considerable, covering several generations. Of the eleven tombs in this cluster, three (Tombs 47, 51, 52) stand out as being both more richly furnished than the others and stylistically earlier. These included two females (Tombs 47 and 51); the sex of the individual in Tomb 52 could not be identified with certainty. The ash-urn of Tomb 52 was a neck-handled amphora, and *kterismata* included an iron knife and a whetstone. Although it is tempting to see the occupant of Tomb 52 as male, sex could not be established through the study of the physical anthropology. On the basis of the preserved evidence, it seems reasonable to conclude that Tombs 51 and 52, together with 47, were the original interments of this cluster around which the other tombs were located.

Cluster D. Although consisting of only four or five tombs (Tombs 55, 60–62, and perhaps 63), and despite the fact that Tomb 56 of cluster C was located close to Tomb 60 of cluster D, this small cluster was nevertheless spatially quite distinct from both clusters C and E. Of the four tombs clearly of this cluster, only one (Tomb 60, an adult male) was sufficiently preserved to allow determination of age and sex. Tomb 60 is also the earliest of the four (Phase III, the others being either Phase III/IV or IV) and the one that stands out from the others in terms of its tomb contents.

Cluster E. This cluster, located near the eastern edge of the cemetery, consisted of ten tombs (Tombs 64–73) and perhaps an eleventh (Tomb 63), all of which were cremations. Of the tombs yielding diagnostic human remains all were adults, although the individual in Tomb 70 was described as a younger adult (appendix A). As discussed above, the details of Tomb 66 were particularly

close to those of Tomb 57 and it is possible, if not likely, that it was an infant cremation, although no diagnostic cremated bone was preserved. Located in the SE corner of Trench 13, in the NE corner of Trench 46, and in Trenches 13 and 46 East Baulk, cluster E was spatially distinct from cluster C to the west and cluster D to the north. Although all tombs are assigned to Phase III/IV, the pottery deposited in some tombs is stylistically earlier than that in others. The earliest, and most richly furnished tomb—Tomb 67—was of an adult male, whose ash-urn (the belly-and-shoulder-handled amphora **T67-1**) was located in the very center of the cluster, around which the other tombs of the group appear to have been arranged.

Cluster F. This small cluster, located at the very eastern edge of the cemetery and immediately to the south of cluster E, comprised five tombs (Tombs 74–78), which although chronologically similar to cluster E were spatially distinct. The diagnostic human remains recovered from these tombs were all adults, including at least one male (Tomb 76) and one female (Tomb 75). The pottery recovered, particularly from Tombs 74 and 75, was stylistically earlier than others, such as Tomb 77, which was among the latest tombs of the cemetery. The most richly furnished burial, and one of the earliest of the cluster, was the female in Tomb 75, and she may well have been the first of this discrete burying group to have been laid to rest.

Little can be said about *Cluster G*, which was comprised of two very poorly preserved cremations (Tombs 79, 80), except that the two tombs were spatially quite distinct from all other groups. *Cluster H*, on the other hand, is among the most interesting in the cemetery. Consisting of Tombs 81–85, this cluster of five tombs includes the very latest tombs in the cemetery, located NE of the Early Iron Age cutting and in the area between the earlier clusters B, N, and I. The five cremations include several adults, with at least one female, and two tombs containing the cremated remains of an adult and an infant/child. Tomb 85 appears to be earlier than the other four tombs, although Tombs 81–84 are all more richly furnished. This was in all probability the last cluster of tombs to have been interred in the burial ground, in an area that was, throughout the earlier periods of the use of the cemetery, free of tombs.

Cluster I. Located due east of the Early Iron Age cutting and SE of cluster H, cluster I comprised nine very poorly preserved tombs. The diagnostic remains of these nine cremations were mostly of adults of undetermined sex, although at least one tomb (Tomb 87) was of an infant. The cluster seemed to span several generations (Phases III–IV, most III/IV); the earliest tomb appeared to be Tomb 94, although the imported Athenian open vessel may be as early or earlier. As was the case with cluster B, no one tomb or groups of tombs could be distinguished from the remainder with any degree of conviction, although it is worth stressing that many of the tombs in this cluster were encountered in a very poor state of preservation.

The next eight clusters were all located in the area of the Early Iron Age cutting in the SW of the cemetery (**figs. 17**, **216**), which itself represents perhaps the most important spatial aspect of the burial ground. This area, comprising both inhumation and cremation tombs, includes all the earliest burials in the cemetery. Although it may be argued that the tombs in this area are better treated as one single cluster, the burials appear to form several distinct clusters, one of the most obvious being *Cluster J*. Consisting of seven tombs in all, four inhumations (Tombs 5–8) and three cremations (Tombs 95–97), cluster J includes a number of inhumed and cremated adults as well as a child, an adolescent, and an adult female all in the one inhumation pit grave (Tomb 5). Although all seven tombs are very early, it is difficult to judge which is earlier than the other on the basis of grave goods as these were quantitatively meager. The ash-urn of Tomb 95 seems stylistically a little later than that of Tomb 96, but a Late Mycenaean date for the amphora **T95-1** cannot be categorically dismissed. It is clear, however, that the ash-urn of Tomb 96 can be assigned to the so-called Submycenaean phase, and this tomb was found above the earlier Tomb 6. Although it is possible that Tomb 96 represents an earlier cremation disturbed by Tomb 6 and subsequently replaced directly above the inhumation, this could not be established with certainty. The three cremation tombs do not differ significantly from one another in terms of grave goods, and despite the fact that Tomb 5 is a multiple grave, the two tombs that

stand out for their placement at the center of this cluster and for the quality and quantity of their grave goods are Tombs 6 and 7; of these, Tomb 7 is more richly furnished than Tomb 6. Tomb 6 is an adult male aged about 40 years at death, Tomb 7 an adult female of about 30 years. It may well be that one or other of these tombs, or both together, represent the earliest burials of this cluster.

Cluster K. Representing the westernmost tombs in the cemetery, cluster K is a distinct group of seven inhumations (Tombs 9–14, 16). Although Cremation Tomb 98 is located slightly closer to Tomb 11 than it is to Tombs 107 and 108 of cluster N, it is perhaps better placed with the latter, or conceivably with cluster L. On account of its uncertain relation to clusters K, L, and N, I have labeled the tomb separately on **figure 216**, so as not to force it with any one group. Cluster K includes six adult males (one each in the multiple Tombs 9 and 16, as well as the individuals in Tombs 10, 11, 13, 14), three adult females (two in Tomb 9, one in Tomb 16), an adolescent of undetermined sex in Tomb 9, and a child in the Pithos Inhumation Tomb 12. Among the adults, the two adults males in Tombs 10 and 14, aged 45+ at death, were among the oldest individuals to have been buried in the cemetery. Although the male in Tomb 10 was buried with considerably more *kterismata* than found in any other burial in the cluster, the tomb that perhaps stands out more than the others is Tomb 9, the sole example of an inhumation cist tomb in the entire cemetery and a tomb that was used to inter four individuals. Moreover, the solitary *kterisma* in Tomb 9, the fragments and chips of an amphoriskos beyond repair, can be assigned as Final Mycenaean/Submycenaean, and is therefore quite early (the *kterismata* in Tomb 10 cannot be dated with any precision). It is worth adding that Tomb 10 cut across the lower portion of Tomb 11 and is therefore later than that tomb; as such, Tomb 10 cannot be the earliest in this cluster of tombs. Tomb 9 was probably the first to be interred in this cluster of burials, which included some of the longest-lived and conceivably most venerable individuals on Terrace V, and perhaps even the earliest burial in the entire cemetery.

On **figure 216** I have distinguished between clusters L and M, but this is perhaps overrefinement and it would be better to treat the two as a single cluster. *Cluster L/M* comprised a total of nine tombs: one inhumation (Tomb 15)—stratigraphically interrelated with Tombs 101 and 102 (see chapters 2 and 3)—and eight cremations (Tombs 99–106). There was a total of nine adults, including two in Tomb 103 (the cremated remains of Tomb 99 were never analyzed), of which four were males (the individuals of Tombs 15, 100, 101, and one of the two adults in Tomb 103) and one female (Tomb 104). The earliest tomb in the cluster appears to be that of the adult male in Tomb 101 (Submycenaean), but the most richly furnished grave, and that which stands out most vividly was the cremation cist tomb containing the adult female, Tomb 104 (Early Protogeometric). In the conventional chronology of the Aegean Late Bronze and Early Iron Ages, **T101-1** would be earlier than **T104-1**, but it is possible that the two overlap chronologically and are more or less contemporary (see Rutter 1978; Smithson 1977; 1982). In any case, the male in Tomb 101, perhaps closely followed by the female in Tomb 104, were the first two burials of this cluster, around which the other tombs were arranged. If clusters L and M are, however, regarded as separate, then Tomb 101 would be the earliest and most richly furnished of cluster consisting of Tombs 15, 99, 100, 101, and 102, and Tomb 104 the earliest and most lavishly furnished of the cluster consisting of Tombs 103–106.

Cluster N. This cluster was largely located in the northern part of Trench 22 and appeared to be quite distinct from clusters O and P to the south and SW, respectively. Although there is something of a gap between Tombs 109 and 110, this particular area was much disturbed by the Classical wall *e* (**figs. 29a–c**). As was noted above, Tomb 98 may belong with this cluster, but this remains uncertain, and the tomb is marked separately from the others of this cluster on **figure 216**. The eight cremations of cluster N contained the remains of seven adults (in Tombs 107–111, 113–114), of undetermined sex, and two children in Tomb 112. On the basis of the *kterismata* deposited in tombs, the earliest, stylistically, would be Tomb 109, and it is possible that this was the earliest tomb of the cluster around which the others were arranged.

Cluster O, located in the south-central portion of Trench 22, comprised four cremation tombs

(Tombs 115–118), which yielded the remains of four adults and a fifth individual of uncertain age or sex in one of the two ash-urns in Tomb 118 (appendix A). In terms of both chronology and the quality and quantity of their *kterismata*, it is difficult to distinguish among the four, except, perhaps, that the two bronze fibulae and the *Spondylus* shell in Tomb 115 stand out as exceptional finds in a group of otherwise fairly homogeneous cremations.

Little can be said for *Cluster P*, owing to the poor state of all four cremations. These were located in the SE part of Trench 22, extending into the NE portion of Trench 9. The human remains in Tombs 119 and 121 were nondiagnostic; those in Tombs 120 and 122 represent an adult of undetermined sex and an adult female, respectively. Owing to their poor state of preservation it is difficult to distinguish among the four, except to say that all four are relatively late and must number as the latest tombs in the area of the Early Iron Age cutting. On the basis of comparanda from other parts of the Greek world, the shoulder-handled amphora in Tomb 120 must date to the closing stages of Late Protogeometric or Early Geometric, and the fragmentary amphora in Tomb 122 is probably later still.

Cluster Q, located in the central and NE quarter of Trench 9, comprises at least six cremations (Tombs 123–128) and perhaps also Tomb 129, which probably belongs with this cluster rather than with cluster R. Four of the tombs (Tombs 124–125, 127–128) are of adults of undetermined sex. Of these, Tomb 123 contained an adult female and a fetus/neonate, Tomb 126 contained a child, and Tomb 129 contained the cremated remains of an adult. Of these, arguably the earliest and most richly furnished grave was Tomb 124, though the differences in the quality and quantity of *kterismata* between this grave and several others of the group were not great. Moreover, Tomb 124 was located at the very center of this cluster, around which the other tombs appear to have been laid out.

Cluster R. The cluster located at the very southern extreme of the cemetery comprised four tombs laid out in a line running more or less north–south (Tombs 130–131, 133–134). Tomb 132, located almost 2 m to the west, is perhaps best seen as an outlier; the state of preservation is such that little can be said about this tomb, and it is perhaps best omitted from this cluster. Of the four remaining tombs, Tombs 130 and 133 contained the cremated remains of younger adults, and Tomb 134 contained the remains of an adult of undetermined sex. There was little to distinguish these four cremations on the basis of tomb type or quantity or quality of *kterismata*. The ash-urn of Tomb 134 may be earlier than the other four, although even this was difficult to establish, and it may be that this tomb was the earliest of this cluster.

This recurring pattern of discrete clusters or groups of burials organized spatially with relation to one another, which cuts across variables such as method of disposal of the corpse, form of the funerary facility, orientation, and grave goods, presents a different view of the Early Iron Age cemetery at Torone. That the clusters represent discrete and distinct burying groups is clear, but what exactly these groups represent demographically is difficult to say. They may well represent "families" in Early Iron Age Torone, but the problem of accepting the family as the critical unit is that the number of individuals in any one family, particularly in those clusters that clearly span several generations, seems too small. Moreover, there is the fact that only a very small percentage of the preadult population as a whole is buried in the cemetery, which would also argue against the family as the primary unit defining these groups.

The relatively high percentage of females among those tombs that stand out in individual clusters for their early date and more richly furnished grave goods is of interest, as it suggests that if these clusters have any meaning, it was not always a male that assumed primary importance. Equally interesting is that some, but very few, infants and children found their way into this burial ground, often enjoying the same type of tomb as adults, while the vast majority of infants/children were excluded from burial in the Terrace V cemetery. The issue of restriction/exclusion of certain members of the community at large, the prominence of the location of the cemetery on Terrace V in the landscape, standing as it does above the settlement of the living, coupled with the fact that there was little *significant* differentiation among tombs, suggests *not* a small village where every person, including the very young, was important

for its survival, but rather a highly ranked community. As outlined above (see pp. 351–353), essential to the Saxe/Goldstein hypothesis was the use and/or control of crucial but restricted resources (Saxe 1970:119–121), and more specifically the critical resource—whatever that may be—passing from parent to offspring or among various different members of a community (Goldstein 1981:61). The logic linking burials and property transmission has been well covered by Ian Morris (1991; 1992:22–23), and even earlier by Alexiou (1974), particularly with reference to Classical Greece. In discussing the phenomenon of ritual economy, Metcalf (1981:571) refines the argument of the transfer of crucial resources, suggesting that where an emphatic claim is to be made, the funerary ritual is held on a larger scale, whereas in those cases where less is at stake, a simpler affair serves the ritual function equally well. Moreover, Meggitt's (1965a; 1965b) work in New Guinea, cited above, has shown that, in the specific case of the Mae-Enga of the Highlands, the scarcity of the crucial resource resulted in a structured descent system that was patrilineal and patrilocal. The prominence of females in the Terrace V cemetery at Torone may suggest a matrilineal or matrilocal inheritance system, whether the crucial resource was land, livestock, or access to metal ores (see chapter 8), although here we enter the realm of pure speculation (on this aspect see further Atchity and Barber 1987; Finkelberg 1991).

Whatever the kinship structure in Early Iron Age Torone, the important point was that differentiation in terms of status and rank was displayed not at the level of the tomb, but at the level of the cemetery. The clear exclusion of a significant portion of the preadult population of Torone in this particular cemetery goes hand in hand with the relatively low number of adults laid to rest in the Terrace V cemetery over a period of more than two hundred years, which suggests that a significant portion of the adult population was also excluded from this cemetery and buried elsewhere. Rather than argue, as has Snodgrass (1983:167–169; cf. Popham, Sackett, and Themelis 1979–80:202–203) in the case of contemporary Lefkandi, for ridiculously low overall Early Iron Age population estimates, the low figures may well reflect the process of exclusion or restriction from burial in particular cemeteries (cf. Little and Papadopoulos 1998; Shay 1985). Blatant differentiation among individual tombs in any cemetery in this scenario is far less important than getting into a particular cemetery. In the Early Iron Age cemetery at Torone, as in the Arlington cemetery in Washington, D.C., status and rank were expressed by the process of *being buried in that particular cemetery.*

NOTES

1. The tomb has been visible since antiquity, but the identity of the occupant(s) remains unknown. The usual name—Treasury of Atreus—is modern, but it is based on a misunderstanding dating back to Roman times (see Higgins 1981:87), when these tombs were thought to be the treasure chambers of powerful heroic kings. Its other modern name, the Tomb of Agamemnon, is equally without foundation. The tomb is dated to the thirteenth century B.C.
2. Jørgensen 1987:20; Jørgensen's chronological divisions are suspiciously neat and fine grained: Phase C1a: A.D. 175–215; Phase C1b: A.D. 215–255; Phase C2a: A.D. 255–295; Phase C2b: A.D. 295–335; Phase C3: A.D. 335–375.
3. Metcalf and Huntington 1991:16; J. Brown 1995. The hypothesis states:

   A. To the degree that corporate group rights to use and/or control crucial but restricted resources are attained and/or legitimized by lineal descent from the dead (i.e. lineal ties to the ancestors), such groups will, by the popular religion and its ritualization, regularly reaffirm the corporate group and its rights. *One* means of ritualization is the maintenance of a permanent, specialized, bounded area for the exclusive disposal of the dead.

   B. If a permanent, specialized bounded area for the exclusive disposal of the group's dead exists, then it is likely that this represents a corporate group that has rights over the use and/or control of crucial but restricted resources. This corporate control is most likely to be attained and/or legitimized by means of lineal descent from the dead, either in terms of an actual lineage or in the form of a strong, established tradition of the critical resource passing from parent to offspring.

   C. The more structured and formal the disposal area, the fewer alternative explanations of

social organization apply, and vice versa." (Goldstein 1981:61)

4. This was especially the case with House 2 in Trenches 41 and 52 (**fig. 10**). In the SE quarter of the excavated area on Terrace IV the structures encountered in Trenches 38, 3, 39, and 53 had their back walls built up against the terrace embankment (fifth- and fourth-century B.C. construction), consequently providing a terrace retention system that did not require a distinct retaining wall: see esp. Cambitoglou 1982: pl. 53b. For a stone stair communicating between Terraces IV and V see **fig. 10**.
5. The Classical steps communicating between Terraces IV and V would place the presumed Classical path on Terrace V just to the east of Trenches 58 and 59.
6. For cemeteries in Athens during various periods see esp. Young 1949a; Smithson 1968; Kurtz and Boardman 1971:49–50, 69, 91–96; cf. Travlos 1971:320, pls. 419–420; Thompson and Wycherley 1972:9–10. For other parts of Greece see Blegen, Palmer, and Young 1964:13, n. 5; Kurtz and Boardman 1971:188–189.
7. Styrenius 1967:151. The observation of a repeated feature, however significant, does not in itself necessarily establish date, and as Styrenius (1967:25) noted, it was only when stylistic evidence and horizontal stratigraphy agreed that one was on comparatively safe ground in assigning a given tomb to a stylistic phase. For the establishment of the chronological sequence in the case of Submycenaean Athens in the first instance see Styrenius 1962:103–123; Kraiker and Kübler 1939:51–88; Furumark 1944:194–265. For further useful comments see the reviews of Styrenius (1967) by Desborough (1968:228–229) and Kraiker (1969:599).
8. It is, however, possible that **T96-1** may have been an earlier cremation, disturbed by Tomb 6, and subsequently replaced at a level slightly higher than the inhumation. The handle fragment indicated on **fig. 24c** near the outstretched left hand of the deceased proved to be one of the handles of **T96-1**.
9. As Snodgrass (1971:141–147) has argued, the evident division between inhumation and cremation need not be necessarily regarded as a primary criterion in determining cultural implications and his citing of the developments in modern Britain is particularly instructive. The differences of the two rites are discussed below; here my aim is to discern possible chronological patterns in the distribution of tombs.
10. The age at death of the individual of Tomb 1 is not known on account of the circumstances of preservation; the discovery of a tooth, perhaps of a child aged 6+ years at death, in the vicinity of the tomb is not necessarily to be associated with this tomb. Tombs 2 and 3 are of children aged 13–14 and ca. 7 years at death respectively. The age at death of the individual in Tomb 4 is not known.
11 It should also be noted that there were no inhumations outside the area of the two groupings already noted. The latest inhumation is perhaps Tomb 13 on the basis of the Thessalian parallels for the kantharos **T13-1**.
12. The difficulty of defining more clearly the area of the cutting was further confounded by the fact that the area was excavated over the course of several seasons; the need to backfill meant the cutting was never fully exposed at any one time.
13. Blackened earth, sometimes with burned sherds, was encountered in the vicinity of Tombs 60, 61, and 62; in the area between Tombs 43 and 46 and also between Tombs 62 and 63; and just north of Tomb 70. In the case of Tombs 60 and 132 a small quantity of blackened earth, but no sherds, was encountered in the tomb pit.
14. It is perhaps worth noting here that Frankel (1975), in considering Bronze Age burial customs in Cyprus, outlined the importance of vases bearing potters' marks, in terms of their distribution among tombs in a cemetery and their potential use in demonstrating relationships between various burial groups. Statistically, the eight vessels with potters' marks that were found in tombs at Torone (**fig. 191**) were too few to point to any clear pattern of distribution.
15. For a survey of Early Iron Age tomb types see esp. Kurtz and Boardman 1971:21–67, 170–187, 342–351. For a site index of tombs/cemeteries of the period, Syriopoulos 1984 (esp. 521–547, 622–681, 822–903) should replace the earlier site indices of Desborough (1952:306–307, 315–328; 1964:264–270; 1972:361–380) and Coldstream (1968:9ff, 335ff, 399ff; 1977:373–383). For synthetic surveys of the material see Snodgrass 1971:140–201; Desborough 1972: 266–277. Among the more important regional surveys are Pini 1968; Courbin 1974; Hägg 1974. For bibliographies and site indices of the Bronze Age material see esp. Ålin 1962; Vermeule 1972:353–

383; Hope Simpson 1965; Hope Simpson and Dickinson 1979; and, more recently, Dickinson 1994:208–233; Cavanagh and Mee 1998.

16. The damage caused to Tombs 8 and 16 was the result of Classical building activity; in the case of Tomb 3 partial damage was caused by the later Cremation Tomb 18; the poor state of Tombs 2 and 4 was mostly the legacy of the modern plow.
17. The lower part of Tomb 14 (to the NW) was cut across by the later Tomb 13, which perhaps destroyed any possible covering over that part of the earlier inhumation. The fairly well-preserved *kterismata* toward the lower parts of the skeletons of Tombs 10 and 13 would preclude any significant damage and, as such, the partial stone covering over the cranial region appears to have been an intentional feature. A similar occurrence is well attested in the case of the post-Byzantine inhumations on Terrace IV, and a similar, partial covering, has been noted with tile graves of the Classical period in Athens: see Kurtz and Boardman 1971:97.
18. A small sample of the dark-colored earth from the majority of the inhumations was water sieved, but in the majority of cases no obvious organic material was retrieved, except in the case of Tomb 9. Analysis showed that the small sample of dark earth directly below the West Skull of Tomb 9 yielded sporadic remains of charcoal (see appendix D).
19. Note the Submycenaean tomb at Corinth thought to be a secondary burial (Williams 1970:15). Cf. generally the fourteen earth-cut graves covered with stone at ancient Elis, each containing the remains of one to three individuals whose original positions were difficult to determine on account of later disturbance (Leon 1961–63:33–58; Yalouris 1964:181).
20. For pithos tombs (i.e., a complete vessel in which the deceased was inhumed) see generally Snodgrass 1971:183; Desborough 1964:39–40; 1972:268–277, esp. 272; Dickinson 1983:58. For Crete see Pini 1968:11–13, 75–94 (cf. Pendlebury 1963:102, 155, 319, 346, 357, who notes the occurrence of pithos burials in Crete into Hellenistic times); also Effenterre 1948. For the Argolid, see esp. Hägg 1974:136–149; for the increase of the type in the Argolid during Geometric times see Hägg 1983b:27–31 (cf. Courbin 1974). For other parts of Greece see Rey 1932:40–44; and esp. 9, fig. 3; 10, fig. 5 for the survival of the type in Albania into Archaic and later times; Nicholls 1958–59:44–46 (Smyrna); Mastrokostas 1961/62:183 (Kalydon); Dekoulakou 1973; 1982; McDonald, Coulson, and Rosser 1983:261, fig. 4.1. For Bronze Age pithos burials see Dörpfeld 1927:249, Tabelle A; Hammond 1973:191, pl. 30c; Milojcić 1961:10–12; Korres 1977: 262–288, pls. 157–160; 1978:326–332, 352–359; 1979:143–149. For Anatolia see esp. Mellink 1964:271–274, pl. 77, figs. 2–4; pl. 78, figs. 5–7, 9 (with references). See also Schachermeyr 1980: 322–328. More recently the incidence of pithos burials in parts of Anatolia and the Near East has been taken as evidence for the arrival of Indo-Europeans: see Carter and Parker 1995.
21. Two of the cup/kyathoi contained the cremated remains of infants (**T43-1**, **T57-1**); the bone from the third, **T66-1**, was nondiagnostic.
22. This method was also common in Athens (see Styrenius 1967:94), although there the tendency was to place the vessel used as lid (normally kalathoi, skyphoi, pyxides, kantharoi, and cups) in the mouth of the ash-urn the right way up (this is best illustrated in the case of the Early Geometric "tomb of a rich Athenian lady" [Smithson 1968: pl. 18; Snodgrass 1971:145, fig. 57]), although in the case of, among others, Kerameikos Tomb PG C, a bowl was placed upside-down over the ash-urn (Kraiker and Kübler 1939:104–105, pl. 33).
23. For similar fragments of bronze found inside an ash-urn at Troy see Blegen, Caskey, and Rawson 1953: fig. 341, inv. 34.484. For the melting points of various metals see Hodges 1964:97 (cf. Popham, Sackett, and Themelis 1979–80:201, esp. 380, n. 18). The question of pyrotechnology in more fully treated in Papadopoulos 1989a. For the temperatures required to reduce a cadaver to the condition in which the bone was found in the urn cremations see C. Wells 1960:29–37.
24. Although the number of individuals and their age at death of many cremation tombs is not known on account of either the poor state of preservation of the tomb or the incomplete collection of cremated remains, the total number of infants and children is unlikely to be far from the truth since their skeletal remains are comparatively easy to distinguish. The one notable exception may be Tomb 66 (see below).
25. Cf. Snodgrass 1971:151–154; for intra- and extramural burial see esp. Sourvinou-Inwood 1983: 43, esp. n. 61; Hägg 1974:87–91; B. Wells 1983a: 122–123; Young 1951:67–134; and generally Sourvinou-Inwood 1981:15–39. For views on the

reasons for intramural child burial see Nilsson 1955:175; Burkert 1977:295.

26. Popham, Sackett, and Themelis 1979–80:200–201; for similar pyres in and around Athens see esp. Smithson 1961:151–152 (the better preserved Pyre A measured about 1.00 m across); 1970:203–204; 1974; cf. also the pyres of Donousa (Zapheiropoulou 1969:390–393, pl. 398; Papadopoulos and Smithson 2002). See also the cremation pyre tombs at Eleutherna excavated by Stampolidis (1990a; 1990b, 1994; 1995; 1996:123, 139, figs. 172, 189). For further examples from various parts of the Greek world see Stampolidis 2001.
27. This aspect is more fully treated in appendix A. On the question of temperatures required, see esp. C. Wells 1960:29. The thoroughness of the burning might also indicate the use of animal fat to cover the body of the deceased prior to cremation; this aspect, along with references to the practice in Homer, is discussed by Paidoussis and Sbarounis 1975:142, n. 17.
28. The analyses of the floral remains from the more recent excavations on Promontory 1 are not yet complete, but it is clear that among the plant types frequently represented in the settlement, the olive is one of the most notable in the settlement that was not found in the cemetery.
29. Fuller notes on each group of burned sherds are provided in chapter 3 under each tomb; in most cases the actual total of vessels recovered from the tomb fill could be twice or even three or more times that given on **table 4.7**, which is indicated with a + sign.
30. For Early Bronze Age examples from Lesbos and Lemnos see Lamb 1936: pl. 9, nos. 301, 26, 210, 440; pl. 35, nos. 27–28, 167, 210; pl. 36, no. 258; Bernabò-Brea 1964: pls. 70–73, 132a–b, d–e, 142, 154–147; 1976: pl. 219. See also Benton 1934–15:101–102; Seiradaki 1960:7–9, fig. 4, pls. 2a–e, 4d; see also Döhl 1973:167, fig. 14, B24; 191, fig. 20, A34; pl. 75; Mylonas Shear 1987: fig. 21, nos. 145–146.
31. Wilson (1985:341–343) noted that the tripod vessels from the Early Minoan West Court House at Knossos displayed traces of burning on the interior but not on the exterior, a scenario that implies incense burning. Elsewhere in Knossos tripod cauldrons have been found in a domestic context described as a kitchen (Hood and de Jong 1958–59:188; cf. Evans 1928:135). For the saucerlike brazier and its use as "incense burner" see the fresco of the so-called Young Priestess from the West House at Akrotiri (Marinatos 1972: color pls. J–K).
32. These four instances are those verified by the excavators; Themelis's suggestion (in Popham, Sackett, and Themelis 1979–80:213) that most of the Vergina tombs contained only a simulacrum while the body of the deceased was previously cremated elsewhere awaits the support of hard evidence (cf. Catling 1985).
33. See Meiggs 1982; Cambitoglou, Papadopoulos, and Tudor Jones 2001:55–56. Other, preferred, sources of good quality timber were Cyprus, Syria, and Cilicia, and one may note here the prevalence of cremation among the Phoenicians (see esp. Martin Wedard 1978:247–252 [where much of the earlier literature is cited]). On the question of timber supply and deforestation see Wertime 1982:351–361.

5

The Early Iron Age pottery

Introduction and chronological framework

The pottery presented in this chapter includes all the material from tombs (see chapter 3) and the fragmentary pottery encountered in the various deposits on Terrace V, a selection of which (**1–83**) is catalogued in chapter 2. The pottery that is considered locally produced is treated under the two broad headings: A, wheelmade and painted, and B, handmade. A typology according to shape is presented for each category, supplemented with notes on the fabric, the character of the decoration (where applicable), and technical, quantitative, and other aspects. Imported vessels, which include both wheelmade and handmade vessels as well as the black- and red-slip wares,[1] are dealt with separately and, as far as possible, according to the center or general region where they are believed to have originated.

The provisional nature of the typology proposed here cannot be stressed enough. The nature of the material itself is limited in scope, its state of preservation often fragmentary, and its chronological development far from clearly understood. The emphasis on these limitations is of some importance. As is so commonly the case with Early Iron Age sites in the Aegean, the pottery provides not only the fundamental means of calculating relative time but, as here, the only body of material with which to build up a chronological sequence. Moreover, apart from the evidence of burial custom and of the handful of objects other than pots offered to the dead, it is the pottery that may provide information on the more general social and economic conditions existing at the time of its production. But the limitations of such evidence do not need to be stressed (cf. Desborough 1972:288–293; Papadopoulos 1997b): pots are not people. Whatever qualities or shortcomings the local pottery possesses, it nevertheless constitutes an important, hitherto unknown, and flourishing regional craft.

The first limitation, that of scope, is straightforward: apart from a few of the fragmentary vessels encountered on Terrace V, all the pottery presented here was either deposited in graves or associated with funeral rites. Although Early Iron Age levels have been excavated more recently in the settlement at Torone, it is beyond the scope of the present study to incorporate this large body of material here. It is also worth noting that material contemporary to the cemetery is quantitatively meager in the settlement in comparison with the later periods, particularly material of the eighth century B.C. (Cambitoglou and Papadopoulos 1994). Without a full analysis of the settlement material our knowledge of local and imported wares is limited to that employed as tomb furniture. To what extent this is a true reflection of the range of shapes and decorative elements in an overall conspectus of pots at any given time within the period is difficult to gauge.

The second limitation, that of the fragmentary nature of much of the material, effectively prevented in many cases the application of stylistic criteria in attempting to discern some form of chronological development. In many of the tombs all that was encountered was the base of a once complete vessel serving as ash-urn, sometimes in the company of a second fragmentary base of a pot serving as *kterisma*. In rarer instances a pot found intact in situ crumbled into a mass of unrestorable fragments and chips on removal (cf., among others, **T114-1**), while in some cases a base fragment as encountered (the pot serving as ash-urn and often containing a good quantity of cremated human

bone) was so poorly preserved it was not possible to be certain whether the shape was of open or closed form, let alone reconstruct details of potential chronological value (cf., among others, **T39-1**). In several tombs pottery evidently well worn from normal household use, and sometimes mended with lead clamps, could be used. Even with shapes well represented among the tomb pottery many difficulties were met. Taking the most common shape as an example, there were close to ninety wheelmade amphorai recovered from tombs and various deposits on the terrace and of these the handle types of more than one-half were unknown due to the fragmentary state of preservation; with other shapes similar problems were more pronounced.

The third limitation is perhaps the most fundamental: at present it remains difficult to lay down a rigid system of discerned chronological phases with any degree of conviction as, for instance, Desborough has for the "Dark Age" pottery (Submycenaean–Subprotogeometric III) from the settlement and cemeteries of Lefkandi (Popham, Sackett, and Themelis 1979–80:281–293). An insistence on a similar scheme for Torone cannot be realistically maintained, and even the application of the traditionally much favored tripartite system of Early, Middle, and Late is tenuous until further evidence is at hand.

The upper and lower chronological limits of the period of use of the cemetery, and of the pottery considered, may be generally fixed with reasonable clarity. Within this overall time span, however, chronological development between one phase and another based on stylistic criteria—a tool itself prone to elements of subjective arbitrariness—was not clear (Popham, Sackett, and Themelis 1979–80:282). There is also the issue of the basic assumption of the linear development of style: although one may note similarities and differences among discerned stylistic groups, it remains difficult to be certain whether such differences do in fact belong to successive stages, or are part of parallel development, or synchronic variation (cf. Davison 1961:101; Brokaw 1963). Certainly a number of relative fixed points can be distinguished. A given tomb group, for example, or a number of vessels sharing common features may be assigned a relative time designation; this was sometimes greatly aided by the presence of imported pots from regions where the sequence is somewhat better established, but a more rigid system of subdivisions with any real meaning could not be attempted.

The obstacles to such a system of phases are many. In addition to those limitations already noted may be added the lack of stratigraphical interrelation of tombs and the lack of large tomb groups. Of the 134 tombs excavated, there were only five instances of graves stratigraphically interrelated (see chapter 2), and although some general patterns of horizontal clustering of tombs could be observed, the chronological value of this information was not clear-cut. (It is worth noting that the stratigraphical interrelation of tombs was of primary importance in establishing the sequence, for example, at Lefkandi: Popham, Sackett, and Themelis 1979–80:105–108, 282). The lack of large tomb groups denied useful nuclei of representative shapes used concurrently; the greatest number of unburned pots placed into a tomb besides the ash-urn was four (Tomb 82). A good deal of care was therefore taken in the study of the fire-affected sherds deposited in the pits of those cremation tombs located mainly in the area of the large Early Iron Age cutting. Although in some cases many individual vessels were represented among the sherds, in the main their fragmentary and burned state greatly lessened their value. The importance of large tomb groups in establishing a chronological sequence proved critical in the case of the cemeteries at Knossos, Perati, and Lefkandi (Brock 1957:142; Iakovides 1969–70, vol. 2:391–406; Popham, Sackett, and Themelis 1979–80: 282).

A further issue, more specific to Macedonian sites, is the high proportion of local handmade wares deposited in tombs. The repertoire of shapes of the local handmade wares of Torone, like those of other Macedonian sites, is remarkably standard and traditional and, indeed, most shapes may be traced back to various stages of the Bronze Age, often with little discernible change over the course of a number of centuries. Consequently, little chronological assistance is gained from this material, and the chronology of the handmade shapes is heavily reliant on the evidence of the painted pottery. This problem was particularly highlighted at

Vergina, where of the 544 vases recovered from the tombs excavated by Andronikos only fifty-eight were wheelmade. This made it difficult to arrange the burials there in a chronological series (Snodgrass 1965:238–240; 1971:132–133, 160–163; Andronikos 1969:274–279; Desborough 1972:86, 216–220; Radt 1974:98–147), although the proportion of handmade to wheelmade vessels was considerably lower at Torone. The figure of 139 handmade and 204 wheelmade vessels at Torone is based on a count of local and imported wares deposited in tombs, including burned sherds. A count of all pottery presented in this volume (including that from the kiln) gives the figure of 171 handmade and 269 wheelmade vessels. It was this "conservatism" in the local handmade tradition that led Hammond (1972:266) to the untenable conclusion that some of the Vergina burials were Middle Helladic in date (for a response see Andronikos 1977a:2–3).[2] More recently Hochstetter's study of the handmade wares of Kastanas has provided an exemplary typology ranging in date from ca. 1600 down to 150 B.C., underlining the importance of material from well-stratified settlement contexts (Hochstetter 1984, with an important survey on pp. 276–375 of handmade wares in the Aegean area and the Balkan peninsula more generally; cf. the complementary material from Assiros [Wardle 1980]). Although it provides a useful and much needed body of comparative material, there are certain differences among the wares of Kastanas, those of other parts of Macedonia in general, and those locally produced at Torone beyond the differences between material from a settlement site rather than from a funerary site. At Kastanas (Hochstetter 1984:12, fig. 1) handmade wares account for 64–88 percent of the total pottery, the highest figure being typical of Level 7 (= K Period VII, 900–700 B.C.).

It is this combination of strong Macedonian or north Aegean elements, coupled with equally strong influences from central and southern Greece, that creates the unique character of the local Toronean pottery. Indeed, the overall range may be described as eclectic, but it is eclectic in an individual way different from any other known style. However difficult it may be to reconstruct even a bare skeleton of the history of the site during this period, the evidence of the pottery indicates that, no matter how the era is conceptualized, the settlement was stable enough to maintain a thriving ceramic output and that the local potters were open to all sorts of influences from both neighboring and more distant regions. The character of the local pottery and its external links are considered more fully in the summary that concludes this chapter. It is enough to state here that connections on the evidence of direct imports from other centers or by stylistic resemblances may be discerned for various regions, including Athens, Thessaly, Euboia, the Cyclades, Lokris, and, to a certain extent, Crete. The importance of these links is that they help anchor the local typology more firmly in time, especially as our knowledge not only of Torone but of Sithonia generally for the preceding Late Bronze Age period is still problematic,[3] and our knowledge of the succeeding postcemetery phase is limited to the pottery from the kiln (Papadopoulos 1989a), the few contemporary sherds discussed below, and the material more recently excavated at the settlement on Promontory 1 at Torone.

Bearing these difficulties in mind, the upper and lower chronological limits of the period of use of the cemetery are as follows. *Stylistically* the earliest distinguishable tombs would include Tombs 96, 101, and 109. The ash-urns of all three were wheelmade belly-handled amphoriskoi, two of which (**T101-1**, **T109-1**) were clearly locally produced and the third (**T96-1**) probably also local. The tomb pits of Tombs 101 and 109 also yielded quantities of fire-affected sherds; in the latter, fragments of at least four vessels were recovered, in the former at least fourteen. The material from Tomb 101 was the more revealing in that of the fourteen vessels represented, five were wheelmade one-handled cups (**T101-2–T101-6**), in fabric very close to **T96-1**, stylistically Submycenaean, and representing a shape not otherwise found in the local repertoire; a contemporary Attic import from the same tomb is the skyphos **T101-8**; the open vessel **T101-9** and the amphora shoulder fragment **T101-10** are probably local. Together, these three tombs provide a useful *relative* "fixed point" contemporary with Attic Submycenaean as represented in the Athenian Kerameikos and at Salamis. By "Submycenaean" I refer to the use of the term ceramically (as set out in Desborough 1964; 1972;

cf. Kraiker and Kübler 1939; Mountjoy 1986:194), not a people or a culture. Clearly, there are a number of earlier tombs: Tomb 6, for instance (and with it Tomb 7), was located beneath Tomb 96 and therefore earlier. Exactly how much earlier cannot be accurately determined, but it is difficult to imagine a significant gap in time between the two, especially on the evidence of the handmade pots associated with both Tombs 6 and 7. Subsequent to the tombs that witness close affinities with Attic Submycenaean are a number of tombs that contain pottery stylistically resembling Attic Early Protogeometric (cf. Desborough 1952:119–126). Two of the most interesting of these are Tombs 104 and 52; in both, the ash-urns, a belly-handled and a neck-handled amphora, respectively, are stylistically very close to Attic counterparts (see also, among others, **T95-1**, **T124-1**).

In addition, a number of vessels display features consistent with later Late Helladic IIIC:1 or IIIC Late (Mountjoy 1986:134); this was particularly so in the case of a number of low-footed skyphoi (Type 1), which resemble, especially in shape, those of the Granary Class at Mycenae (Wace 1932:184–187), as well as individual vessels such as the krater with pictorial representation **T116-1**. But it is exactly here that the very definition of the term "Submycenaean" (or "Sub-Mycenaean" as it sometimes appears) is called into play. The problems concerning the term are many (Skeat 1934:28; Desborough 1964; 1972:30–48; Deshayes 1966:195, 247, 251; Styrenius 1967:125–128; Snodgrass 1971:24–43; cf. Deshayes 1964:572–574; Starr 1962:90; Smithson 1977; Rutter 1978: 58–65; Schachermeyr 1980:177–363; B. Wells 1983a:123–124; Mountjoy 1986:194; 1988: 1–33; Papadopoulos 1993:176–181), and they continue to be disputed. In any case, the evidence from Torone in this respect is best viewed as inconclusive, but it would seem to suggest that specific features, like those of the krater **T116-1**, which are more happily at home in the traditional view of later Late Helladic IIIC (that is, LH IIIC Middle and Late: cf. Iakovides 1979:454–462; Mountjoy 1986), are also to be found in Submycenaean (that is, LH IIIC:2: Iakovides 1979:462; Mountjoy 1986), or later. It would be wrong to maintain, on the evidence at hand, that vessels such as **T116-1**, in local fabric and that saw service as ash-urn, belonged to the closing stages of the "Bronze Age," but would argue more reasonably for the survival of certain features into the Early Iron Age. This problem highlights only too clearly the need for a more flexible system of viewing chronological development. This is especially true in a period where the quantities of a discerned style, variant style, or even "nonstyle" such as "Submycenaean" are not great (Styrenius 1967:125–148; Desborough 1972: 41; Mountjoy 1986:194–200, where it is clear how meager is the evidence outside Attika), and in a region where the breakdown of the local Mycenaean tradition is far from being clearly understood (for "local Mycenaean" in Macedonia see Heurtley 1939:96–97; Podzuweit 1979b:203–223; Wardle 1980:250–252; Jung 2002). Indeed, the evidence from both Kastanas and Assiros has shown that fragments that can be designated as "local Mycenaean" pottery continued into the Early Iron Age levels as "survivals" well after the complete breakdown of the tradition in central and southern Greece (Podzuweit 1979b; Wardle 1980:250–252; Jung 2002). In this context it is worth mentioning the contents of Tomb 101—particularly the amphora shoulder fragment **T101-10**, which is decorated with mechanically drawn concentric circles, found with pottery otherwise stylistically Submycenaean—as they establish, at the very least, that a Submycenaean style was in part contemporary with a Protogeometric style at Torone.

Establishing the lower chronological limit of the cemetery with exactitude is similarly no easy matter. Attic links, readily seen in the earliest tomb pottery, become less pronounced as the local style developed, and although there is an increase in the quantity of imported vessels from other centers, especially Euboia, during the later stages of the period of use of the cemetery, the local style proceeded essentially under its own steam with few external influences. There is a tendency toward more linear decoration, especially witnessed in the crosshatched triangles on the amphorai with belly and shoulder handles, and although there are certain changes in the details and proportions of individual vessel forms, the decoration remains essentially in the light-ground system throughout the period. The dark-ground system (Desborough 1952; 1972; Coldstream 1968; Popham, Sackett, and Themelis 1979–80; Catling and Lemos 1991; cf. the material

recently published from Kyme: Sapouna-Sakellarakis 1998), the hallmark of later Protogeometric in Attika, Euboia, and most other centers, is never adopted. Moreover, there is nothing inherent in the local *tomb* pottery that heralds a distinct change to a true Geometric style. The question, therefore, is to what extent does the latest tomb pottery represent material contemporary with Late Protogeometric elsewhere, or a continuation as, say, Subprotogeometric, and if so, for how long?

The latest imported vessels deposited in tombs, securely dated on the basis of style, include the Euboian amphoriskos with handles from shoulder to lip **T22-2** and the jug **T72-1**, which is probably Cycladic; both may be safely assigned toward the end of Late Protogeometric. In Tomb 77, located at the very eastern edge of the cemetery as excavated, the fragments of an imported pendent semicircle skyphos, **T77-3**, were encountered, although the exact position of the vessel in situ was not determined. **T77-3** represents the only imported example of this class of skyphos at Torone and one of only two pendent semicircle skyphoi; the other, **T82-2**, is of local manufacture. Unfortunately, both are fragmentary and neither has the base preserved, so although the main lines in the chronological development of the pendent semicircle skyphos are fairly well established (Kearsley 1979; 1989; 1995; Descoeudres and Kearsley 1983, pp. 41–52; see also Desborough 1952:180–194; Coldstream 1968:148–157; Popham, Sackett, and Themelis 1979–80:297–302), it remains difficult to assign the Torone fragments with certainty. The imported **T77-3** is best accommodated within Kearsley's Type 3, which she dates to the ninth century B.C., contemporary with Attic Early Geometric-Middle Geometric I (Kearsley 1989:126–132; Descoeudres and Kearsley 1983:44, 47; the height of the short offset rim [<0.015 m] is in keeping with this type: cf. Kearsley 1995:67–69). The local **T82-2** is more problematic. The similarly short offset rim and deep body are consistent with Kearsley's Type 3, but the decoration, especially the two horizontal bands at midpoint, are unusual and may, if anything, suggest a slightly earlier date (cf. Andronikos 1969:169, fig. 23, pl. 50, no. P21). In any case, both skyphoi, which constitute the latest clearly distinguishable tomb pots, may reasonably be assigned to the first half of the ninth century and not much later than ca. 850 B.C. More significant, however, is the general paucity at Torone of this class of skyphos, the hallmark of the regional *koine* comprising Euboia, Thessaly, the Northern Cyclades, and Skyros during the very latest stages of Late Protogeometric and in the course of Subprotogeometric (Desborough 1952: 127–179; 1972:185–220; Popham, Sackett, and Themelis 1979–80:291–292, 297–302), and the hallmark of Euboio-Cycladic trade in the Eastern Mediterranean (Descoeudres and Kearsley 1983:42). It is also the most common type of vessel among the wheelmade and painted pottery of Vergina (Andronikos 1969:168–174), and is conspicuous in several other Macedonian cemetery and settlement sites (Desborough 1952:190; Kearsley 1989:72–73). It seems reasonable to conclude that although Torone maintained links with these centers, as is witnessed by direct imports during Late Protogeometric, it was not part of the broader trade and production of the pendent semicircle skyphos during the period of use of the cemetery, except in a minor way. The chronological inference would then be, based essentially on negative argument, that although the latest tombs may be assigned to the ninth century, the majority is earlier.

A further, and more general, chronological indication is offered by the evidence of the kiln pottery and the few sherds from various deposits, not associated with tombs, that are contemporary. This material, quantitatively meager as it is, attests the existence of a developed local Geometric style, which may be dated to the eighth century B.C., and which displays many significant differences from that of the earlier tomb pottery (Papadopoulos 1989a).

With this relative chronological framework based on such unstable ground, its translation into absolute terms is adventurous, but the attempt is worth making primarily with the view of determining the overall time span of the cemetery. As already outlined, the lower chronological limit may be generally fixed within the course of the ninth century and, on the evidence of the latest diagnostic pottery (the skyphoi **T77-3**, **T82-2**), more reasonably within the first half. There is no clear feature in the local and imported tomb pottery to indicate a date in the second half of the

ninth century. In Attic terms there is near broad consensus for the date of ca. 900 B.C. as the turning point from Protogeometric to Early Geometric (Desborough 1952:292–295; 1964:258–263; Coldstream 1968:302–331; Snodgrass 1971:106–135 [esp. 122–123]; 1982b:665; Robertson 1975: 17), and the weight of the evidence at Torone would indicate that most tombs were earlier. Consequently, a date of ca. 850 B.C., *in the conventional chronology*, may be suggested for the lower limit of the Terrace V cemetery.

The absolute dating of the upper limit is somewhat more difficult. In 1944 Furumark, using the evidence then available proposed the dates of ca. 1075–1025 B.C. for Late Helladic IIIC:2, beginning his Late Helladic IIIC:1a at ca. 1230 B.C. and ending Late Helladic IIIC:1c at ca. 1075 B.C. (Furumark 1944:262; cf. 1972b). In reassessing the same material and that which has accumulated since, Iakovides (1979:462) proposed a shorter span of twenty-five years for Late Helladic IIIC:2 (Submycenaean) as ca. 1075–1050 B.C. It was this same twenty-five years from 1075–1050 B.C. that Desborough (1972:79, n. 10; 1974) saw as a period of "considerable and many-sided activity which marked the turning point in the Dark Ages" from Submycenaean to Protogeometric. In reviewing the available evidence, Snodgrass placed the initial date for Attic Protogeometric at ca. 1050/1040 B.C. He proposed the date of ca. 1125/1100 B.C. as the starting point of Submycenaean in the Attic series and equated the end of Late Helladic IIIC in the Argolid with the rise of Attic Protogeometric (Snodgrass 1971:122–124; but contrast Wells 1983a:123–124); Styrenius (1967:163–164; 1962: 121–123), too, places the beginning of Submycenaean to 1125 B.C. More recently, Mountjoy has lowered the dates, preferring an initial date of ca. 1060/1040, with the close of Submycenaean sometime around 1020/1000 (Mountjoy 1986:8, with the dates of ca. 1100/1090–1040/1000 for Subminoan; for the chronology of Crete down to Subminoan/Protogeometric see Sandars 1971:24–25; Levi 1981:88–89). These dates have been even further lowered in her most recent paper to 1004/984 B.C. for the close of Submycenaean (Mountjoy and Hankey 1988:37; see further Styrenius 2002).

The presence at Torone of an Attic import stylistically Submycenaean; the influence that Euboian, Attic, and other central and southern Greek products appear to have exerted on the local pottery; and the rise of a local Protogeometric style based on the Attic model, support Desborough's (1972:79; cf. 1948) view of considerable activity for the Aegean-facing districts of this period, and argues for an initial date for the Terrace V cemetery sometime within the first half of the eleventh century, perhaps ca. 1075–1040 B.C., or somewhat later. If one accepts the high chronology for the beginning of Submycenaean (ca. 1125 B.C.), then the maximum period of use of the cemetery would be in the vicinity of 275 years; if one goes for Mountjoy's lower date, then the figure would be closer to 200 years. The alternative chronology, proposed by James and his collaborators (1991a; 1992), opts for an even more radical lower dating in which the Late Bronze Age ends around 950 B.C. instead of ca. 1200 B.C. The latter has not won universal approval—rather, it has met with stiff resistance from both Near Eastern and Aegean archaeologists (see comments in James et al. 1991b; Roaf 1991; Leighton 1993). If anything, the evidence from the Near East, which is far from conclusive (see Forsberg 1995), would suggest raising the dates of Protogeometric, not lowering them (Saltz 1978; Yannai 1982; 1983; see also Kopcke 2002). An earlier starting date for Protogeometric is also suggested by the new dendrochronological and radiocarbon determinations from Assiros, which recommend setting the beginning of the Protogeometric period as early as 1100 B.C. (Newton, Wardle, and Kuniholm 2003).

Names given to vases

A note is here necessary on the terminology of vase shapes as there is often a good deal of inconsistency in the modern literature.[4] For the wheelmade painted pots I have followed the guidelines established in Desborough (1952:1–126) for the Attic series, except for minor amendments which seemed necessary in describing local variations.

The local amphorai may be subdivided into four types in accordance with the position of their handles (cf. Desborough 1952:5; 1972:33, 147–149; the Attic shoulder-to-lip-handled amphora is not represented in the local repertoire). Three requiring no further comment here are the neck-handled, the belly-handled, and the shoulder-han-

dled amphorai, the latter being a rare variety witnessed to date by only one certain example. The fourth type, the belly-and-shoulder-handled amphora, is here classified as "amphora" although, strictly speaking, the vessel is not an ἀμφορεύς (i.e., from ἀμφί φέρω: see Richter and Milne 1935:3). The shape is essentially, however, a belly-handled amphora with the addition of two small vertical handles on the shoulder and thus it seemed pedantic to distinguish it as completely separate and classify it as, say, a "four-handled jar" (cf. Furumark 1972a, Shapes 63–64, which can have two, four, and sometimes six handles). The point was particularly highlighted in the case of **T67-1**, one of the first examples of the shape encountered in the course of excavation. It was found with one of the shoulder handles missing and with the handle scar so worn it was initially overlooked; the vessel, consequently, was originally designated as "hydria" in the inventory (cf. Popham, Sackett, and Themelis 1979–80:335, 405, n. 350; Rocchetti 1969–70:46–47, figs. 7–8, no. B.1 [F. 743], for a four-handled amphora referred to as a hydria).

The distinction between amphora and amphoriskos is not always a happy one and overall consistency is difficult; particularly fragmentary examples are labeled in the catalogue (chapters 2 and 3) as "amphora/iskos." Three types of amphoriskoi are here distinguished: the first, the belly-handled, is restricted to the Final Mycenaean or Submycenaean shape, which therefore forms a chronological variant that is distinct. The examples classed under the second type, the vertical-handled, differ in details of both shape and decoration from the neck-handled amphora, so the distinction between the two is not limited to size only. The third type, the small amphora/amphoriskos with horizontal handles rising vertically and low conical foot, is rare.

The shape here referred to as "skyphos" may be found elsewhere variously termed "bowl," "skyphos," "krateriskos," "krater," "skyphoid-krater," and so on.[5] The vase is an ordinary drinking vessel that may also have been used to eat out of (Desborough 1952:77); larger examples could easily be used for mixing. The distinction between skyphos and krater is here not one primarily of size but rather of rim form. Four types of skyphoi have been distinguished, three according to the form of the base, the fourth, the pendent semicircle skyphos, subdivided on account of its offset rim and by the manner of decoration. All four skyphos types enjoy a form of rim that facilitates drinking, whereas the krater, often of similar proportions to some skyphoi (and sometimes smaller), is characterized by a distinctly articulated, usually horizontal rim that would make drinking difficult. Consequently, large open vessels, as for instance **T30-1**, are here referred to as skyphoi and not kraters as size alone is not considered essential. Large, often very large, drinking vessels are attested in many periods—witness the size of the German *Bierstein* or *Bierkrug*, the English pint, or, better still, the yard glass.

The local krater is subdivided into two main types (as well as a transitional type) according to the shape of the base, as is the local lekanis. I use the term "lekanis" rather than "shallow bowl" for reasons of personal preference. The latter is distinguished from the krater by a considerably smaller and shallower body, and further characterized by a short horizontal or everted rim and two horizontal ribbon handles attached immediately below. A few examples of the lekanis are equipped with a spout.

Such, then, are the main shapes in the local wheelmade repertoire; others are rare, normally represented by one example only; treated under the heading *Miscellaneous*, these include the kantharos, the jug, the "amphora/pyxis," and the lid. I have also listed the fragmentary one-handled cups from Tomb 101 under this heading.

As outlined below, two varieties of clay are employed for the local handmade vessels; both are essentially the same, differing primarily in the quantity of visible inclusions and resulting in a very coarse fabric and a somewhat less coarse or semicoarse variety (the difference is not unlike that of "Attic cooking ware" and "Attic pithos fabric" as set out by Brann [1962:29]). The coarser variety is limited to three shapes: pithos, pitharion, and tripod cauldron; all other local handmade shapes are made of the semicoarse variety.

Open vessel forms in the handmade repertoire include the kantharos, the cup/kyathos, the bowl with square-cut handles, and the tripod cauldron. Of these, the tripod cauldron is traditionally a cooking vessel (see chapter 4 for its use in terms of funerary ritual); the remaining three were used for

drinking and eating.[6] Two types of kantharos may be distinguished: the first, which is the more common, is characterized by a slightly offset rim and two vertical high-swung handles that are thin in section. The second type has a more incurved rim and distinctive handles surmounted by disk knobs. The cup/kyathos differs from the kantharos in that it has only one handle and a rim of slightly different form; the shape is probably best seen as a drinking vessel—a cup, by any other name—but it is also well suited to serve as ladle (κύαθος) and resembles later shapes used for drawing liquid out of a krater (cf. Sparkes and Talcott 1970:143, 229, pls. 35, 96). The bowl with square-cut handles is distinguished from the kantharos and cup/kyathos by both its distinctive handles and the form of the rim. On the basis of these differences it was possible to determine the various open vessel forms in local handmade fabric even from small rim fragments.

Local handmade closed vessel forms include the two-handled jar, the jug, the pithos, and the pitharion, all storage and/or transport vessels except for the jug, which is used for pouring. I have preferred the term "two-handled jar" rather than "amphora" primarily to avoid any possible confusion with the wheelmade amphora, especially as two-handled jars can have either neck or belly handles. The term "jug" is here preferred to "oinochoe" mainly because the term is well established for the distinctive Macedonian variety of the small closed vessel used for pouring with its characteristic cutaway neck. It also avoids a certain amount of confusion with wheelmade vessels made in other parts of the Greek world normally referred to as oinochoai and characterized by either a round or a trefoil mouth.

The pithos and pitharion were both shapes made from the coarser variety of clay; the pithos requires no further comment here. The term "pitharion" is given to the distinctive vessel form with slightly flattened base, an elongated, ovoid body, and a comparatively tall neck marked from the shoulder by a slight offset and which flares out to a chamfered rim (I have taken the term from Sparkes and Talcott 1970:51). The shape is usually characterized by two horizontal handles set rather high on the body and thus it, too, may be classed as amphora (belly-handled), but is classified as pitharion in order to distinguish it from the handmade two-handled jar (which is different in terms of both shape and fabric) and the wheelmade amphora.

In addition to these standard shapes of handmade vessels, there are a number of variations such as the jug with plain round mouth (**T81-3**), a small version of the two-handled jar with unique rim and handles (**T21-1**), and two smaller kantharoi with relatively deeper bodies (**7**, **T1-2**), which are treated as variants under each respective shape. To date there is only one example of a multiple or composite vase, the small "double vase" **T69-2**, a vessel form referred to by Heurtley (1939:105, pl. XXIIID) as "binocular jars."

"Fragments are dangerous allies, and extra care must be taken in finding the whole shape to which they belong" state Sparkes and Talcott (1970:2) in one of their notes to readers. The following typology is primarily based on complete or semicomplete vessels where the overall details of shape are clear, or reasonably so. Discussion of particularly fragmentary vessels or of sherds has been either avoided or treated only briefly in the following pages. Where an individual sherd or fragmentary vessel preserves a feature or features of interest it is noted in the catalogue; fragments are listed in the typology for comparison with types of shape to which they may belong, but beyond this I have purposely avoided their handling in the typology in order to present the main lines of local shapes as far as the material allows.

The relationship between wheelmade and handmade pottery

Until quite recently little attention has been paid to the special relationship in Late Bronze and Early Iron Age northern Greece between handmade and wheelmade pottery (Kiriatzi et al. 1997). The long tradition of handmade pottery in central Macedonia was well established throughout the Bronze Age and continued through the Early Iron Age. In the Late Bronze Age imported Mycenaean pottery is recorded at various sites in Macedonia—the earliest to date is from Torone (Cambitoglou and Papadopoulos 1993)—and by the later Mycenaean period was produced locally at various sites in the north. As Kiriatzi et al. (1997) have noted, this marked the establishment of a new pottery manufacturing tradition in Macedonia that coexisted for centuries with the handmade tradition.

These two traditions, however, reflected quite different production, organization, and consumption patterns within the same cultural environment. Kiriatzi et al. (1997) go on to reconstruct the *chaine opératoire* within each tradition, through both macroscopic examination of the pottery and analytical techniques, in order to define the technological choices made during the manufacturing process. Their aim was to understand the constraints acting on each tradition, not only environmental or functional but also social and cultural constraints. The social context in which the potters worked, and which the potters themselves acted on, appear to play a major role in keeping the boundaries of these two traditions well defined and thereby rendering their coexistence possible. The coexistence of these two traditions continues into the Classical period, at which time the production of handmade pottery gradually stops (Kiriatzi et al. 1997). In Thrake, as in Thasos and much of southeast Europe, handmade pottery continues to be a flourishing tradition, arguably with ideological overtones, well into the historical period (S. Papadopoulos 2001).

The special relationship—or coexistence—of these two pottery traditions can be observed at Torone on the basis of the material not only from the cemetery and, more recently, the settlement, but also from the Early Iron Age kiln on Terrace V (Papadopoulos 1989a; Whitbread, Jones, and Papadopoulos 1997). In terms of the cemetery material, it is interesting to note the relative proportions of handmade to wheelmade pottery at Torone. The figures already cited—139 handmade and 204 wheelmade pots deposited in tombs, or 171 handmade pots and 269 wheelmade pots counting all pottery presented in this volume—show that, depending on which way the material is counted, 63–68 percent of the pottery was wheelmade. This contrasts markedly with the situation at Vergina, where only just over nine percent of the pottery from the tombs excavated by Andronikos was wheelmade. At the Late Bronze and Early Iron Age settlement site at Kastanas handmade wares account for 64–88 percent of the total pottery (Hochstetter 1984:12, fig. 1). On the basis of these figures alone it is tempting to speculate that a coastal Chalkidic site such as Torone, where imported wheelmade pottery occurs earlier and where the coexistence of the handmade and wheelmade pottery traditions was somewhat longer lived, had a more flourishing wheelmade pottery tradition than sites further inland such as Vergina and Kastanas.

Here the material from the Early Iron Age kiln was crucial. First of all, the kiln established that not only wheelmade and handmade pottery but also terracotta loomweights were fired together in a single kiln load (Papadopoulos 1989a). Second, the variety of fabrics encountered in the collapsed kiln showed marked variances not only between the handmade and wheelmade wares, but also between individual handmade and wheelmade vessels. The differences in the various fabrics recovered from the kiln should have provided a useful gauge of comparison for the more numerous tomb pottery and help establish some guidelines for the definition of earlier and later local wares (see further Papadopoulos 1989a:26–27). Following a program of elemental and petrographic analysis, "the lesson learned from this study is that, in areas with diverse geological resources, ceramics from kiln deposits do not necessarily provide a representative sample of local fabrics" (Whitbread, Jones, and Papadopoulos 1997:91; see appendix E). The old adage "get a kiln, get a control group" clearly did not work in the case of the Early Iron Age kiln at Torone.

Of the handmade vessels recovered from the kiln, the fabric of **KP-14** was consistent in every visible respect with the fabric of the coarser variety of clay used only for pithoi, pitharia, and tripod cauldrons encountered in the tombs. It differs from that used for all other handmade vessels. The fabric of the three kiln pithoi is more revealing. Here were three examples of the same shape, produced at the same time and fired in the one kiln, that differ from one another not only in the color of the fired clay but also in the range and quantity of impurities (Papadopoulos 1989a:27). The clay of **KP-1** contained far fewer inclusions than any other pithos, as well as less mica, with predominantly fine particles, both silver and golden. The clay body and surfaces were fired black, except for the upper shoulder and rim, which are close to light reddish brown 5YR 6/4. The fabric of **KP-2** is slightly coarser with many small to medium white and light-colored inclusions, but only the odd larger impurity; the mica quantity is similar to that

of **KP-1** but predominantly golden and, where unaffected by secondary burning, more evenly fired light red. The fabric of **KP-3** is more consistent with that of the tomb pithoi. It contains many white and light-colored inclusions ranging from small to large, as well as much mica, both fine and small through medium flakes, which are exclusively golden; the clay body and surfaces were evenly fired close to light brown 7.5YR 6/4.

As for the fabric of the wheelmade pottery encountered in the kiln, the fired color of the clay and the quantity of impurities varies from piece to piece. The clay of most examples (e.g., **KP-4**, **KP-6**, **KP-7**, **KP-11**, **KP-12**) contains many small to medium white and light-colored inclusions, with the occasional larger impurity. The fabric of these five vessels also contains much mica, in some cases predominantly golden, in others silver. The fabric of **KP-5** is particularly gritty with an above-average quantity of small to medium inclusions and a great deal of predominantly silver mica. It is also more friable than normal. Somewhat finer is the clay of **KP-8** and **KP-10**; in both cases inclusions are fewer and the mica content lower. More unusual is the even finer and denser fabric of **KP-9**, which contains considerably fewer inclusions and only a little fine silver and golden mica, although the fabric does contain the occasional larger red inclusion. Moreover, the paint of **KP-9** is semilustrous as opposed to the normally dull paint that could fire any color from true black through red, with various shades of brown and reddish-brown common. The fabric of **KP-13** is particularly coarse with many small to larger inclusions and predominantly golden mica; the clay has fired an uncommon gray-brown color, which is not due to secondary burning. More important for the discussion here, **KP-13**, though wheelmade, is of a fabric normally used for handmade vessels. The appearance of wheelmade versions of standard local Macedonian handmade shapes, or the use of the variety of clay usually reserved for the latter, was already noted by Casson (1923–25:20–21) as a feature prevalent among Geometric and Archaic versions of earlier handmade shapes at Tsaousitsa.

A more thorough study of the technical aspects of the Early Iron Age pottery at Torone, particularly from a diachronic perspective and incorporating material from the Bronze Age through the Archaic period, is best done in the light of more published material from Torone, particularly that from the Early Iron Age settlement, and is beyond the scope of the current study.

CONSPECTUS OF THE POTTERY

The following conspectus, organized according to shape, lists all tomb pottery (including fire-affected sherds), as well as fragmentary vessels from Terrace V and other parts of the site not associated with tombs but considered contemporary. The kiln pottery is not included.

A. LOCAL WHEELMADE	
I. The Amphora	
1. Neck-handled amphorai	T41-1, T52-1, T73-1, T74-1, T77-1, T124-1, 8
2. Belly-handled amphorai	T20-1, T24-1, T51-1, T60-1, T65-1, T75-1, T91-1, T95-1, T104-1, T114-1, T115-1, T134-1
3. Shoulder-handled amphora	T120-1
4. Belly-and-shoulder-handled amphorai	T26-1, T56-1, T67-1, T78-1, T81-1, T82-1, T83-1, T84-1, T86-1, T125-1, 39
Amphora frr. of uncertain type	T11-2, T28-4, T29-1, T42-1, T44-2, T51-2, T51-4, T53-1, T59-1, T63-2, T64-1, T68-1, T80-1, T88-1, T92-1, T99-2, T102-2, T104-9, T104-10, T105-6, T108-6, T112-3, T113-2, T113-10, T114-4, T115-5, T117-2, T117-3, T118-2, T118-5, T119-1, T121-1, T122-1, T128-2, T129-1, T131-1, 1, 4, 9, 10, 12, 24, 26, 32, 33, 61, 62, 65, 66, 80, 86, 93, 94

II. The Amphoriskos	
1. Belly-handled amphoriskoi	T9-1, T96-1, T101-1, T109-1
2. Vertical-handled amphoriskoi	T27-1, T44-1, T55-1, T69-1, T71-1, T99-1, T105-7, T107-1, T112-2, T123-1, 41, 73(?)
3. Amphoriskoi with horizontal handles rising vertically and low conical foot	T22-1, T87-1
III. The Skyphos	
1. Low-footed skyphoi	T23-1, T25-1, T85-1, T98-1, T101-7, T103-1, T105-1, T106-1, T108-1, T110-1, T112-4, T113-6, T117-6, T128-5
2. Skyphoi with conical foot	T36-1, T90-1, T94-1, T117-1
3. Skyphoi with tall flaring foot	T28-1, T30-1, T37-1, T116-2, T117-7 (cf. T114-5)
4. Pendent semicircle skyphos	T82-2
Skyphos frr. of uncertain type	T34-1, T101-15, T103-2, T104-12, T104-13, T104-14, T105-4, T105-5, T106-2, T108-3, T108-4, T108-5, T109-3, T109-4, T111-2, T112-5, T113-3, T113-4, T113-5, T113-7, T115-8, T117-4, T117-5, T117-8, T117-9, T118-8, T119-2, T119-3, T128-3, T128-4, 16, 28, 35, 38, 44, 45, 87
IV. The Lekanis	
1. Lekanides with conical/flaring foot	T20-2, T21-2, T25-3, T26-2, T41-2, T47-3, T104-15, T113-8, T115-9, T115-10, T116-3, T117-10, T124-3, 5, 14, 15, 25, 37, 69, 89
1A. Spouted	T51-3, T117-11
2. Lekanides with low ring base	T81-2, T83-2, T108-7, 6
Lekanis frr. of uncertain type	T84-4, T103-4, T112-6, 72
V. The Krater	
1. Krater with low foot	T102-1, T116-1
Transitional type	T48-1, T62-1, T76-1
2. Krater with tall foot	T33-1, T35-1, T58-1
Krater frr. of uncertain type	T24-4, T32-1, T40-1, T79-1, T103-3, T104-11, T105-3, T115-6, T115-7, T117-12, T118-7, 11, 34, 40
Variant with knobbed rim	T109-2, T111-3
Miscellaneous	
VI. The One-handled Cup	T101-2, T101-3, T101-4, T101-5, T101-6; cf. T118-9, T118-10
VII. The Kantharos	T13-1
VIII. The Jug	46
IX. The "Amphora/Pyxis"	T45-1
X. The Lid	T88-2
Local wheelmade vessels of uncertain shape	T39-1, T117-13, 19

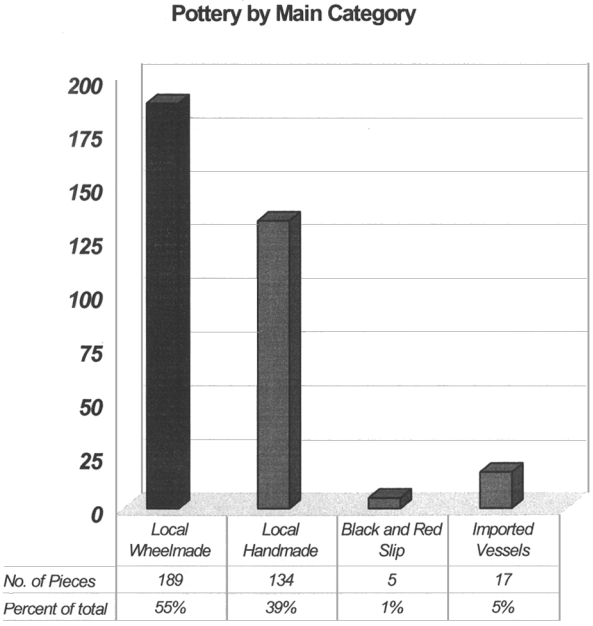
B. LOCAL HANDMADE POTTERY	
XI. The Two-handled Jar	
1. Belly-handled jar	T18-1, T63-1, T100-1, T118-1, T128-1, T130-1, T132-1, T133-1, 60
Small variety	T21-1
2. Neck-handled jar	T19-1, T46-1
Wheelmade version	T17-1
Frr. of uncertain type	T113-11, 75
XII. The Jug	
1. Jug with cutaway neck	T6-1, T10-2, T26-3, T38-2, T43-2, T52-2, T58-2, T70-2, T73-2, T77-2, T82-3, T84-2, T103-5, T104-16, T106-3, T114-3, T115-11, T117-18, T124-2, T125-2, T125-3, 2, 21, 90
Probably with cutaway neck	T7-3, T21-4, T41-3, T42-2, T42-3, T56-2, T60-2, T68-2, T74-2, T75-2, T80-2, T81-4, T84-3, T86-2, T88-3, T101-14, T102-3, T104-17, T122-2, 3, 17, 42
Local or Macedonian imports	T13-2, T67-3, T109-5
2. Jug with round mouth	T81-3
XIII. The Multiple Vase	T69-2
XIV. The Kantharos	
1. Kantharos with high-swung handles	T10-1, T10-1a, T10-3, T75-3, T82-4, T82-5, 31, 67, 74
Small variety	T1-2, 7
2. Kantharos with vertical handles surmounted by a disk knob	T7-2
XV. The Cup/Kyathos	
1. Cup/kyathos with high-swung handles	T43-1, T57-1, T66-1
2. Cup/kyathos with vertical handle surmounted by a disk knob	T10-4
XVI. The Bowl with Square-cut Handles	T67-2, T101-12, T102-4, T112-7, T113-13, T113-14, T113-15, T113-16, T114-6, T117-16, T117-17, 13, 29, 51, 81
XVII. The Pithos	T1-1, T7-1, T12-1, T24-2, T25-2, T27-2, T28-3, T34-2, T46-2, T89-1, T104-3, T105-2, T107-2, T108-2, T114-2, 30
XVIII. The Pitharion	
Larger variety with horizontal handles	T22-3, T38-1, T52-3, T53-2, T95-2, T104-19, T113-1, T118-4
Smaller variety with or without handles	T31-1, T49-1, T70-1, T118-3, T126-1
XIX. The Tripod Cauldron	T6-2, T7-4, T25-4, T47-4, T70-3, T99-3, T101-11, T104-18, T113-17, T114-7, T115-12, T115-13, T116-4, T117-19, T118-11, T121-2, T123-2, T123-3, T123-4, T123-5, 20, 22, 23, 76, 77, 88
Local handmade vessels of undetermined shape	T11-3, T61-1, T101-13, T113-12, T117-20, 18, 47, 52

C. Black- and Red-slip Ware (Wheelmade)	
1. Black-slip Ware	T24-3, T47-2, T50-1, T104-2.
2. Red-slip Ware	T111-l
D. Imported Wheelmade and Painted Vessels	
1. Attic	
a. Final Mycenaean/Submycenaean	T101-8
b. Protogeometric	T93-1
2. Euboian	
a. Developed Protogeometric	T127-1, 48, 49, 84
b. Late Protogeometric/Subprotogeometric	T22-2, T77-3
c. Frr. of uncertain date	T113-9, T117-14, T117-15, T118-6
3. Thessalo-Euboian	T47-1, 63, 78, 85
4. Cycladic	T72-1
5. Uncertain provenance	27, 64
E. Imported Handmade Vessels	
1. Central Macedonian Burnished Ware	T102-5, T111-4, 53, 54
2. Other (Macedonian/Chalkidic)	T21-3, T54-1, T97-1, T112-1

QUANTITATIVE ANALYSIS OF THE TOMB POTTERY

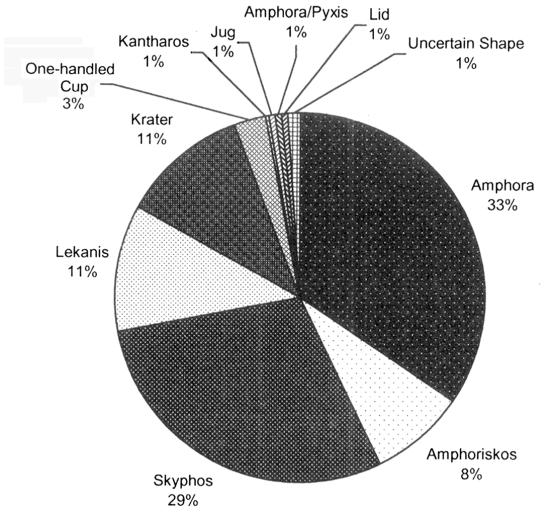
A quantitative analysis of the Early Iron Age pottery from the Terrace V cemetery is presented in **graphs 5.1–5.14**). These graphs are based on the pottery that is clearly from tombs, including the fire-affected sherds. The material presented in chapter 2 is omitted from this analysis, in part because of its fragmentary state but also because it includes material postdating the period of use of the cemetery. The only exception is the sole example of the wheelmade jug with cutaway neck (**46**), which almost certainly derives from one or other of Tombs 12 or 14. Among the fire-affected pieces from cremation tombs, a few fragments (e.g., **T118-9**, **T118-10**) where the shape was impossible to determine have been omitted from the graphs. Apart from these few pieces, the graphs essentially contain all the pottery presented in the conspectus above minus the material that could not be associated with any particular tomb (see chapter 2).

The individual graphs present the material according to categories. Thus, in **graph 5.1**, the local wheelmade pottery accounts for 55 percent of the total, while the handmade makes up 39 percent. The black- and red-slip ware accounts for only one percent, while the imports (which include both wheelmade and handmade pottery), consti-

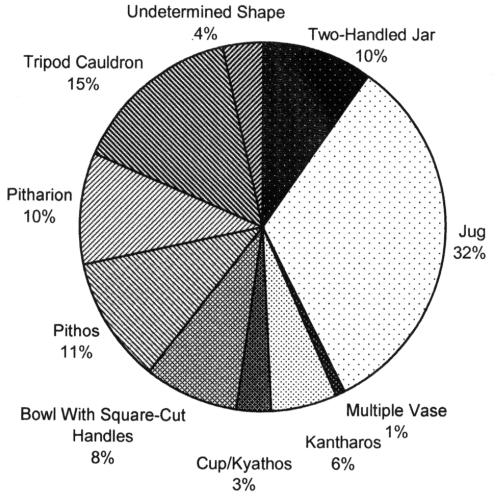


GRAPH 5.1. Pottery by main category.

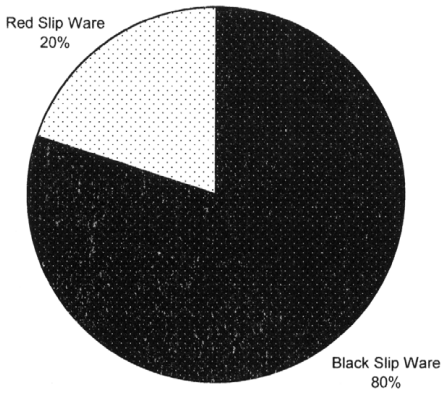
tute five percent of the total, although there are a few more imports among the sherds presented from other parts of the site in chapter 2. **Graphs 5.2–5.3** show the primary breakdown of the local wheelmade and handmade pottery according to shape. **Graph 5.4** shows the breakdown between the black- and red-slip ware, while **graph 5.5** presents the relative quantities of the different types of imports; the designations Attic (12 percent), Euboian (40 percent), Thessalo-Euboian (6 percent), and Cycladic (6 percent) refer to the wheelmade painted pottery; the remainder refers to imported handmade vessels. **Graphs 5.6–5.10** show the breakdown of those individual pottery shapes in the local wheelmade repertoire that can be divided into different subtypes—thus **graph 5.6** (local wheelmade amphora) shows the proportion of neck-handled to belly-handled, shoulder-handled, and belly-and-shoulder-handled amphorai, as well as amphora fragments of uncertain type. Only a few shapes can be subdivided into further types: in addition to the amphorai, the amphoriskoi, skyphoi, lekanides, and kraters. Similarly, **graphs 5.11–5.13** show the breakdown into subtypes of



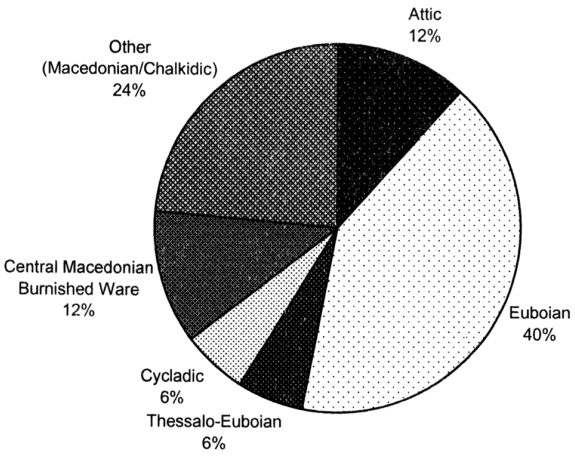
GRAPH 5.2. Local wheelmade pottery.



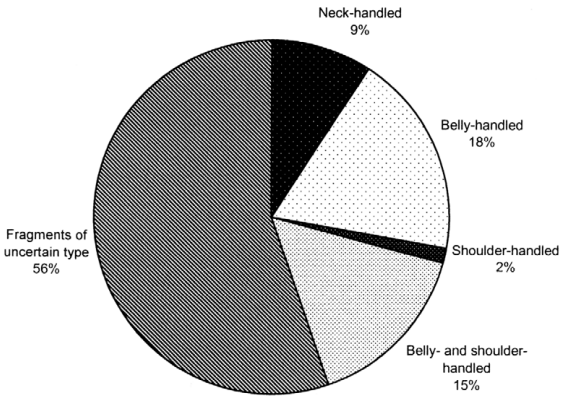
GRAPH 5.3. Local handmade pottery.



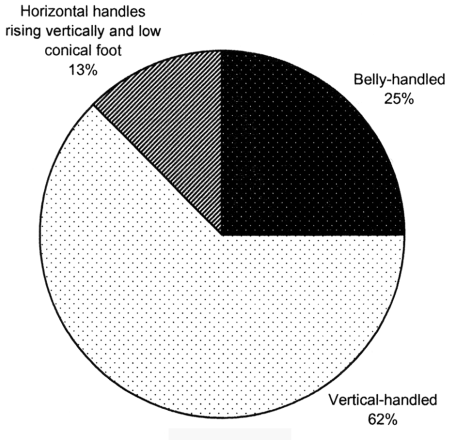
GRAPH 5.4. Black- and red-slip ware.



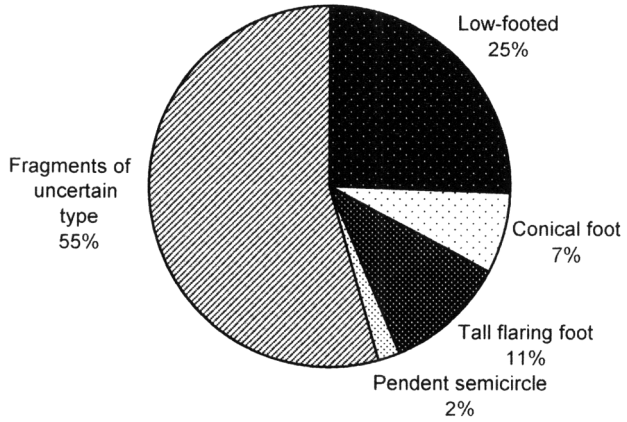
GRAPH 5.5. Imported vessels.



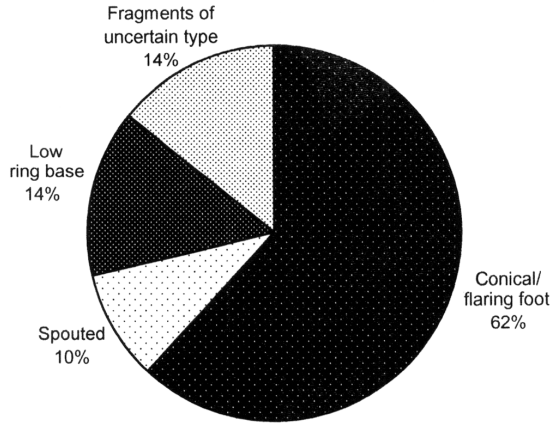
GRAPH 5.6. Amphora.



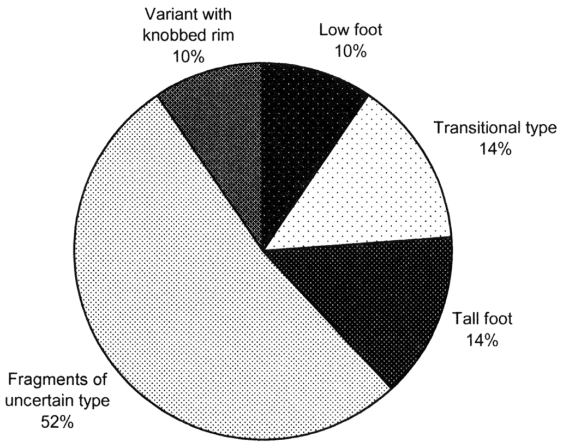
GRAPH 5.7. Amphoriskos.



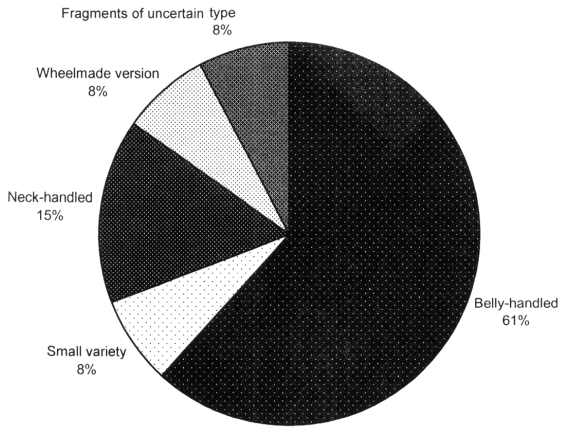
GRAPH 5.8. Skyphos.



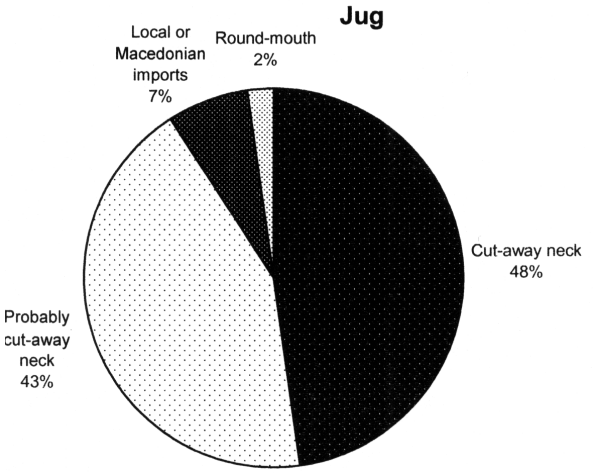
GRAPH 5.9. Lekanis.



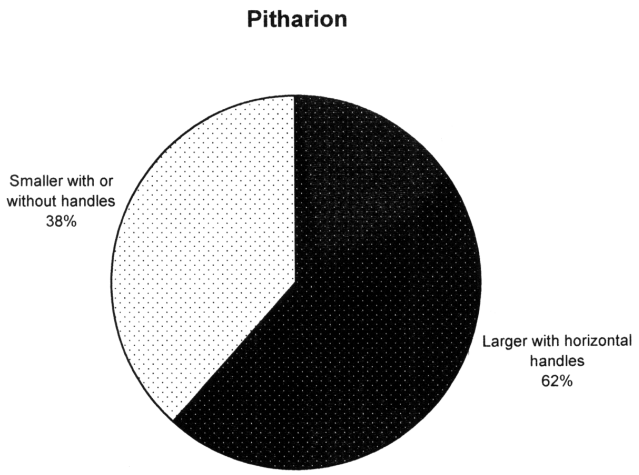
GRAPH 5.10. Krater.



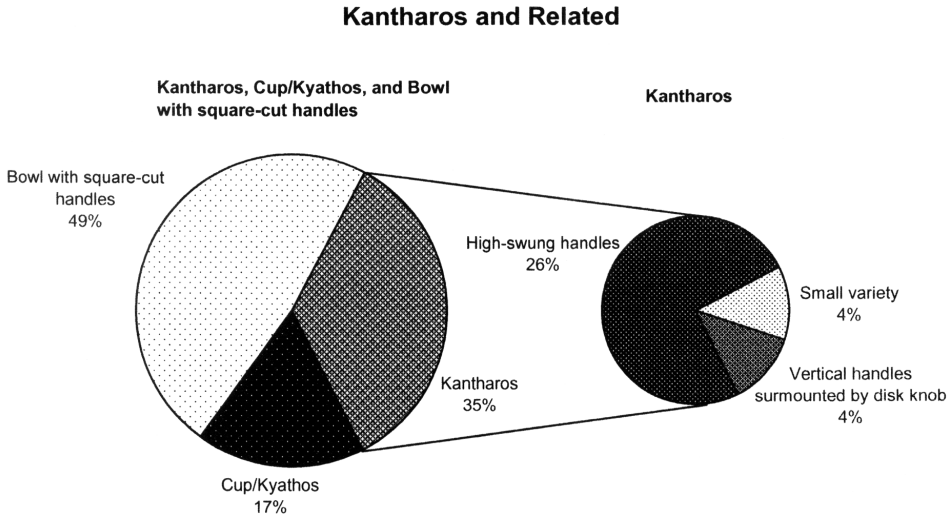
GRAPH 5.11. Two-handled jar.



GRAPH 5.12. Jug.



GRAPH 5.13. Pitharion.



GRAPH 5.14. Kantharos and related.

the local handmade shapes: the two-handled jar (**graph 5.11**), the various types of jug, including those pieces thought to be imports (**graph 5.12**), and the pitharion (**graph 5.13**). **Graph 5.14** shows the quantitative breakdown of the various different types of local handmade open vessel forms, such as the kantharos, cup/kyathos, and bowl with square-cut handles in addition to the various subtypes of kantharoi. Further discussion of these various categories of pottery is presented below in the shape studies.

A. LOCAL WHEELMADE POTTERY

General characteristics

The normal clay used for vessels formed on the wheel is perhaps best described as semifine, not thoroughly levigated, and micaceous (for the fabric of the kiln pottery see Papadopoulos 1989a). The fabric is characterized by many white and light-colored inclusions (including limestone), which are normally small to medium-sized and only occasionally larger. Dark-colored inclusions are rare,

but in several pieces distinctive red inclusions are visible; these are particularly common in thick-walled kraters (especially **T33-1**, **T40-1**, and cf. **KP-9,** as well as the handmade jug **T70-2**). They may be inclusions of crushed potsherds (grog) used as temper, or else small pieces of schist. The actual quantity of inclusions can vary from piece to piece: in some cases the quantity is great, resulting in a very gritty fabric, a good example of which is the kiln amphora **KP-5** (Papadopoulos 1989a:30–31, 39). In others the clay is somewhat better levigated, as with lekanides of Type 2 and also a number of the larger amphorai (e.g., **T52-1**, **T95-1**, **T104-1**) where the local Toronean fabric approaches the feel and consistency of that used in Attika during Submycenaean and Early Protogeometric.[7] Generally speaking the local clay is slightly coarser than Attic Submycenaean and Early Protogeometric, and vessels such as **T37-1, T47-3**, and **T99-1** may be taken as representative. Perhaps the most striking inclusion in the local clay that readily distinguishes it from Attic is mica, even though small particles of silvery mica are a feature of Attic (Coldstream 1968:196; Brann 1962: 29; Papadopoulos 2003). The mica content in the local clay may vary from fine through to small, medium, and large flakes; in the case of vessels where the fabric is better levigated, whether by intent or naturally, the mica content, like the other visible inclusions, is clearly lower. Both silver and golden mica can be observed, often on the same vessel, although in most cases there is a noted prevalence for one type of mica, whether predominantly golden (as is more common) or silver. It was noted that on vessels where the clay has fired a lighter color there is usually a preponderance of silver mica, whereas with vessels fired closer to red, golden mica tends to predominate. This observed feature, which is by no means invariable, was thought to indicate the possible existence of more than one local clay source. The evidence of the kiln pottery in this respect was of interest since individual vessels fired in the same kiln load could contain either golden or silver mica, or both (Whitbread, Jones, and Papadopoulos 1997). In addition, individual vessels containing a good quantity of both silver and golden mica (e.g., **T99-1**) showed that both types of mica could be found on the same vase. The results of the elemental analysis of the pottery (see appendix E) verified that there were two distinct "groups" among the wheelmade pottery considered local, although these groupings did not accord with the nature of the mica content.

The amphoriskos **T99-1** showed, perhaps more clearly than any other vessel, the wide range of colors that the local clay and paint could achieve according to the conditions of firing, so much so that had the vessel been encountered in fragments, it would have been difficult to believe that sherds from either side of the vase could belong to the one pot. The standard color range of the clay could vary from a pale, light-colored fabric—usually around light brown 7.5YR 6/4 (**T75-1**) or light yellowish brown 10YR 6/4 (**T124-1**) but sometimes even paler, approaching white 2.5Y 8/2 to light gray 2.5Y 7/2 (**T84-1**)—through to a redder-colored fabric, something like light red 2.5YR 6/6 to reddish yellow 5YR 6/6 (**T45-1**). On average, the color was consistently close to reddish yellow 5YR 6/6–7.5YR 6/6 (cf., among others, **T37-1**, **T47-3**, **T51-1**, **T51-2**, **T51-3**). In the case of **T99-1** one side of the vessel fired close to reddish yellow 5YR 6/6 (with the paint firing red), while on the other side the clay color was light brown 7.5YR 6/4 (with the paint firing dark brown approaching black). This was clearly the result of an uneven firing, with one side of the vessel having been fired in an oxidizing atmosphere, the other the result of reduction. In some cases a brownish-gray color, often with a mauve tinge, was met, something in the range of light brown 7.5YR 6/4 to pale brown 10YR 6/3 (cf. **T78-1**, **T124-3**). Further variances of color were noted on the fire-affected sherds, normally discolored gray.

The *texture* of the fabric is normally rather soft and is easily incised with a fingernail; in this respect it more closely resembles the characteristic Corinthian clay (cf. Edwards 1975:9–10), and never quite reaches the firmness of, say, Attic black-figure or later vases.[8] The soft texture of the clay is usually accompanied by a surface that has a powdery or chalky feel. In many cases, especially with thicker-walled vessels, the clay core has fired light gray. Here the result is usually an even more powdery surface, and the painted decoration tends to be very poorly preserved. Better fired pots are less common; two outstanding examples, however,

are the skyphoi **T25-1** and **T103-1,** which form a contrast to the normal soft texture and where both paint and slip are better preserved. The standard local wheelmade ware must have been rather porous, but this defect would have been in part offset by the handmade wares whose special qualities, in addition to lightness and resistance to heat, included a much reduced porosity.[9]

The local wheelmade pottery is slipped and painted prior to firing. By "slip" I refer to a thin layer of fine clay that was applied to, or had formed during manufacture on the surface of a pot. In most cases it is little more than a clay wash or slurry that helps seal the surface of the vessel and is normally a shade lighter in color than the body clay after firing (the burnished surface of the handmade pottery is unslipped). In the majority of cases it is best described as a "self-slip" (see H. Robinson 1959:5; Papadopoulos 1989b) and was probably not intentionally applied. There are several ways in which such a slip can originate (Rye 1981:75). For example, water added during forming produces a slurry that is distributed over the surface of the pot in the process of throwing. Alternatively, shortly after throwing a vase the potter may finish the surface of the pot with wet hands, a wet sponge, a cloth, or something similar. This process may create a thin layer of slip. In both cases the slip is not intentionally applied but originates during the process of manufacture from the clay from which the pot was thrown, plus water. As such, the term self-slip is not inaccurate. In the case of vessels where the painted decoration has almost completely worn off, so too has the slip. On some vessels a thicker, more pronounced slip has normally fired a creamy off-white and tends to stand out more readily against the background of the normal clay color; examples include, among others, **T45-1**, **T102-1**, **T104-1**, **T109-1**, **T116-1**, and **T117-1**. On a number of vessels, especially **T109-1** and **T116-1**, the slip is particularly prominent, with a slight sheen, and occasionally almost resembles that found on Late Mycenaean White Ware (references in Papadopoulos 1990). This thicker slip, which was probably intentionally applied, is not only rare but is found only on some of the earlier tomb pots.

The general features of the paint are another characteristic of the local wheelmade pottery. The term "paint" is here preferred to "glaze" or "gloss" in order to distinguish it both from the later metallic glazes used in the Roman and Byzantine periods (Robinson 1972; Hochuli-Gysel 1977; Papanikola-Bakirtzi 1999), and from the modern use of the term glaze (Rhodes 1957; Leach 1976:127–177; R. Jones 1986:760–761). The local paint, essentially a refined solution of the body clay (cf. the clay glaze or gloss of Classical black-glaze, black- and red-figure pottery: Jones 1986:798–804), is almost always dull or matte and never achieves the sheen, gloss, or luster of the paint of several other contemporary pottery-producing centers, although occasionally a very slight sheen is observed (cf., for example, **KP-9**: Papadopoulos 1989a). The paint may be applied thickly, where there is often a tendency to flake, or it can be applied more dilutely, with the result that brushmarks and streaks are more readily visible. As with the clay, the color of the paint is prone to great variances according to the conditions of firing, often to be seen on the one pot (as with **T99-1** already noted), and any color from true black, through various shades of brown, to a good bright red or orange red may be found.

There is nothing inherent in the local wheelmade pottery to indicate technical differences in the shaping or decorating of the various vessel forms on the wheel from other contemporary wares (for which see Noble 1981; 1988; Jones 1986:749–819; Papadopoulos 2003).

Shape studies: Typology

I. THE AMPHORA

The amphora, in its four principal varieties, is the most common wheelmade shape represented among the tomb pottery, on account of both its popularity as ash-urn and its further use in other aspects of funerary ritual (see chapter 4). Although it was the most common, the fragmentary state of the majority of examples impedes a more detailed analysis, and fewer than one-half of the amphorai recovered may be assigned with certainty to any one of the discerned types. The local amphorai may be divided into four types in accordance with the position of their handles. The general shape is a storage vessel used also for carrying liquids. With the exception of Type 4 (belly-and-shoulder-han-

dled amphorai), the shape is the one that best reflects influences from other parts of Greece and especially Attika.

Type 1. Neck-handled amphorai **(pls. 259–265)**
Only seven amphorai may be classed with absolute certainty as neck-handled: **T41-1**, **T52-1**, **T73-1**, **T74-1**, **T77-1**, **T124-1**, and **8**. Of these, only five (**T52-1**, **T73-1**, **T74-1**, **T77-1**, **T124-1**) preserve complete profiles. All seven examples are of one standard type in terms of both shape and decoration, and range from 0.340–0.440 m in height: the smallest (**T73-1**) has a height of 0.343, the largest (**T77-1**) 0.436. The general shape is characterized by a flat disk base offset slightly from the body (this is a feature of other local amphora types). Sometimes the underside may be very slightly hollowed out around the edge, creating a minor false ring foot, but never is the base a true ring foot—as is the case, for instance, with Thessalian neck-handled amphorai. The form of the base of Toronean neck-handled amphorai is identical to Attic Submycenaean and Early Protogeometric (see Desborough 1972:33, fig. 1), whereas the true ring base becomes common in the course of Protogeometric in Athens (Desborough 1972: 147) and is a standard feature of Thessalian amphorai, even the earliest (see Verdelis 1958:6, figs. 1–2; 8–10, figs. 3–5), and is also a feature found on one of the few well-preserved neck-handled amphorai at Lefkandi in the light-ground technique (Late Protogeometric: see Popham, Sackett, and Themelis 1979–80:334, fig. 19B). It is worth adding that all the more recently published neck-handled amphorai from the Toumba building at Lefkandi have ring feet of various height, as do the hydriai (Catling and Lemos 1991:37–40, pls. 63–64 [amphorai]; 40–42, pl. 65 [hydriai]).

The body is ovoid with the point of maximum diameter set relatively high; occasionally, as with **T41-1** and **T73-1**, the junction between upper and lower body is more marked (cf. Doumas and Marangou 1978:183, pl. 34). The neck is tall and may be straight or slightly concave but is almost always offset from the shoulder by a small ridge. The rim is usually everted and rather broad, normally with a slight thickening either toward the lip or outside edge. The handles rise vertically from the shoulder, curve over, and are attached to the neck below the rim. The vertical handles are thick and are usually characterized by a slight, but nevertheless distinct, double concavity on the upper face.

The general scheme of the decoration is clay-ground or light-ground, with the shape divided into separate areas by the use of horizontal bands; the dark-ground system, as developed in Athens, Euboia, Thessaly, and elsewhere, was never adopted (Desborough 1952). The rim is painted over, on interior and exterior; there is a band, or bands, at the base of the neck, usually over or immediately above the small ridge; the point of maximum diameter below the shoulder is marked by a broad band normally with a few thinner bands below, sometimes enclosed by bands above and below (**T52-1**, **T77-1**, **T124-1**); the lower body can have from one to three thin bands. Apart from these bands, only the shoulder was decorated (except perhaps for **T77-1**), with the decorative elements confined to two only: either sets of mechanically drawn concentric circles (**T41-1**, **T77-1**, **T124-1**), or sets of mechanically drawn concentric upright semicircles (**T52-1**, **T73-1**, **T74-1**, **8**). Of the latter, the semicircles of **T74-1** had solid hourglass filling ornaments (cf. Kraiker and Kübler 1939: pl. 40, inv. 585; Kübler 1943: pl. 6, inv. 2152; the small "triangular motif" on **T41-1** is probably a splash of paint), but apart from these there were no subsidiary decorative elements. On **T77-1** a possible second row of mechanically drawn concentric circles, very poorly preserved, is found on the lower wall.

Another characteristic feature of the decoration was the treatment of the handles; the upper face of both handles is usually decorated with two parallel stripes that follow the slight double concavity. Below the handle these would cross over and extend onto the body, normally for quite some distance; more often than not, these two stripes would be joined by another line, running parallel to them, which encircled the lower handle attachment (see especially **figs. 97a**, **130b**). The painted decoration of the handle at the upper attachment would normally extend for a short distance onto the neck (see **T41-1**, **T74-1**, **T124-1**, **8**); occasionally this painted extension could fork, as on **T73-1**, and in one instance (**T52-1**) it extended as a tremulous line immediately below the rim. A similar tremulous line appears at the base of the neck on an

amphora from Lefkandi (Popham, Sackett, and Themelis 1979–80: pls. 175, 260b [= Toumba T14.2]; cf. also the tremulous lines enclosed by bands on the hydria Catling and Lemos 1991: pl. 66, no. 470). Such painted extensions onto the body are not normally met in Attic Protogeometric, where the painted decoration of the handles usually terminates at both the upper and lower attachments (e.g., Kraiker and Kübler 1939: pls. 40–42, 57; Kübler 1943: pls. 5–7; Desborough 1952: pls. 2–3), but it is a feature commonly found on Attic belly-handled amphorai. Similar painted extensions onto the body are sometimes met on the earlier Thessalian Protogeometric neck-handled amphorai in light-ground technique (e.g., Verdelis 1958: pl. 1, nos. 1–2; cf. Popham, Sackett, and Themelis 1979–80: pl. 281C; Andreiomenou 1980: 292–294, pls. 127–129), but they are rarely as pronounced as in the Toronean examples. In Thessaly it is also common to find, especially at Marmariani, the painted extension of the upper handle attachments developing into ×s on the neck (Heurtley and Skeat 1930–31:24–26, pls. V–VI; Desborough 1952: pl. 22, nos. 78–79; Coldstream 1991: 292, fig. 6; Coldstream and Catling 1996:403, pl. 101, no. 30.4); otherwise the necks of Thessalian amphorai are normally decorated with other motifs (e.g., Desborough 1952: pl. 22, nos. 74–75, 77; Verdelis 1958: pl. 2), or left reserved (e.g., Verdelis 1958: pl. 1, nos. 1–2). It should be stressed that the free-floating × on the neck of an amphora from the Kerameikos (Kübler 1943: pl. 5, inv. 1069) is quite different in concept from the ×s on the necks of the Marmariani amphorai as it is isolated and occurs only on one side of the vase. I have argued elsewhere that such isolated xs are potters' marks (Papadopoulos 1994). In other parts of the Greek world the motif as found in Thessaly is rare, and neck-handled amphorai from other regions normally have the neck painted solid, left reserved, or decorated with thin horizontal bands.[10] The closest parallels to the method of decorating the handles of the local amphorai come from the excavations at Kastanas (Hänsel 1979a:198, fig. 18, no. 3; Jung 2002) and from Skyros (Doumas and Marangou 1978:183, pl. 34), while a more elaborate decorative system found on a neck-handled amphora from Saré Omér in the Gallikos valley is probably somewhat later in date (Heurtley 1939:236, no. 485).

Arranging the seven neck-handled amphorai into a chronological sequence on the basis of internal evidence is not possible, except that **T77-1** was clearly late as it was found in association with the imported pendent semicircle skyphos **T77-3** and thus was among the very latest of the dated tombs. It differed in points of detail from the other neck-handled amphorai in that the body was taller and comparatively more ovoid,[11] the neck somewhat wider, and the underside of the base more noticeably hollowed out. Moreover, **T77-1** was perhaps the only neck-handled amphora to be decorated with mechanically drawn circles on the lower body in addition to the shoulder, although its state of preservation makes any reconstruction of the decoration tentative. The same amphora also established that the light-ground system of decoration continued for quite some time at Torone.

Determining the date of the remaining amphorai remains largely conjectural as it must be based on the evidence of stylistic resemblances with comparative material from elsewhere. Stylistically, the closest parallels are offered by the many neck-handled amphorai from the Kerameikos; this is especially highlighted in local amphorai such as **T52-1** (cf. Kraiker and Kübler 1939: pl. 40, inv. 585, 557, 558, 594; pl. 57, inv. 565, 572, 573, 571; Kübler 1943: pl. 5, inv. 1069, 2008, 906; pl. 6, inv. 1093; also Brouskari 1980: pl. 3a) and **T124-1** (Kraiker and Kübler 1939: pl. 29, inv. 522; pl. 41, inv. 591; pl. 56, inv. 556; Kübler 1943: pl. 5, inv. 915; Brouskari 1980: pl. 3c), where not only the shape and decoration are close to Attic Protogeometric, but the fabric is better levigated and the overall shape well formed. Indeed, the resemblance is so close that the link between Torone and Athens is striking and appears to be further supported by the evidence of the distribution of the neck-handled amphora in other parts of the Aegean. In many respects, Toronean examples such as **T52-1** and **T124-1** seem closer to Athenian counterparts in shape and decoration than they do to north Aegean amphorai from sites such as Nea Anchialos (see R. Catling 1998a:162, 176–177). In discussing **T52-1**, Catling places this amphora to the middle of the tenth century B.C. and **T124-1** slightly later; **T41-1** and **T74-1** he dates to ca. 950–850 B.C. This chronological schema is reasonable and in keeping, broadly speaking, with the ev-

idence of the horizontal location of tombs in cemetery (see chapter 4).

As Desborough (1952:6, 15; 1972:33) has outlined, the frequency of this type of amphora in Athens and its comparative paucity elsewhere derives in part from its use as ash-urn, tending to be rare in regions where inhumation was practiced, although both Elis and Thessaly provide exceptions to this observation. Nevertheless, the basic pattern of distribution is revealing: apart from a handful of examples in places such as Aigina, Corinth, Chios, Kos, and Boiotia, all of which display strong Attic influences,[12] the only regions outside Attika to have yielded any *quantity* of the type are Crete (Desborough 1952:15, 233–271; Brock 1957:146, Snodgrass 1971:79–84; Coldstream and Catling 1996:331–335), Thessaly (Desborough 1952:15, 127–153; 1964:128–129, 135–136, 261–262; 1972:206–216; Verdelis 1958:5–11; Theocharis 1960:58; 1961:51–60; Snodgrass 1971: 61–63), Ancient Elis (Leon 1961–63:33–58; Yalouris 1964:181; Styrenius 1967: 139–42; Snodgrass 1971:65; Desborough 1972:33; most recently Eder 2001), and now Euboia, judging from the more recent finds at Lefkandi (although rare in the tombs [Popham, Sackett, and Themelis 1979–80:335–338; Popham, Touloupa, and Sackett 1982:241, no. 4], neck-handled amphorai are numerous among the pottery associated with the Toumba building, and probably form about 50 percent of all large closed shapes [Catling and Lemos 1991:37–40]). A number of very fragmentary examples have been published from Asine.[13]

The Elian amphorai, Submycenaean in the main, are similar to Attic Submycenaean but differ mostly in that they are largely covered with paint. The neck-handled amphorai of Crete represent a new shape in the local repertoire, which, as Desborough (1952:245, 248) has argued, was introduced from Athens; they differ from the Toronean mainly in their taller, more slender bodies and rims that are slightly more rounded, in addition to variances in decoration. The earlier Thessalian amphorai in the light-ground system of decoration are much closer in general features to those of Torone and it may seem more natural to assume a certain amount of influence from that region, although on closer inspection the Attic links are far more pronounced. First, as already noted, there are certain differences between Thessalian and Toronean in details of decoration and especially the form of the base—the ring base of Thessalian amphorai is stressed by Desborough (1972:212) as indicating a later date than the earlier flat disk base—that point to a closer link with Athens. Second, and perhaps more significant, is the question of the popularity at Torone of the belly-handled amphora, another type that closely follows the Attic model but is rarely represented in the Thessalian repertoire (a few examples are known at Iolkos—e.g., Sipsie-Eschbach 1991: pl. 14, no. 1). Although this is not the place to discuss the vicissitudes of the rise of the Protogeometric style in Thessaly, the arguments for the role played by Athens, especially the influence as seen in the Thessalian neck-handled amphorai, seem most compelling.[14] It is also worth stressing that many fragments of amphorai decorated in the light-ground technique with concentric circles on their shoulders that are often identified as Protogeometric are considerably later (e.g., Andreiomenou 1981b:196, fig. 19 [Late Geometric or early Archaic]).

Elsewhere in Macedonia the neck-handled amphora is not very common on the evidence of what is currently published, although more recent excavations, especially at a number of sites in Chalkidike and around the Thermaic Gulf, have added considerable new information; some well-known published examples of Early Iron Age date may be noted from Kastanas (Hänsel 1979a:198, fig. 18, no. 3; see now Jung 2002), Nea Anchialos (Sakellariou 1965: 421, pl. 471e; see further Tiverios 1990; 1991; 1991–92; 1993; 1998), Axiochori/Vardarophtsa (Heurtley and Hutchinson 1925–26: 27, fig. 14, no. 7), Karabournaki (Rhomaios 1941: fig. 4, no. 1; cf. Tiverios 1987), and Saré Omér (Heurtley 1939: 236, no. 485). At Kastanas a few fragments, evidently of this type, also were encountered in the later Mycenaean levels (Podzuweit 1979b: 220–221, fig. 24, no. 6; cf. no. 3; more recent analysis in Jung 2002). The Mycenaean ancestry of the neck-handled amphora has been discussed by Desborough (1952:6–7; 1972:33; cf. Kraiker and Kübler 1939:75–76, 217–220) and requires no further comment here (for the shape in Mycenaean see Furumark 1972a: Form 11, Types 66–70, esp. 70; cf. Deshayes 1966:66–67, pl. 67, tomb 24, nos. DV98, DV107; Popham and Milburn 1971:345, fig. 7, no. 4; Kardara 1977: pls. 47–51).

Despite the fact that published examples from Macedonia and Chalkidike are not numerous, neck-handled amphorai of north Aegean manufacture appear to have enjoyed a fairly wide distribution. This has been recently noted by Richard Catling, who cites examples of north Aegean amphorai at a number of sites in Euboia, Phokis, Thessaly, Skyros, south central Macedonia, the Chalkidike, and the Troad (Catling 1996:126; 1998a; cf. L. Morricone 1978:403, fig. 903; note also the fragments from Bassit in Syria published in Courbin 1993). In his detailed typology of the Protogeometric and Subprotogeometric pottery from Troy, Catling (1998a:176–177; see also Lenz et al. 1998) has gathered the most comprehensive list of north Aegean neck-handled amphorai from Troy, Kalapodi, Elateia (see further Dakoronia and Deger-Jalkotzy 1991), Agnanti, Lefkandi, Kastanas, Mende (see further Moschonissiotou 1998), Sane, Assiros, Torone, Pherai, Lesbos (Pyrrha), Marmariani, Skyros, Poseidi, Iolkos, Nea Anchialos, Thasos, and Giannitsa (Archontiko); further examples may be cited from the Early Iron Age cemetery at Nea Philadelphia (Misaelidou-Despotidou 1998: 267, pl. 3). Although Catling's discussion of the chronology and primary features of this class is cogent, there are significant differences in terms of fabric between the Toronean amphorai and those from other sites in Macedonia and Thessaly. These differences, together with the fact that there is a good deal of variety in the overall repertoire of shapes at many of these north Aegean sites—the handmade component is more considerable at Kastanas and Nea Anchialos than it is at Torone, and it is remarkable, for example, that the Protogeometric pottery from Troy is largely composed of neck-handled amphorai (Lenz et al. 1998)—makes it difficult to group amphorai of different fabrics under a unified typology. It is worth adding that the fragmentary north Aegean amphora from Lefkandi published by Catling (1996:127, fig. 1A, pls. 43–44) differs in certain details from the Toronean examples published here, particularly in its proportionately taller and more slender body and neck, its more noticeably outward leaning handles, and the form of its rim. Moreover, the rarity at many north Aegean sites of the belly-handled amphora, a shape that is common and early at Torone, suggests that Torone enjoyed closer ceramic links with sites in central and southern Greece than did other north Aegean sites.

The stylistic links of the local neck-handled amphora outlined above indicate that it probably first appeared at Torone at a time contemporary with, or slightly later than, Attic Early Protogeometric, if not already in the Late Bronze Age. Once established, however, its general characteristics seem to have remained rather standard and the type persisted down to the years of the ninth century B.C. with only minor changes in details of shape and decoration (cf. **T77-1**).

Of the many fragmentary amphorai recovered from tombs and the various deposits on Terrace V the exact type of which could not be determined with certainty, the following are probably neck-handled amphorai: **T28-4**, **T119-1**, **T121-1**, **T129-1**, **T131-1** (and cf. **9**). Other fragments are even more problematic; the following, listed for comparison only, may be from neck-handled amphorai or from amphorai of other types (where they may also be listed): **T29-1**, **T42-1**, **T44-2**, **T51-4**, **T63-2**, **T64-1**, **T80-1**, **T88-1**, **T92-1**, **T104-10**, **T114-5**, **T117-2**, **T118-2**, **10**, **32**, **33**, **61**, and **62**.

Type 2. Belly-handled amphorai **(pls. 266–274)**

The belly-handled amphora, perhaps more than any other shape, is the one that most closely follows Attic influences. There are twelve complete or semicomplete amphorai that can be securely assigned as belly-handled: **T20-1**, **T24-1**, **T51-1**, **T60-1**, **T65-1**, **T75-1**, **T91-1**, **T95-1**, **T104-1**, **T114-1**, **T115-1**, and **T134-1**. These may be further divided, as in Attic, into two varieties according to the molding of the neck and rim:

A. Tall straight or slightly concave neck with a sharply outturned or everted rim (Desborough 1952:23–27 [Class I]; 1972:33, 148; p. 36, fig. 3)

B. Tall neck flaring out to a "trumpet mouth" with a plain rounded rim (Desborough 1952: 23–24, 27–29 [Class II]; 1972:33, 148; 35, fig. 2).

The third Attic variety, that with a low collar neck (Desborough 1972:33; cf. Kraiker and Kübler 1939: pl. 21) is not attested at Torone, although a related version does appear with the belly-and-shoulder-handled amphora below.

In aspects other than the shape of neck and rim the two varieties are similar. As with neck-handled amphorai the base is usually a flat disk (**T20-1, T51-1, T95-1, T104-1, T114-1, T115-1, T134-1**), sometimes very slightly hollowed out (**T60-1, T91-1**), but in three instances a true ring base is found (**T24-1, T65-1, T75-1**), signifying a later date (cf. Desborough 1972:33, 147–148). The body is more globular than that of the neck-handled amphora, and in most examples the body and neck are offset by a small ridge, the notable exception being **T104-1** (such small ridges are not normally met in Attic). Horizontal handles, round in section, are set on the belly usually at, or slightly above, the point of maximum diameter, and in most cases tend to rise at an angle of about 45°. The size of the vessel can vary considerably; of the complete specimens the smallest (**T65-1**) has a height of 0.230 m, the largest (**T104-1**) 0.506 m (**T114-1** may originally have been larger).

As for decoration, the system of dividing the various parts of the vessel is similar to that of the neck-handled amphora, except that the neck is invariably painted solid; apart from this the decoration remains in clay-ground throughout. The body itself is divided into separate zones by either single bands or groups of bands that are always found on the shoulder and lower body; sometimes a third group of bands, or a single band, is found in the area immediately below the handle. Often, but not always, the bands on the shoulder are characterized by a broad band enclosed by thinner bands. Apart from the bands, which more often than not constitute the only preserved decoration, the shoulder could be decorated with mechanically drawn concentric circles (**T51-1, T104-1**) and in one case (**T114-1**) with pendent concentric semicircles.[15] A rare, and probably late, variation is the tremulous line approaching zigzag on the shoulder of **T75-1**, with a second, similar tremulous line on the lower neck. The belly zone, left largely reserved, could be decorated with wavy lines, which were clearly preserved in only two instances (**T104-1, T134-1**). The outer faces of the handles were painted with the decoration extending onto the body, sometimes for quite some distance (cf. **T60-1, T75-1, T104-1**), while in the case of **T20-1** the handle decoration extended onto the body as a horizontal band. The former is a feature common in Attic belly-handled amphorai (cf. Desborough 1952: pls. 4–5), and is also found on the local neck-handled amphora (see above); the overall effect creates the impression that the potter was attempting to copy, in paint, the plektonic attachment of a woven cane basket handle; the influence of basketry on Geometric pottery has been discussed by a number of scholars (Brann 1962:14, n. 46; 62, pl. 16, no. 271; cf. Thompson 1946:286; Walker Kosmopoulos 1953; Pfaff 1988:76–77, fig. 37, pl. 31, nos. 109–111; for the influence of basketry in earlier painted pottery, see Rutter 1988:85).

Variety A. There are three adequately preserved examples of this variety: **T75-1**, **T91-1**, and **T104-1**. Of the three, the earliest stylistically, **T104-1**, finds many close parallels in the Kerameikos (Kraiker and Kübler 1939: pl. 46, inv. 857; pl. 54, inv. 549; pl. 55; pl. 56, inv. 560, 578; Kübler 1943: pl. 9, inv. 1089; cf. pl. 10; see also Kraiker 1951:23, no. 1 [inv. 1326]; Brouskari 1980: pl. 4a, d; cf. Popham, Sackett, and Themelis 1979–80, Toumba T14.1, pls. 175, 260a; Catling and Lemos 1991: pl. 61, no. 450; cf. pl. 62, no. 452). Its flat disk base and relatively short vertical neck are features consistent with Submycenaean and Early Protogeometric in Athens, as is the wavy line on the belly zone (Desborough 1972:33). An interesting aspect of the decoration of the vessel worth noting are the seven sets of mechanically drawn concentric circles on the shoulder, which are spaced rather unevenly with three sets very close together and the remaining four placed wide apart, suggesting perhaps that the potter was not totally proficient in the use of the pivoted multiple brush and its application to the curved surface of the vase (Papadopoulos, Vedder, and Schreiber 1998:518, fig. 10).

The more fragmentary **T91-1** has a base that is slightly hollowed out on the underside, although the form of the rim and other aspects of shape are not unlike those of **T104-1**; the flat rim top is barred, a feature particularly common with belly-and-shoulder-handled amphorai. The latest of the three appears to be **T75-1**, which has a ring base, a comparatively taller and wider neck, and a rim that

is not as carefully molded as those of **T91-1** and **T104-1**. The body, although more globular than **T104-1**, is also rather carelessly formed with wheelmarks prominent on the interior; the junction of lower and upper wall is marked, as on the neck-handled amphorai **T41-1** and **T73-1**. Among the fragmentary amphorai and sherds, **T102-2** and **4** probably belong to this variety; the rim top of the latter is decorated with a tremulous line approaching zigzag, similar to those on the shoulder and lower neck of **T75-1**.

Variety B. There are three adequately preserved examples of this variety: **T20-1**, **T51-1**, and **T65-1**, which appear to be smaller than variety A. **T20-1** and **T51-1** form a group characterized by a flat disk base and body decorated with three bands and there are mechanically drawn concentric circles on the shoulder of **T51-1.** The general shape is also closely paralleled in Athens (cf. Kraiker and Kübler 1939: pl. 43, inv. 559, 586, 611, 583; pl. 44 [from Andros, now in Heidelberg: see Cambitoglou et al. 1981: fig. 63]; pl. 54, inv. 562, 563; Kübler 1943: pl. 4, inv. 925; pl. 9, inv. 1088; pl. 11, inv. 904, 902; Brouskari 1980: pls. 3d, 4c). **T65-1** differs somewhat in that it is smaller, stands on a ring base, and has a comparatively wider neck and handles set rather high on the body, features that would suggest a date later than **T20-1** and **T51-1**; nothing, however, is preserved of the decoration (cf. Desborough 1972:204, pl. 47 middle row, center [from Delphi]). In addition to these three, a number of amphora rim fragments almost certainly belong to this variety, notably **T113-2**, **T128-2** (and cf. **T108-6**).

For the remaining six belly-handled amphorai rims are not preserved, making it difficult to place them with certainty to one of the two varieties. Of these, **T114-1** is particularly close to **T104-1** and is almost certainly of variety A; the taller, more slender body and narrow neck are not unlike Cretan versions of the shape (cf. Desborough 1952: pl. 36; Brock 1957: pl. 18, no. 243; Coldstream and Catling 1996:335–338). **T114-1** stands on a flat disk base, as do **T60-1**, **T95-1**, **T115-1**, and **T134-1**. Unusual is the fabric of **T24-1**, characterized by a particularly pale-colored clay with somewhat less mica; its shape, especially the form of the base, is similar to **T65-1** but slightly larger.

In Athens varieties A and B (corresponding to Desborough's Classes I and II [1952:23–29; 1972:33, 148]) are found in Submycenaean and continue through to the later stages of Protogeometric, although the shape evidently disappeared before the very end of Protogeometric (Desborough 1972:35–36, 148, figs. 2–3); the ancestry of both varieties may be traced back to Mycenaean (Desborough 1952:20; Furumark 1972a: Shapes 58 and 63; Mountjoy 1986:160–161, fig. 202; cf. Karageorghis 1963: pl. 37, nos. 1–2; 1965b: pl. 23, no. 3). Significantly, the belly-handled amphora is exceedingly rare in Macedonia. There is one complete example from Toumba Thessaloniki similar to Type A and complete with a potter's mark under one handle (Andreou and Kotsakis 1996:372, fig. 3, no. TKA 641/707 [Phase 2: eleventh to tenth centuries B.C.]), and there are a few fragmentary pieces from Kastanas (Hänsel 1979a:190, fig. 15, no. 9; Podzuweit 1979b:214, 216, fig. 22, no. 2; Jung 2002: pls. 32–33, nos. 337–342, of which only nos. 338, 339, and 342 are clearly belly-handled amphorai and not hydriai; also p. 438, pls. 59-60, nos. 500, 502); the published examples are primarily from levels 11 and 12 (= Kastanas Period V, dated ca. 1190–1000 B.C.); there are none at Nea Anchialos (Stephanos Gimatzidis personal communication). Elsewhere, the distribution of the belly-handled amphora is common in Athens and related areas, whereas outside Attika it is more limited (Desborough 1952:31, 36–37). Only Knossos has produced any number of both varieties (Desborough 1952:36; Brock 1957:146; Coldstream and Catling 1996:335–338). A few are known from Aigina, Andros, Delos, and Dirmil (Desborough 1952:31, 36; for Dirmil see Bass 1963:360–361, fig. 20, no. 6; Boysal 1969: pl. 38, no. 2), while those from other parts of the Cyclades and Rhodes are mainly Late Protogeometric or Early Geometric (Desborough 1952:36; Papadopoulos and Smithson 2002; cf. Kunze 1952:53–57). The Argolid has yielded several, including specimens that must belong to Early Protogeometric;[16] elsewhere in the Peloponnese the type is attested at Nichoria (McDonald, Coulson, and Rosser 1983:131, figs. 3–15 [with flat disk base]; 156, figs. 3–40 [P1606, with low ring base]). The absence of the belly-handled amphora in the Thessalian repertoire is noteworthy; there is one possible example among the pub-

lished finds at Iolkos (Sipsie-Eschbach 1991:64–65, pl. 14, no. 1; none of the fragments illustrated on pl. 19 are clearly from amphorai as opposed to hydriai), while at Lefkandi the type is extremely rare (Popham, Sackett, and Themelis 1979–80: 335–339; cf. especially the amphora Toumba T14.1 [pl. 175], which is an Attic import [Catling 1998b:376]). In dealing with the pottery associated with the Toumba building at Lefkandi, Richard Catling (in Catling and Lemos 1991:35) notes: "The comparative rarity of the belly-handled amphora may reflect a specialized and prestigious function, perhaps as an item of feasting equipment" (for Skyros see Doumas and Marangou 1978:184, pl. 35; Kalogeropoulou 1983:138, fig. 1; for Bronze Age antecedents see Parlama 1984: pl. 98, no. 72; pl. 99, nos. 74–75). The absence of diagnostic belly-handled amphorai (as opposed to hydriai) at Troy (Lenz et al. 1998; Catling 1998a) and Kalapodi (Jacob-Felsch 1996) is noteworthy, as it establishes that the closest comparanda for the Toronean examples are from south of Euboia, in Attika, the Peloponnese, and even Crete. It is worth adding that the fabric of the Toronean belly-handled amphorai is identical to that of the neck-handled.

The close affinities of the local belly-handled amphorai with those of Athens would indicate that the earliest examples of the type at Torone are Early Protogeometric, and it is possible that the type was introduced during the Submycenaean period, if not already in the Late Bronze Age. As with the neck-handled amphora, the belly-handled amphora, once introduced, appears to have changed or developed little, with the light-ground system retained throughout the period of use of the cemetery. There is, however, a very fragmentary amphora, **T88-1**, of undetermined handle type, decorated with pendent semicircles on the shoulder (cf. **T114-1**); the body is covered either with a series of many close-set thin bands, or with dilute paint. If the latter is the case, then this would be the only certain closed vessel of local manufacture decorated in the dark-ground system. Unfortunately, the poor state of preservation of the vessel is such as to make any firm statement about its decoration tenuous. The form of the base of **T88-1**, along with its decoration, is very similar to another fragmentary amphora, **T42-1**.

Of the many fragmentary amphorai of undetermined type the following may represent belly-handled varieties: **T51-2**, **T63-2**, **T64-1**, **T104-9**, **T108-6**, **T114-4**, and **12** (**T102-2**, **T108-6**, **T113-2**, **T128-2**, and **4** have already been noted above as perhaps belonging to either of varieties A or B). The following are listed here only for comparison: **T29-1**, **T42-1**, **T51-4**, **T53-1**, **T59-1**, **T92-1**, **T99-2**, **T105-6**, **T112-3**, **T114-5**, **T117-2**, **T118-2**, **4**, **26**, **32**, **33**, **36**, **61**, and **62**.

Type 3. Shoulder-handled amphora **(pl. 275)**

There is to date only one certain example of a shoulder-handled amphora at Torone, **T120-1**. The fabric of the vessel is a little unusual, but is best seen as local. The shape is characterized by a flat disk base, with the lower edge partly chamfered. The vessel is small (H: 0.202 m), the body tending ovoid. The neck and rim are similar to those of the belly-handled amphora of variety B; there is, however, no small ridge between body and neck. Two vertical shoulder handles (only one of which is preserved) are attached quite high on the body, rising vertically, curving over, the upper attachment joined to the upper shoulder just below the neck. The preserved handle is quite thick and has a concave upper face. The vessel is decorated in a similar manner to both neck- and belly-handled amphorai in that the system is clay-ground and the shape is divided into separate areas or zones with the use of horizontal bands. The decoration recalls that of the belly-handled amphora **T20-1**, as do the overall shape and proportions of the vessel, but the neck and rim are reserved. There is one band at the junction of body and neck, a broad band at the point of maximum diameter, a thinner band on the shoulder, and three horizontal bands set close together on the lower wall.

In Athens the shoulder-handled amphora, invariably in dark-ground, replaces the belly-handled amphora and is common only during the latest stages of Late Protogeometric and the transition to Geometric (Desborough 1952:37–40; 1972:148–149; cf. Charitonides 1973:26, pl. 16g). The shape is well attested in Attic Early Geometric I through Middle Geometric II (Kübler 1954: pls. 42–45; Coldstream 1968:11, 14, 17, 22; pls. 1a, 2a, 3[l], 5g; Brouskari 1974: pl. 170). Elsewhere in the Aegean

it has a limited distribution; several Attic-inspired examples are known from Marathon, Eleusis, Andros, Dirmil, and Samos (Desborough 1952:37; Bass 1963:359, fig. 16, no. 2; H. Walter 1968:92, pl. 2, no. 18; Boysal 1969: pl. 38, no. 1; Cambitoglou et al. 1981: fig. 58, no. 335), and a version of the shape appears in the Thessalo-Cycladic region (Desborough 1952:148; cf. Levi 1925–26:225, fig. 27 [Tenos]). A number of shoulder-handled amphorai found in Rheneia were characterized by a much shorter neck (Desborough 1952: pl. 19, nos. A1454, A1453, A1452, cf. A1455; cf. Dugas and Rhomaios 1934: pl. 14, no. 60; Coldstream 1968: pls. 32f, 34[I]), and a similar vessel, thought to be a Cycladic import, was found at Knossos (Brock 1957:129, pl. 109, no. 1492; cf. Coldstream 1990: 26). A small amphora from Theotokou Tomb B is close in shape to **T120-1** (Desborough 1952: pl. 21a; cf. pl. 20, no. 6 [from Halos]), and several of the vessels designated vertical-handled amphoriskoi from Lefkandi and Chalkis are not unlike in form (Popham, Sackett, and Themelis 1979–80:308–311; cf. Andreiomenou 1966: pls. 48β, 49γ, cf. pl. 46β; Catling and Lemos 1991:42–45, pls. 36, 70, esp. nos. 641–643, which are extremely fragmentary; also H. Catling 1984–85:13, fig. 14). And there are a number of related shapes in Aitolia (Vokotopoulou 1969a: pl. 46, first three, middle row) and Delphi (Lerat 1937: pls. 5–6 [= Desborough 1972:204–205, pls. 47–48, esp. pl. 47, bottom row, second from right, and pl. 48, top left-hand corner]). The majority, however, of the Thessalo-Cycladic examples are decorated in dark-ground, and belong either to Late Protogeometric or Subprotogeometric/Geometric, and the majority of these are further characterized by a ring base and a more articulated rim (cf. also the small amphora/iskos **T47-1**, which is an import). The exact shape and especially the light-ground system of decoration of **T120-1** find no close parallels and the vessel remains difficult to place chronologically. It is worth noting that the shape does have a Mycenaean pedigree (Furumark 1972a: Shape 62, cf. Shape 74: the former averages 0.150–0.280 m in height and is dated mainly to LH IIIC; the latter is normally smaller [H: 0.100–0.150 m] and earlier, mainly LH IIB–LH IIIA:2); there is a good example of the type from Chamber Tomb XL in the area of the later Athenian Agora (S. Immerwahr 1971:244, pl. 59, no. XL-1 [= Vermeule and Travlos 1966:72–73, pl. 24]; the vessel is compared to Furumark 1972a, Shape 74.).

Type 4. Belly-and-shoulder-handled amphorai **(pls. 276–288)**

This is a common shape at Torone, attested by at least eleven certain examples: **T26-1**, **T56-1**, **T67-1**, **T78-1**, **T81-1**, **T82-1**, **T83-1**, **T84-1**, **T86-1**, **T125-1**, and **39**. Several more fragmentary vessels are almost certainly of this type. The shape is essentially a belly-handled amphora with the addition of two small vertical handles set high on the shoulder, in axis at right angles to the belly handles. The shape is an interesting one as it finds no contemporary parallels in Athens and is extremely rare elsewhere in the Aegean. The shape may be divided into two varieties primarily on the basis of the molding of the rim.

Variety A. The following are considered under this heading: **T56-1**, **T67-1**, **T81-1**, **T82-1**, **T83-1**, **T84-1**, **T125-1**, and **39**. The shape is characterized by a base that is either a flat disk (**T67-1**, **T81-1**) or slightly hollowed out on the underside (**T83-1**, **T84-1**); the bases of **T56-1**, **T82-1**, **T125-1**, and **39** were not preserved. The body is ovoid, tending large. Of the vessels preserving complete profile, the smallest (**T67-1**) has a height of 0.340 m, **T81-1** stands 0.429 m high, and the fragmentary **T56-1** is clearly larger. **T83-1** and **T84-1** both have a preserved height of 0.352 m, **T125-1** a preserved height of 0.385 m. The form of the neck and rim is similar to that of belly-handled amphorai of variety A: the neck is tall, straight or slightly concave, and is mounted by a sharply outturned or everted rim (the rims of **T83-1**, **T84-1**, and **39** are not preserved). There is often a small ridge at the juncture of body and neck. Two horizontal belly handles, thick and round in section, are attached at, or slightly above, the point of maximum diameter. Two small vertical handles are set high on the shoulder; the upper attachment usually extends onto the lower neck or is joined at the juncture of body and neck. The shoulder handles are thin in section, normally concave on the upper face (cf. **T67-1**, **T81-1**, **T82-1**, **T83-1**, **39**), occasionally more oval in section (cf. **T84-1**, **T125-1**); the preserved shoulder-handle of **T67-1** is set slightly askew. The function of these vertical

handles is unclear, especially as in most cases their attachment to the vessel is poorly formed and they tend to break off easily.

However close the shape of this variety is to belly-handled amphorai of variety A, the system of decoration is very different. Stylistically, the earliest of the group, and the one that most closely resembles both the shape and decoration of the belly-handled amphora, is **T67-1** (for shape cf. **T75-1**, **T91-1**, **T104-1**; for decoration cf. especially **T51-1**). The neck and rim are painted solid and the remainder of the body is decorated in clay-ground. There are two bands on the lower body; the point of maximum diameter has two broad bands, above which are two thinner ones. The shoulder is decorated with mechanically drawn concentric circles, the upper portions of which extend over the small ridge onto the lower neck. The painted decoration of the belly handles extends onto the body for quite some distance; the upper faces of the vertical handles are similarly painted, with the paint extending onto the body as shown. Of the amphorai of this variety **T67-1** is the smallest. Slightly larger, but of similar shape, is the more fragmentary **T125-1**; the system of decoration is not unlike **T67-1** but rather more complex. The neck and exterior face of the rim are painted solid; the rim top was evidently barred. There are two horizontal bands on the lower wall; the upper body is decorated with two tremulous lines enclosed by many bands, both thin and broad. From the uppermost of the bands springs a row of mechanically drawn upright concentric semicircles. Judging by the preserved fragments, the handles are decorated in a manner similar to **T67-1**.

The remaining six examples of this variety form a homogeneous group that may be dated to the latest stages of the period of use of the cemetery. Of the six, **T81-1**, **T82-1**, **T83-1**, and **T84-1** were ash-urns of tombs located close together near the center of the cemetery area. Serving as the lid for **T82-1** was the pendent semicircle skyphos **T82-2**, one of the latest securely dated vessels in the burial ground. The lid for **T81-1** was the fragmentary Type 2 lekanis **T81-2**, a version of the shape that is late (see below). The decoration of these amphorai remains essentially in clay-ground, but there is a tendency to cover more of the body, especially the shoulder, with patterned decoration. This is matched with a tendency toward more linear motifs, with mechanically drawn circles or semicircles giving way to crosshatched triangles (for crosshatched triangles on later amphorai from Thasos see Bernard 1964:118, fig. 30, no. 110; 120, fig. 32, esp. nos. 129–131). The body is divided into several zones with the use of horizontal bands, normally arranged in groups of three (cf. **T83-1**, **T84-1**; also **T56-1**, **T82-1**). The proportionately larger and more ovoid body gave rise to two or more rows of patterned decoration. On **T56-1**, **T82-1**, and **T83-1** there are two rows of crosshatched triangles separated by horizontal bands; in the case of **T82-1** these are further separated by a reserved band decorated with vertical strokes arranged in groups of five to form a sort of "metope pattern" (cf. Hochstetter 1982:208, fig. 3, motif 1). The decoration of **T81-1** is poorly preserved and difficult to reconstruct, but the shoulder is clearly decorated with a single row of crosshatched triangles that are proportionately larger in order to cover the required field. On the fragmentary **39** the upper body is decorated with two rows of crosshatched triangles divided by bands; above these is a row of mechanically drawn concentric circles (each set comprises only two circles, a feature also found on the kiln amphora **KP-5**). Mechanically drawn circles are also found on **T84-1**, but here they are arranged in a new manner: the shoulder is divided into two zones by a single thin band; above and below are sets of mechanically drawn circles that overlap vertically (over the thin band). The upper parts of the top sets extend onto the lower neck, and the lower parts of the bottom sets extend over a broad band at the point of maximum diameter below; each set is filled with a solid hourglass motif as shown (the scheme of more than one row of sets of circles on the body is also perhaps found, but in a somewhat different manner, on the neck-handled **T77-1**, which is also late). The necks of these amphorai continue to be painted solid, but there is a tendency to leave the lowest portion of the neck either reserved (**T81-1**) or decorated with one or more thin bands (cf. **T83-1**, **T84-1**). There is also a tendency to decorate the rim top with short parallel strokes (cf. **T82-1**, **T125-1**), although in many cases the rim was too poorly preserved to determine the decoration accurately. The handles are also decorated in a manner slightly different from those of belly-

handled amphorai: instead of a single broad stripe extending onto the body from the horizontal handles, the outer faces of the handles are decorated with a thinner stripe flanked by one or two similar stripes encircling the handle attachment. These extend onto the body in the form of two or three parallel stripes (**T56-1**, **T83-1**, **T84-1**, **39**) instead of one (**T67-1**). The upper faces of the small shoulder handles could be decorated with either two or three stripes (**T81-1**, **T82-1**, **T83-1**, **T84-1**, **39**) or with a single stripe (**T67-1**, **T125-1**).

These decorative elements combine to define a style prevalent in the later stages of the period of use of the cemetery. The shape appears to continue into Late Geometric as it is also found in the kiln (**KP-5**), although with this later example the handles are thicker and the neck considerably shorter, and in terms of decoration the heaping on of motifs is even further developed. A number of amphora fragments, including one with Geometric figured decoration, from the excavations of the settlement at Torone are probably of this type of amphora (Cambitoglou and Papadopoulos 1991: pl. 23.3; 1994:150, fig. 3). Chronologically, the fact that most of the examples from the cemetery of belly-and-shoulder-handled amphorai of variety A form a homogeneous late group may indicate that this amphora type gradually replaced the two-handled belly amphora in much the same way that the shoulder-handled amphora replaced the belly-handled variety in Athens during the course of Late Protogeometric (Desborough 1972:148–149). If this is the case, then **T67-1** may provide something of a transitional link between earlier examples of local belly-handled amphorai and the later belly-and-shoulder-handled type.

In addition to the vessels already discussed, there are a number of amphora fragments that almost certainly belong to this variety. A similar system of horizontal bands and crosshatched triangles on the shoulder are found on two fragmentary ashurns, **T68-1** and **T122-1**; the lower preserved neck of the latter is interesting in that there is a circular motif, only partially preserved, above two thin bands. Crosshatched triangles above bands are also found on the small body fragment **24**, and on the shoulder fragment **65** there are what appear to be crosshatched panels instead of the more normal triangles (cf. Bernard 1964:121, fig. 33, no. 134). A number of fragments already discussed in relation to belly-handled amphorai are also listed here for comparison, especially **T102-2**, **4**, and **36**.

Variety B. There are two certain examples, **T26-1** and **T78-1**, of this less common amphora type, to which a third, **T86-1**, may be grouped. Chronologically there is no firm internal evidence to help fix their date. **T78-1** had no associated *kterismata*; **T26-1** and **T86-1** both had handmade jugs placed beside them. The former was further equipped with the base of a Type 1 lekanis as lid, a feature that would generally indicate a date neither early or late in the period of use of the cemetery. **T86-1** was found in the same vicinity as the late group of variety A (see above).

The shape differs from variety A not only in the molding of the rim but also in size and general proportions. The vessel is smaller and the body more globular; of the certain examples of this variety, **T26-1** has a height of 0.284 m, **T78-1** 0.195 m (**T86-1** has a preserved height of 0.233 m; its original height would have been less than 0.300 m). The base has a proportionately greater width in relation to height than is the case with variety A. The base is either a flat disk hollowed out on the underside as on **T26-1** (cf. **T86-1**) or a true ring base with flat resting surface as **T78-1** (the base of **T78-1** is not unlike those of the Submycenaean belly-handled amphoriskoi **T96-1**, **T101-1**, **T109-1**). The body is rounded, assuming an almost spherical form on **T78-1** and **T86-1**; in the case of **T26-1** the body tends to sag, with the point of maximum diameter set relatively low. Body and neck on all three are offset by a small ridge; the neck is vertical, terminating in a plain rim marked by a slight thickening on the exterior. The four handles are placed as they are on amphorai of variety A, although the belly handles tend to be set higher on the body, above the point of maximum diameter. The preserved shoulder handles of **T78-1** and **T86-1** have concave upper faces, those of **T26-1** are attested only by handle scars.

Unfortunately, the painted decoration of all three is poorly preserved and difficult to reconstruct accurately. Be that as it may, all three appear to share common features. Rim and neck are painted solid and the decoration of the handles is similar to that of **T67-1**, with a single stripe ex-

tending onto body. The juncture of base and body is marked by a thin band in the case of **T26-1** and **T86-1**, and a broader band on **T78-1**. Above this there may be one or more thin bands. In all three examples there is a very broad band near midpoint, immediately below the handles, below which are two (cf. **T78-1**) or three (**T26-1**, **T86-1**) thin, close-set bands. The belly zone, thus defined, is evidently reserved, although in the case of **T78-1** very faint traces of paint may indicate the presence of a wavy line. The shoulder is divided by a thin horizontal band (cf. **T26-1**, **T78-1**) above which are traces of painted decoration in two instances: the shoulder of **T78-1** is decorated with a tremulous line, that of **T26-1** may have been decorated with hatched or crosshatched triangles, although this remains uncertain (the triangles, if that is what they are, are too poorly preserved to indicate on the drawing; the decoration of the vessel is more fully described in chapter 3).

The external links of this amphora type, in both its varieties, are not readily apparent. Close parallels for the shape of variety A are offered by a distinctive series of "Four-Handled Jars" of Mycenaean date from Achaia (Vermeule 1960:4–7, pl. 1, figs. 2–8; pl. 2, fig. 9; Desborough 1964:97–101, pl. 10; T. J. Papadopoulos 1978/79:68–70, figs. 52–62, 191–197). Thanasis Papadopoulos lists some thirty-four examples from several sites in Achaia, of which twenty have the shoulder handles set horizontally, the remainder vertically. He dates the series mainly to Late Helladic IIIC:1b (Middle) through Submycenaean (T. J. Papadopoulos 1978/79:70). In her discussion of the type Vermeule (1960:4–5) states that "this class of vases is the most original and characteristic in Achaia, with no true parallels anywhere else in Greece." Both Vermeule and Papadopoulos compare the basic form to Furumark Shape 58, but both note the differences (Vermeule 1960:6; T. J. Papadopoulos 1978/79:69). Papadopoulos goes on to provide a list of comparable vessels outside Achaia and although examples from as far afield as Crete, Sicily, and Thessaly are cited, the basic pattern of distribution is one that is quantitatively limited.[17] However close the resemblance between the four-handled jars of Achaia and variety A at Torone may seem, the disparity in time and place cannot be bridged easily. Closer to home, a related series of Late Helladic IIIC:1 amphorai with small lugs or knobs on the shoulder instead of the vertical handles are well represented on Skyros (Parlama 1984:214–220, pls. 98–101; Desborough [1964:100] refers to the knobs as "warts"), but again the connection is not clear. Variety B is equally problematic: there is a general likeness with Furumark (1972a:594–595, fig. 9) Shapes 63 and 64, a form that continues in Athens into Final Mycenaean/ Submycenaean and Early Protogeometric (Desborough 1972:33; cf. Kraiker and Kübler 1939: pl. 21; Kübler 1943: pl. 9, inv. 920). Although there are similarities, the difference in details of shape and decoration are many and the Attic version does not appear to outlive the period of transition from Final Mycenaean to Protogeometric (Desborough 1952:20), whereas most of the Torone examples may more reasonably be dated to Late Protogeometric or Subprotogeometric. The closest parallels to variety A, and the only near-contemporary examples of the shape known to me, are at least three fragmentary vessels from Lefkandi (Popham, Sackett, and Themelis 1979–80:335–336, pl. 282f [from P Channel lower fill], pls. 112, 282a [S pyre 3.1], pls. 156, 282e [P pyre 41.1]): one is dated to Submycenaean, another to Submycenaean or Early Protogeometric, the third to Late Protogeometric. In discussing them, Desborough (in Popham, Sackett, and Themelis 1979–80:335–336, 405, n. 352) pointed to the Mycenaean four-handled amphorai from Achaia already discussed. All the Lefkandi examples are locally produced but the form is rare, at least as tomb furniture, and their general paucity and fragmentary state are such as to provide no clear link with the Torone series (cf. also the large fragmentary amphora with two knobs on the shoulder from Lefkandi Toumba pyre 11: Popham, Touloupa, and Sackett 1982:232, pl. 24, no. 5). There is nothing at Lefkandi resembling variety B at Torone.

From this discussion it is clear that the appearance of the shape at Torone is problematic. It may well represent a local development from the belly-handled amphora or it may represent an Early Iron Age version of an earlier Mycenaean shape.

II. THE AMPHORISKOS

Three types of amphoriskoi are presented here: the belly-handled and the vertical-handled amphoriskoi are distinct in terms of both shape and

decoration from the belly-handled and neck-handled amphorai respectively, and are well represented among the tomb pottery. The third type is rare.

Type 1. Belly-handled amphoriskoi **(pls. 293–295)**
This type represents a standard Final Mycenaean/Submycenaean shape (Styrenius 1962:113–114; Desborough 1972:35, 38, fig. 4; Mountjoy 1986:196, fig. 260), which has its origins in Late Helladic IIIC (Furumark 1972a:37, fig. 9, Shapes 59–61, 64; cf. Popham, Sackett, and Themelis 1979–80:308, 399, nn. 187–188; Popham and Milburn 1971: pl. 50, no. 5; pl. 51, no. 4; pl. 55, no. 4; Parlama 1984: pl. 102, no. 78, cf. pl. 117, no. A28; Perdrizet 1908:11, fig. 40). The shape does not outlive Early Protogeometric proper (Desborough 1972:35; the four examples of the shape at Lefkandi were found in Submycenaean and Early Protogeometric tombs groups: Popham, Sackett, and Themelis 1979–80:307).

Four examples have been found in tombs at Torone: **T9-1**, **T96-1**, **T101-1**, and **T109-1**. The fabric of **T9-1**, **T101-1**, and **T109-1** is reddish colored, the paint a bright, semilustrous red, and the slip considerably thicker than most other local vessels (an almost identical slip and paint is found on a skyphos from Saratsé: Heurtley 1939:222, no. 441). In contrast, the clay of **T96-1** is pale and the paint has fired a black/brown without the sheen found on the other three amphoriskoi; **T96-1** also lacks the thicker slip. These differences in fabric, slip, and paint initially suggested **T96-1** may have been an import. The shape and decoration of **T96-1** are somewhat closer to Attic examples from the Kerameikos and Salamis than they are to **T9-1**, **T101-1**, and **T109-1** (cf. Kraiker and Kübler 1939: pls. 16–20; Smithson 1961: pl. 31; Styrenius 1962:113–114, pls. 1, 5–7). The fabric of **T96-1**, although not unlike canonical local Toronean, approaches, but is not identical to, that typical for Attic Submycenaean; the closest parallel in terms of fabric and feel is offered by an amphoriskos from Kerameikos Grave 24 (Kraiker and Kübler 1939:17–18, pl. 19, inv. 442). Elemental analysis suggests the fabric of **T96-1** is probably local, although an Attic origin cannot be categorically dismissed.[18] It is worth stressing that **T96-1** is considerably larger than most amphoriskoi in Athens and Salamis.

Be that as it may, all four belly-handled amphoriskoi at Torone share similar general details of shape and decoration, although **T9-1** is very poorly preserved. The shape is characterized by a globular body and a short concave neck, with flaring rim and rounded lip. The width of the neck, mouth, and body may vary somewhat (contrast **T101-1** and **T109-1**; cf. Desborough 1972:35; Mountjoy 1986:196; Styrenius's [1962:113–114] three main "types" of amphoriskoi from Salamis are not easy to distinguish; particularly close to **T101-1** is Karageorghis 1963: pl. 37, no. 5); on **T96-1** and **T101-1** there is a slight offset at the juncture of body and neck. The base is invariably a low ring. Two horizontal handles are set on the body, immediately above the point of maximum diameter, rising at an angle of about 45°. As for decoration, it was customary to paint the neck and handles solid and the body banded. In the case of the better preserved **T96-1** and **T109-1** the paint extends over the rim onto the interior; **T9-1** and **T101-1** are too poorly preserved to determine whether the neck interior was painted. With the exception of the fragmentary **T9-1**, the bands are arranged in groups of two to four on the lower body and also on the shoulder. The belly zone, thus defined, could be decorated with simple motifs like the single wavy line on **T96-1** (Mountjoy 1986:195, fig. 258, no. 3 [= Furumark 1972a: Motif 53], with various examples of the motif illustrated in Kraiker and Kübler 1939: pls. 16–20), the "pendent arcs" or "tassel pattern" on **T101-1** (I know of no exact parallel for the motif, although it does resemble examples of the tassel pattern [e.g., Furumark 1972a:411, fig. 71, Motif 72, no. 7; Mountjoy 1986:195, fig. 258, no. 10; cf. Blegen 1937, vol. 2: fig. 210, no. 380]), or else reserved as on **T109-1**. A reserved belly zone is rare in what is normally classed as Submycenaean (see Kraiker and Kübler 1939: pls. 16–20; Styrenius 1962:113–114, pls. 1, 5–7), but is a more common feature of the latest Mycenaean (cf. Wace 1932: pl. 31, nos. 54–55; Iakovides 1969–70, vol. 3: pl. 21, no. 565; pl. 187, no. 55; cf. Perdrizet:11, fig. 40). In the case of **T9-1** the shoulder, rather than banded, is decorated with vertical bars or "necklace pattern" (cf. Mountjoy 1986:195, fig. 258, no. 11; Styrenius 1962: pl. 7, no. 3634; Iakovides 1969–70, vol. 2:201, fig. 78, nos. 169, 133, 450, 216, 551, 729, 1198).

Chronologically, these four amphoriskoi are among the earliest securely dated vessels from the cemetery not only on the basis of style, but also by way of the fire-affected sherds encountered in the pit of Tomb 101, which included, among other vessels, five fragmentary one-handled cups stylistically Final Mycenaean/Submycenaean and a contemporary skyphos (**T101-8**) imported from Athens.

As for the distribution of the type elsewhere in the Aegean, Desborough (1972:35) has noted that in Athens and on Salamis the shape was more popular than any other, with more than fifty known examples (cf. Mountjoy 1986:196, fig. 260; 1993: 114–117, figs. 327–328). There are 223 examples of the shape, slightly earlier, from eighty-six tombs at Perati in east Attika (Iakovides 1969–70, vol. 2:198 [stamnoi and stamniskoi]). In contrast, Desborough knew of only two Submycenaean examples from the Argolid[19] and none from Elis. Only four are listed from tombs at Lefkandi (Popham, Sackett, and Themelis 1979–80:307–308)—the same number as at Torone—and a few are known from Boiotia (Schachermeyr 1980: pl. 64b–c [Paralimni]), and Delphi (Lerat 1937:47, pl. 5, nos. 1–3; Desborough 1972:204, pl. 47; Maass 1996: 158–159, nos. 21–22). I know of no published example of the shape in North Greece, and this is true for both Late Bronze and Early Iron Age contexts; there are none published in Heurtley (1939; cf. Styrenius 1967:146–138) and no certain examples have been reported from Vergina, Kastanas, or Assiros. The stylistic similarities of the belly-handled amphoriskoi of Torone and Athens, particularly **T96-1**, and the evidence of the distribution of the type elsewhere in the Aegean suggests Attika as the most likely source for the origin or inspiration of the shape at Torone.

Type 2. Vertical-handled amphoriskoi **(pls. 296–303 [local], 304–305 [imported])**

The shape, although relatively common at Torone, defies straightforward classification. Nine certain examples were encountered in tombs: **T27-1**, **T44-1**, **T55-1**, **T69-1**, **T71-1**, **T99-1**, **T107-1**, **T112-2**, and **T123-1**; in each case the vessel served as ash-urn. There is in addition the small fragment **T105-7** recovered among the fire-affected sherds of Tomb 105, which is probably of this shape. There are two fragmentary examples found in later deposits on Terrace V, **41** and **73** (from deposits type 2 and 3, respectively). It is also worth noting here the imported vertical-handled amphoriskos **T47-1**.

Among the examples of the form listed above there is a good deal of variety in details of shape, and the profiles of no two pieces are identical in all respects. The body is normally globular or rounded with the point of maximum diameter set rather high. Occasionally, the body approaches a biconical shape (cf. **T99-1**); an ovoid form, as at Lefkandi (Popham, Sackett, and Themelis 1979–80:308), is not met. The base can be a flat disk (**T107-1**; cf. Andronikos 1969:179, fig. 27, no. N34; a true flat base as Andronikos 1969:180, fig. 29, no. AΔ10 is not attested at Torone), or one that is slightly hollowed out creating a false ring foot (**T27-1**, **T123-1**); more commonly, however, the vessel stands on a low ring base (**T44-1**, **T55-1**, **T69-1**, **T71-1**, **T99-1**, **T112-2**; cf. Andronikos 1969:179, fig. 27, nos. Υ5, N35, Δ23; most of the Lefkandi examples are equipped with a foot of conical type [cf. **T22-2**], although some have a ring base, e.g., Popham, Sackett, and Themelis 1979–80:309, figs. 12F, G, I). The height and width of the neck, its relationship to the body, and the form of the rim also can vary. Often the neck is either vertical or concave, with the rim flaring out to a rounded lip (**T44-1**, **T99-1**, **T107-1**, **T112-2**). In the case of **T27-1** and **T123-1** the neck is more vertical, terminating in a plain rim and only very slightly flaring. With **T55-1** and **T69-1** the neck tends to slope in toward the rim, which, in turn, is more sharply everted. There is often, but not always, a small offset marking the juncture of shoulder and neck. Only in the handles is there uniformity: they are attached vertically from the upper shoulder to the neck below the rim and, invariably, the upper face is concave in section. Of the specimens preserving complete profile, the smallest, **T44-1**, stands to a height of 0.132 m, the largest, **T99-1**, 0.180 m. In terms of overall proportions, vertical-handled amphoriskoi are different from neck-handled amphorai; the bodies of the latter are proportionately taller and more ovoid, and the necks more narrow (closest to the proportions of the neck-handled amphorai is the amphoriskos **T107-1**).

In decoration, as in shape, there is no overall consistency, although horizontal bands are found on most pieces. There is commonly a broad band at the point of maximum diameter (**T44-1**, **T55-1**, **T99-1**, **T107-1**, **T123-1**), which is sometimes enclosed by thinner bands above and below (**T44-1**, **T55-1**, **T123-1**). In the case of **T27-1** (cf. **T55-1**) the broad band covers a large area of the body and the general scheme approaches that of the dark-ground system of decoration (the dark-ground system is common in Euboia: cf. Andreiomenou 1966: pls. 46α–β, 48β, 49γ; Popham, Sackett, and Themelis 1979–80:309; Sapouna-Sakellarakis 1998). The rim, on exterior and interior, is almost always painted, so too the upper faces of the handles. The neck may be painted solid (**T69-1**, **T99-1**), or decorated with band(s) (cf. **T55-1**, **T107-1**). On two examples, **T27-1** and **T123-1**, bands on the neck enclose a zigzag, and in the case of **T44-1** a triple row of tremulous lines. A triple row of tremulous lines is also found on the shoulder of **T99-1**, which is paralleled by two fragmentary pieces not associated with tombs (**41** and probably **73**); in the case of **T107-1** there is a single tremulous line, poorly preserved, on the lower neck (cf. Popham, Sackett, and Themelis 1979–80:309, fig. 12B, Early Protogeometric). The overall effect of **T107-1** also resembles the later East Greek "conventionalizing" style of the Archaic period discussed by Paspalas (1995) under the broad heading of the "wavy line" group. Apart from the zigzag and tremulous lines, no other motif is encountered (contrast, however, both Popham, Sackett, and Themelis 1979–80:309, fig. 12, and Andronikos 1969:178–180, figs. 27–29; the true zigzag is not a common motif at Torone). **T112-2** stands apart from the rest in that it is unpainted (cf. the small belly-handled amphora **T65-1**).

Arranging the vertical-handled amphoriskoi in chronological sequence on the basis of internal evidence is largely conjectural. **T55-1** and **T71-1** were both from tombs yielding no other pottery; the pottery associated with **T27-1**, **T69-1**, **T99-1**, **T107-1** and **T123-1** provided little chronological assistance. **T44-1** was, however, found with the amphora body fragment **T44-2**, more likely to be Developed Protogeometric, rather than Late Protogeometric; **T112-2** was found with the small handmade pyxis **T112-1**, a shape common in Athens in both Submycenaean and Protogeometric, and the context of the small fragment **T105-7** appeared to be early (Early Protogeometric?).

Elsewhere in Greece the shape during the Protogeometric period is largely, although not exclusively, localized at Euboia and its related region, and examples of the shape in this region, like the amphoriskoi of Torone, provide few significant stylistic changes in their development (Popham, Sackett, and Themelis 1979–80:308; cf. Wells 1983a:39). It is worth noting that there is nothing at Torone that resembles the Type A vertical-handled amphoriskoi distinguished among the material from the Toumba building at Lefkandi (Catling and Lemos 1991:42–43, pls. 36, 70, nos. 632–640). The Lefkandian vertical-handled amphoriskoi begin in Submycenaean but do not outlast Subprotogeometric I (Desborough 1972:35; Popham, Sackett, and Themelis 1979–80:308–311; cf. Catling and Lemos 1991:42–45). There are no obvious antecedents in Late Helladic III—although smaller examples of forms (e.g., Furumark 1972a: Shapes 62, 67, 74) are not unlike—and the shape is generally considered to have originated as a variant of the Submycenaean belly-handled amphoriskos at Lefkandi (Desborough 1972:35, 39, fig. 4F [= Popham, Sackett, and Themelis 1979–80:309, fig. 12B]; cf. Mountjoy 1986:196, n. 15, who cites Skoubris Tomb 38.3 [Popham, Sackett, and Themelis 1979–80: pl. 103]).

The shape is not clearly attested in developed Attic Protogeometric, although there is a Final Mycenaean/Submycenaean example from the cemetery on Erechtheion Street (Brouskari 1980:22, pl. 3f, no. 11; cf. the amphoriskos from Zagora: Desborough 1952: pl. 16, no. 147). Within the Euboio-Thessalo-Cycladic area the shape is common, especially during Late Protogeometric and Subprotogeometric; examples from Chalkis, various sites in Thessaly and the northern Cyclades, Skyros, and Paralimni in Boiotia may be cited,[20] as well as a number of variations outside this region.[21] The imported **T47-1** is either Euboian or Thessalian. The shape is also well represented with five examples among the wheelmade and painted vessels at Vergina (Andronikos 1969:178–180, figs. 27, 29); these provide good parallels, especially in shape, to the Torone series, although there are differences in decoration. A number of vertical-handled ampho-

riskoi are known from east Greece, from both the mainland and the Dodekanese, although these are mostly of Subprotogeometric or developed Geometric date; Late Geometric amphoriskoi may also be cited from Achaia and Aitolia,[22] and there are related examples on Crete (e.g., Rocchetti 1988–89:221–223, figs. 126–128; cf. the so-called "kantharoi," 224–225, figs. 129–124; 1974–75:200–201, figs. 43a, 46).

On the basis of this comparative material and the few indications offered by associated tomb pottery at Torone, it appears reasonable to conclude that the shape probably first appeared in the course of earlier Protogeometric, if not slightly earlier. It would also be reasonable to conclude that the vertical-handled amphoriskos was, generally speaking, later than the belly-handled type, and that it continued to be produced throughout the course of the Protogeometric period. It is tempting to see examples of the shape that are squatter and have a proportionately wider mouth (e.g., **T55-1**, **T69-1**) as later than those that have a narrower mouth and are proportionately taller (e.g., **T99-1**, **T107-1**, **T123-1**: compare and contrast Popham, Sackett, and Themelis 1979–80:309, figs. 12B, C, D [EPG], and figs. 12F, G, I [LPG, SPG I]). But the warning issued by Popham, Touloupa, and Sackett (1982a:213) that variations in details of this shape have little or no chronological value should be heeded.

The amphoriskos with handles from shoulder to lip does not appear in the local repertoire, at least as represented in the tomb pottery, even though an imported example, almost certainly Euboian and dating to Late Protogeometric, was found in Tomb 22 (**T22-2**; cf. Desborough 1952: 40–43, pl. 6; 1972:149; Popham, Sackett, and Themelis 1979–80:311; Catling and Lemos 1991: 42–45; Coulson 1983:357, fig. 1, pl.).

Type 3. Small amphora/amphoriskos with horizontal handles rising vertically and low conical foot **(pl. 306)**

There are only two examples listed under this heading, **T22-1** and **T87-1**, neither of which is complete; both vessels saw service as ash-urns. The general form is a small belly-handled amphora or amphoriskos, but it is here distinguished from Type 1 amphoriskoi on account of differences in shape, decoration, and fabric.

Only the base and lower wall of **T87-1** were preserved and **T22-1** is therefore the more diagnostic, despite its fragmentary state. The shape is characterized by a low conical foot; the lower wall rises steeply to the point of maximum diameter, which is set rather high, and the shoulder curves in. Wheelmarks are prominent on the interior of both. There is a shallow groove at the junction of the shoulder and neck; the form of the neck and rim remains unknown. The horizontal handles, attached to the shoulder, rise vertically with an inward curve. **T22-1** has a preserved height of 0.153 m (base to top of handles) and in its original form was probably under 0.180–0.200 m; **T87-1** is larger. The fabric of both vessels is a little unusual and perhaps misfired, and although the possibility that they represent imports cannot be dismissed, they are probably local. Neither vessel appears to have been decorated, although the exterior on both was poorly preserved (possible, but uncertain, traces of paint may be preserved toward the base of **T22-1**).

T22-1 may be securely dated to Late Protogeometric, as it was found with the imported **T22-2** (**T87-1** was the ash-urn and only vessel encountered in Tomb 87), and the shape may represent a local development of the earlier belly-handled amphoriskos of Type 1. Elsewhere in Macedonia the shape is rare; the closest parallel is an amphoriskos from Saratsé (H: 0.116 m), although it is difficult from the published illustration to determine whether the vessel has a low conical foot or ring base (Heurtley 1939:237, pl. 21, no. 494; Heurtley and Radford 1928–30:136–137, fig. 25a; it belongs to Saratsé Period D [Early Iron Age] and is probably slightly later than **T22-1**). Also worth citing are two wheelmade kantharoid vessels from Vergina that have a base and body almost identical to **T22-1** but differ in that they have vertical high-swung handles (Andronikos 1969:211, fig. 50, pls. 40, 65, nos. Z35, AΓ37; Radt 1974: pl. 35, nos. 3–4). Both pots have a slight carination at juncture of lower wall and shoulder and both are unpainted. I know of no comparable shape in central or southern Greece, or from lands north of Greek Macedonia.

III. THE SKYPHOS

The skyphos is the second most common shape encountered among the wheelmade pots (after the amphora) on account of its popularity both as ash-urn and as a vessel associated with other aspects of funerary ritual (see chapter 4). The shape is prone to certain stylistic changes that can be traced chronologically. Four types of skyphoi are here presented, but essentially all examples of the form can be classed under the two broad categories of low-footed and tall-footed.

Type 1. Low-footed skyphoi (with low conical or ring base) **(pls. 307–312)**

At least fourteen examples from tombs can be listed under this heading: **T23-1**, **T25-1**, **T85-1**, **T98-1**, **T101-7**, **T103-1**, **T105-1**, **T106-1**, **T108-1**, **T110-1**, **T112-4**, **T113-6**, **T117-6** and **T128-5** (fragments of skyphoi that are probably of this shape are listed below). Among these there is a good deal of standardization in shape and decoration. The shape is characterized by a low foot that may vary slightly in points of detail from piece to piece, but it is typically low, rather heavy, and proportionately small in relation to the diameter of body and rim. On some pieces it is more markedly a ring base (**T108-1**, **T110-1**, **T112-4**, **T113-6**, **T117-6**, **T128-5**), while on others it is fractionally taller and of very low conical form (**T85-1**, **T98-1**, **T101-7**, **T105-1**, **T106-1**). I follow Desborough (1972:39; Popham, Sackett, and Themelis 1979–80:297–298, fig. 8) in using the term "very low conical." The bases of **T23-1** and **T103-1** may be described either as very low conical or ring. Even the tallest-footed vessel of this class, **T25-1**, has a base that is considerably lower than those of Types 2 and 3. The resting surface of Type 1 is flat and, although narrow, comparatively broad for the size of the base; the lower outside edge of the base is often chamfered. The lower wall curves out gently, and the upper wall ascends vertically; occasionally the distinction between upper and lower wall may be marked, as it is on **T106-1** and **T108-1**, but more commonly the two blend in a gentle curve. The rim is invariably flaring or outcurved, tapering slightly to a rounded lip; on some pieces the outward curve is more pronounced (e.g., **T25-1**, **T103-1**), but never is the rim truly everted or offset as, for instance, it is on pendent semicircle skyphoi (cf. Popham, Sackett, and Themelis 1979–80:299). Desborough distinguishes between plain "everted" and "everted and carinated": the latter is here referred to as "offset" (cf. also Verdelis 1958: 27–28, figs. 18–20, pl. 9; Andronikos 1969: 169, fig. 23, P1, Δ15, P21). Two horizontal handles, round in section, are attached to the upper body and these may rise almost to the level of the rim but never above it. Of the examples preserving complete profile the height ranges from 0.130–0.185 m (normally ca. 0.165 m). The shape is that of the standard Submycenaean skyphos (Kraiker and Kübler 1939: pls. 22–23; Styrenius 1962:114–115; Desborough 1972:39, 46, fig. 9; Mountjoy 1986:200; Popham, Sackett, and Themelis 1979–80:297–299), with very close antecedents in Late Helladic IIIC.[23] The low-footed skyphos with flaring rim is well represented in Macedonia in the Late Bronze Age,[24] but is, in comparison, rare in Early Iron Age contexts. During the Early Iron Age the standard type of skyphos in Macedonia is the pendent semicircle skyphos (see below); other types are less common and are usually tall-footed, but sometimes low-footed but with an everted or offset rim (cf. Casson 1923–25:10, fig. 3d; 15, fig. 16d; Andronikos 1969: 170, fig. 24).

The system of decoration is uniform and distinctive, characterized by "ugly sausages." The term "ugly sausage" or "sausage motif" was coined by Martin Robertson (in Heurtley and Robertson 1948:104), to describe a distinctive Ithakesian decorative element. Coldstream (1968:227) retains the term sausage, but adds the adjective "mysterious." The interior is painted solid, although on many examples the paint at the center of the floor and on the lower wall is not preserved on account of use and cleaning (e.g., **T23-1**, **T98-1**, **T106-1**, **T108-1**). Sometimes there is a reserved band on rim interior (**T23-1**, **T103-1**, **T110-1**), but this is by no means standard (contrast **T25-1**, **T105-1**, **T106-1**, **T108-1**; cf. Desborough 1972:39). It is interesting to note that four of the seven examples of the shape assigned Submycenaean at Lefkandi have no reserved band on rim interior, whereas the others do (Popham, Sackett, and Themelis 1979–80:297, n. 113). The rim top of **T101-7** is barred (cf. Mountjoy 1986:200 [described as "reserved and dotted"]; cf. Popham, Sackett, and Themelis 1979–80: pl. 92, S3.2; pl. 107, S55.2). As for the exterior,

the base can be either reserved (**T23-1**, **T85-1**, **T98-1**, **T103-1**, **T110-1**), as is often customary on Submycenaean skyphoi (cf. Shear 1937:364, fig. 28; Styrenius 1962:114; Desborough 1972:39; Popham, Sackett, and Themelis 1979–80:297; Podzuweit 1979a:429, fig. 45, nos. 6–7; Felsch 1980: 85–86, fig. 8; Mountjoy 1986:200, fig. 269), or painted (**T25-1**, **T108-1**; cf. the imported **T101-8**; Kraiker and Kübler 1939: pl. 22, inv. 434; Brock 1957: pl. 3, no. 11); sometimes there is a band at the juncture of base and lower body (**T101-7**, **T105-1**, **T106-1**; cf. Kraiker and Kübler 1939: pl. 22, inv. 445). On **T101-7** there are traces of paint on the underside (cf. **T28-1** [Type 3]). The lower body is decorated with bands, usually a group of three or more, which are thin and above which, at the point of greatest diameter, is a broader band. The upper wall is invariably decorated with "ugly sausage(s)" motif. This consists of the painted decoration of the upper and outer faces of the handles being extended onto the body of the vase either in the form of a continuous solid area ("single sausage" as on **T23-1**, **T101-7**, **T106-1**, **T108-1**) or in the form of two "confronted" or "opposed sausages" (as on **T25-1**, **T85-1**, **T103-1**, **T105-1**, **T110-1**);[25] the area below the handles is therefore reserved. "Sausages," which Coldstream (1968:227) regards as motifs in their own right, are elsewhere encountered in any quantity only in west Greece (Ithaka and Akarnania: Coldstream 1968:227; Mastrokostas 1961/62: pl. 212a, no. 9; Schachermeyr 1980: pl. 51b [top row no. 9]) and are mostly not earlier than Late Geometric I, although a Protogeometric origin may be traced at Ithaka (Coldstream 1968:226–227; Heurtley and Robertson 1948:63, 104; Heurtley and Lorimer 1932–33:37–65; cf. Desborough 1952:271–281, pl. 37; 1972: 243–247; see also Coulson 1991). The geographical disparity between the Toronean and west Greek material, and the fact that apart from the sausages the two respective styles share little in common, would argue that this method of decoration represents separate local developments.[26] Occasionally a skyphos or deep bowl from Late Bronze Age Crete comes very close to both the shape and decoration of the Torone low-footed skyphoi, but the quantity of these is not great (cf. especially the vessel from Mouliana in Kanta 1980: fig. 83, no. 1 [Herakleion museum no. 3484]). A few examples from Iolkos may be compared, but this type of decoration is not common in Thessaly (Sipsie-Eschbach 1991:53–54, pl. 8, nos. 3–4). Among the numerous fragmentary low-footed skyphoi of Late Bronze and Early Iron Age date from Kalapodi, at least one preserves two opposed sausages on its upper body (Jacob-Felsch 1996: pl. 45, no. 406), but as in Thessaly, the type is not common.

Chronologically, this is the earliest type of skyphos at Torone, and the whole group may be placed reasonably within the earlier part of the period of use of the cemetery (Final Mycenaean/Submycenaean down to a time roughly contemporary with Attic and Euboian Middle Protogeometric, or the earlier stages of Late Protogeometric). Among the earliest examples of the shape, on the basis of associated pottery, is **T101-7** (Submycenaean). The fragmentary **T112-4** is associated with the handmade pyxis **T112-1**, a shape found in Attic Submycenaean and Protogeometric (see below). Also chronologically informative were the fire-affected sherds recovered from Tombs 113 and 117: both tombs yielded a large number of sherds, among which were fragments of imported vessels that could be dated to Middle Protogeometric or to the early stages of Late Protogeometric (cf. **T113-9**, **T117-14** [and **T117-15**]; Tomb 117 was especially interesting as it yielded skyphos fragments of other types). The two skyphos base fragments of Type 1 encountered in these tombs (**T113-6**, **T117-6**) represent the latest dated examples. This type of skyphos has not been encountered in tombs assigned to the later part of the period of the use of the cemetery.

Tall-footed skyphoi

Two types of tall-footed skyphoi are presented, those with conical foot and those with tall flaring foot. It may seem pedantic to distinguish the two, but enough differences in details of shape and decoration exist to warrant the division (cf. Desborough 1952:77–92; 1972:152; there is no such division in Catling and Lemos [1991:23–24], although there the skyphoi are distinguished from the so-called "crater-bowls," an unfortunate term applied to slightly larger skyphoi). Both types are less numerous than Type 1.

*Type 2. Skyphoi with conical foot (***pls. 313–314** [local], **315** [imported])

This is a small group, not particularly uniform. The first, **T94-1**, is interesting in that it copies very closely the shape and decoration of **T127-1**, which is a Euboian import. The base is a true conical foot with a narrow resting surface; there is a deep groove at the junction of body and base. The body, rim, and handles are similar to those of Type 1 skyphoi except that the rim diameter is proportionately smaller and the bowl a little deeper. Base and lower body are reserved; the remainder of the vessel, including rim, is painted, except for a thin reserved band at the point of greatest diameter; the interior is painted, although little survives. The paint on the interior is almost completely worn; minute traces of paint are preserved here and there. There is perhaps a reserved disk at the center of the floor, but this is impossible to establish with certainty. This type of skyphos with relatively tall conical foot is characteristic of Attic Protogeometric (Desborough 1952:77; 1972:152), although the simple manner of decoration is not so common in Athens (it corresponds to Desborough's [1952: 80, 89] Type V skyphoi; cf. **T127-1**). The type first appears at Lefkandi in Middle Protogeometric, with contemporary parallels in Thessaly, Skyros, and Asine (Wace and Thompson 1912: 209, fig. 144c; 211, fig. 146d; Hansen 1933:119, fig. 53c [Skyros]; Frödin and Persson 1938:427, fig. 275; Verdelis 1958: pl. 8, no. 51; Popham, Sackett, and Themelis 1979–80:299 [cf. Desborough 1952:89]; Catling and Lemos 1991:19–21, pls. 5(e), 8, 46–47; Sipsie-Eschbach 1991: pls. 8–11). Particularly close to **T94-1** is a skyphos from Chalkis (Andreiomenou 1966:251–252, no. 3, pl. XLVb; cf. some of the monochrome skyphoi from the Toumba building [Catling and Lemos 1991: pl. 46, esp. no. 101]; where preserved, the conical base of the Lefkandi examples tends to be taller). The type is exceedingly rare in Macedonia. The closest vessel in shape, but not decoration, comes from Vergina (Andronikos 1969:170, fig. 24, pl. 47, no Ξ2), a site where there are examples with tall flaring foot (Torone Type 3), but few, if any, with true conical foot.

The next skyphos, **T90-1**, is rather unusual. The vessel is fragmentary and the decoration very poorly preserved, although details as shown on **figure 146** are fairly certain. Body, rim, and handles are very close to skyphoi of Type 1 except that the body profile is a little more angular. The base is a very small, but relatively tall, conical foot with narrow resting surface. The base is so small in relation to the body that setting the vessel in a stable upright position in its original state must have been difficult. As for decoration, the base is reserved and there are four thin bands on the lower wall (cf. Type 1). Unfortunately, almost nothing survives on the fragments of the upper wall; faint traces of paint may indicate an "ugly sausage" motif, but this is uncertain. Particularly close to **T90-1** is **T117-1**, which was encountered almost complete but with no trace of the foot preserved, indicating that the vessel had been placed in the tomb in a broken state. **T117-1** shares a similar angular profile with **T90-1** and tapers to a near point at the base, suggesting it also had a similar foot (the preserved diameter at juncture of base and body is almost identical to that of **T90-1** and far too small for skyphoi of Types 1 and 3; a foot similar to that of **T90-1** would easily account for its broken state); the base has been restored flat. The decoration is similar to what is preserved of **T90-1**, and standard for Type 1: four thin bands on the lower wall and "confronted sausages" on the upper wall; the interior is painted and the rim top is barred. The associated, fire-affected, pottery of Tomb 117 would point to a date sometime around Middle Protogeometric or the earlier stages of Late Protogeometric, and it is reasonably clear this type is contemporary with later examples of Type 1 (cf. **T117-6**).[27]

Only one other piece is worth noting under this heading, the base fragment **T36-1** (I am fairly certain the fragment is from a skyphos and not a lekanis). It preserves a tall conical foot, similar to that of **T94-1**, only the lower half of which is painted; paint is also preserved on the lower body at the break. Both the shape and the system of decoration are closely paralleled in Athens (cf. Kübler 1943: pl. 22, inv. 1072; pl. 23, inv. 2102).

Type 3. Skyphoi with tall flaring foot (**pls. 316–318**)

There are three well-preserved examples of this type: **T28-1**, **T30-1**, and **T37-1**; around these may be grouped a further two base fragments,

T116-2 and **T117-7**. Although not unlike Type 2, they differ both in the manner of decoration and in details and proportions of shape. Of the three well-preserved examples, **T28-1** and **T37-1** form a group that is distinct. The shape is characterized by a tall foot that flares or splays out toward the resting surface; the result is that the difference between the diameter of base and rim is not as great as it is for other skyphos types. The lower body is more noticeably rounded and proportionately deeper; the rim is of typical flaring form. In Athens the tall flaring foot tends to be found on larger Protogeometric skyphoi (Desborough 1972:152); elsewhere in the Aegean the form is not uncommon.[28] The base is reserved and there are three thin horizontal bands on the lower wall, above which is a much broader band (on **T28-1** there is a further thin band above); the rim is painted and the painted decoration of the handles extends onto the body. The handle zone is decorated with tremulous lines, two in the case of **T37-1,** four on **T28-1**; the decoration is closely matched by a skyphos from Kos (L. Morricone 1978:385, fig. 847, inv. 862). The interior is painted except for the center of the floor (on **T28-1** there is a reserved disk at the center of the floor, 0.042 m in diameter; the interior of **T37-1** is very worn on account of use or cleaning); there are traces of paint on the underside of **T28-1** (cf. **T101-7**). As with Type 2, Type 3 skyphoi are not common in Macedonia, although there is a skyphos from Vergina that is very close to **T28-1** and **T37-1** (Andronikos 1969:170, fig. 24, pl. 23, no. N15), the only difference being that there are two bands instead of tremulous lines on the handle zone. Tremulous lines are found on a number of low-footed skyphoi at Kastanas (see Podzuweit 1979b:216, fig. 22, nos. 1, 8; cf. also McDonald, Coulson, and Rosser 1983:124–125). This type of skyphos does not appear at Lefkandi.

The third skyphos, **T30-1**, is larger; the shape is that of **T28-1** and **T37-1** except that the lower wall is not so rounded. The decorative scheme, however, is that of Type 1 skyphoi. Base and lower wall are painted, above which are many thin bands that merge at points; there is a broad band at the point of greatest diameter and the upper wall is decorated with two "confronted sausages;" the interior is painted; the decoration is particularly close to **T25-1** (Type 1).

Chronologically, there is little associated pottery with any of the three skyphoi of this type to help fix their date more precisely than Protogeometric (the most diagnostic associated piece is the amphora fragment **T28-4** which is clearly Protogeometric, but unlikely to be very late). The presence of a fragment of this type in Tomb 117 indicates that it was contemporary, at least for a time, with Type 2 skyphoi, as well as with later examples of Type 1 (cf. also the base fragments **T116-2** and **T114-5**, the contexts of which are early).

Type 4. Pendent semicircle skyphos (**pl. 319**)

Only one pendent semicircle skyphos in local fabric, **T82-2**, was encountered in the cemetery, partially preserved, with only about one-half of the body and rim recovered. A second piece, the small rim fragment **T77-3**, is imported, probably Euboian (see below and appendix E).

T82-2 is one of the latest securely dated tomb pots and the only local skyphos with an offset rim; the vessel is fully described in the catalogue (chapter 3). The pendent semicircle skyphos represents a hallmark of the regional *koine* comprising Euboia, Thessaly, the northern Cyclades, and Skyros during the later stages of Protogeometric and in the course of Subprotogeometric (Desborough 1952:127ff; 1972:185–220; Coldstream 1968:148–157; Popham, Sackett, and Themelis 1979–80: 291–292, 297–302; Descoeudres and Kearsley 1983:41–53). A few Middle Protogeometric examples, variously classified as skyphoi and as "crater-bowls" have been published from the Toumba building at Lefkandi (Catling and Lemos 1991:22–23, pls. 12, 48–49 [skyphoi]; 23–24, pls. 5[I], 15, 52),[29] although the Middle Protogeometric date for the deposit as a whole has been recently questioned by Kopcke (2002). The pendent semicircle skyphos has been the subject of several studies (Desborough 1952:127ff; 1972:185–220; Coldstream 1968:148–157; Popham, Sackett, and Themelis 1979–80:291–292, 297–302 [cf. Catling and Lemos 1991:22–23]; Descoeudres and Kearsley 1983), the most comprehensive being that of Kearsley (1979, with a published summary in Descoeudres and Kearsley 1983:41–52; 1989, reviewed by Popham and Lemos 1992; 1995). According to Kearsley's typology, **T82-2** is best accommodated within type 3, which she dates to

the ninth century B.C., contemporary with Attic Early Geometric–Middle Geometric I (the imported **T77-3** is also of this type). The vessel does, however, display certain peculiarities, such as its proportionately deeper bowl and the two horizontal bands at midpoint. The latter are paralleled on only one of the pendent semicircle skyphoi from Vergina (Andronikos 1969:169, fig. 23, pl. 50, no. P21; the rim of this vessel is somewhat taller than that of **T82-2**). A low ring base might be assumed, but this is uncertain (for further discussion see Papadopoulos 1998a).

The pendent semicircle skyphos is conspicuous in many parts of Macedonia, from cemetery and settlement sites, where it is one of the most common wheelmade shapes during the Early Iron Age (Desborough's list of sites [1952:190; cf. Skeat 1934:7, n. 2] is now supplemented by Kearsley 1989:72–73; see further Chrysostomou and Chrysostomou 1994:82, fig. 9; Misaelidou-Despotidou 1998:267, pl. 6; there is a pendent semicircle skyphos from nearby Aphytis and several more from the vicinity of Dion in southwest Macedonia, although further details must await the final publication). The paucity of the shape at Torone is noteworthy.

Skyphos fragments of uncertain type

A good number of skyphos fragments have been catalogued that cannot be placed among any of the discerned types with certainty (see Conspectus of shapes, p. 419). The majority of these are fire-affected sherds encountered in tombs in the area of the Early Iron Age cutting and are, therefore, on the whole, early. Others (including **16**, **28**, **35**, **38**, **44**, **45**) are from various deposits on Terrace V. Many (**T103-2**, **T105-4**, **T109-4**, **T119-2**, **T119-3**, **28**, **38**, **44**, **45**) are decorated with the "ugly sausage" motif, and the following are probably decorated with the same motif: **T108-3**, **T108-4**, **T113-3**, **T113-7**, **T118-8**, and **T128-3**. The latter fragments could belong to either of Types 1, 2, or 3, but are more likely to be Type 1. Worth noting is the barred decoration on the rim of **28**, which is similar to **T101-7** (Type 1) and the rather angular profile of **38**, which is particularly close to **T90-1** and **T117-1** (Type 2). The base of **T111-2** was not preserved, but the general features of the body and rim are identical to Type 1, whereas the partially preserved base of **T34-1** is clearly of a tall-footed type (Type 2 or 3); the absence of a groove at juncture of base and body might suggest Type 3 rather than Type 2. The tremulous lines on the upper wall of **T117-8** are similar to **T28-1** and **T37-1** and may suggest a skyphos of Type 3. The remaining catalogued skyphos fragments are too fragmentary to hazard a guess as to type.

Chronological development

The quantity of skyphoi from the cemetery and the fact that the shape may be divided into a number of distinct and, to a degree, overlapping types, make it a useful criterion for discerning stylistic development. The earliest are those of Type 1, some of which may be assigned as Submycenaean, others Early Protogeometric or slightly later. None, however, can be demonstrated at present to belong to the later stages of the period of use of the cemetery. The shape is typical for Submycenaean skyphoi wherever they are found (Desborough 1972:39, with further details given above), but the distinctive decoration consisting of "ugly sausages" might be best seen as a local development. During the course of Protogeometric the tall foot, both conical and flaring, is introduced (the tall conical foot is also found on the local Type 1 lekanis). This development must have been the result of external influences either Attic (Desborough 1964:262) or Euboian; imported vessels, such as **T127-1** (probably Euboian) may well have provided suitable examples of the model, or rather, the general type that was followed. It seems that at first the local potters had some difficulty in the forming of the conical foot, a feature perhaps best seen in **T90-1** and **T117-1**, and it may be that the flaring foot (Type 3), with its added stability, was a logical enough solution. Some of the tall-footed skyphoi (**T117-1**, **T30-1**) retained the decorative scheme of Type 1, but others (**T28-1**, **T37-1**) did not. Noteworthy is the decoration of **T94-1**, which follows that of **T127-1** so closely there can be little doubt that the two are contemporary, or near contemporary. At Lefkandi the tall conical foot is a distinct development assigned to the Middle Protogeometric phase and considered to be the result of Attic influence (Popham, Sackett, and Themelis 1979–80:298–299; cf. Catling and Le-

mos 1991:92). At Torone this development occurred at more or less the same time.

There is sufficient evidence from a number of tombs, particularly Tomb 117, that Type 1, 2, and 3 skyphoi were, for a time at least, produced concurrently. Gradually, however, the tall-footed types replaced the low-footed. It remains difficult to establish for how long the tall-footed varieties continued, especially as on the whole the shape became less popular as ash-urn during the later stages of the period of use of the cemetery. The latest phase does, however, witness the appearance, albeit limited, of two pendent semicircle skyphoi, one imported and one local (**T77-3**, **T82-2**). Whether the pendent semicircle skyphos replaced the tall-footed skyphoi of different decoration or whether the two were produced concurrently remains uncertain. It is worth remembering that at Lefkandi the onset of Late Protogeometric saw the introduction, or rather the establishment, of the pendent semicircle skyphos and the "circles" skyphos, described by Desborough (in Popham, Sackett and Themelis 1979–80:299–300) as an innovation, although examples of both types are now attested in Middle Protogeometric by virtue of the material from the Toumba building (Catling and Lemos 1991:21–23), whereas in Athens the skyphos with tall conical foot was retained to the end of Protogeometric and discarded only in the transition to Geometric (Desborough 1952:92; 1972:152; Coldstream 1968:8–11; for the development of the distinctive types of skyphoi in Lakonia see Coulson 1985:34–52). At Vergina the pendent semicircle skyphos and the tall-footed skyphos appear to have happily coexisted.[30]

IV. THE LEKANIS

The lekanis, or shallow bowl (for the name, see p. 415), is another common shape at Torone. Few lekanides were recovered intact because the shape was never used as ash-urn, serving rather as tomb lid/cover or else encountered among fire-affected sherds. Nevertheless, the main features of the shape and its chronological development seem clear enough. There are two main types of lekanis: an earlier one with a tall, conical, or sometimes flaring foot (the most common), and a later type with a low ring base; both types are further distinguished by different rim forms.

Type 1. Lekanis with tall conical/flaring foot (**pls. 320–323**)

There are three complete examples of this type: **T47-3**, **T51-3**, and **T124-3**.[31] They form a close-knit group around which a good many base and rim fragments may be assembled. The shape is characterized by a tall conical or flaring foot with narrow resting surface. The lower wall is shallow and curved and rises almost vertically to a sharply everted or horizontal rim, which is flat on top. Two horizontal ribbon handles are attached to the upper wall immediately below the rim (the upper part of the handle is usually level with the top of the rim), normally with a concave outer face, although occasionally it is more oval in section (**T124-3**). A few examples of this type are equipped with a bridged spout (**T51-3, T117-11**; for a definition of "bridged spout" see Mountjoy 1986:201).

The system of decoration is fairly uniform. The foot may be painted (**T51-3**, **T124-3**) or reserved (**T47-3**). The lower wall usually has a number of horizontal bands (**T47-3** and **T51-3**; the decoration on **T124-3** is at this point too poorly preserved to be certain of details and is indicated on **fig. 180** as wholly reserved), and the midpoint is decorated with a broad band. A further band below the rim extends all the way round the vessel onto the outer faces of the handles (also around the spout in the case of **T51-3**); below this the upper wall may be either reserved (**T51-3**) or decorated with tremulous lines (**T47-3**, **T124-3**). The latter system of decoration is not unlike that of the two Type 3 skyphoi, **T28-1** and **T37-1**. The outer edge of the rim is reserved and the rim top is invariably barred, sometimes with opposed diagonals, although almost always the strokes are arranged in groups rather than being continuous round the rim. The interior is painted and there is often, although not always, a reserved disk at the center of the floor (there is a reserved disk on **T51-3**, as well as on the fragmentary **14** and **T26-2**; the interiors of **T47-3** and **T124-3** are clearly painted solid).

These distinctive elements of shape and decoration make it possible to assign even small fragments to this type (there are sufficient differences, in the flesh, between the feet of lekanides and the feet of Type 2 and 3 skyphoi as to be fairly certain of the shape); base fragments that can be so assigned are

T20-2, **T21-2**, **T26-2**, **T115-10**, and **14**; except for **T26-2** the exterior is painted. The characteristic rim, often with handle or handle-scar preserved, is found in the following fragments: **T25-3**, **T104-15**, **T113-8**, **T115-9**, **T116-3**, **T117-10**, **5**, **15**, **25**, **69**, **89**. Where preserved, the rim top is decorated with plain strokes (**T104-15**, **T115-9**, **T117-10**, **15**) or with strokes arranged in groups of opposed diagonals (**5**, **25**, **69**). More unusual is **T25-3** where the rim top is decorated with mechanically drawn arcs (the diameter of the inner arc was small enough to define an almost full circle: cf. the krater rim fragment **40**). Probably of this type, but atypical, is the rim fragment **37**; the rim is less articulated than normal and the top is obliquely cut, although the decoration is standard. **T103-4** and **T112-6** are handle fragments of the normal ribbon variety, although such handles are also standard for Type 2 lekanides.

Two further examples, **T41-2** and **T101-9**, are probably of Type 1, although in both cases the base was not preserved. **T41-2** differs slightly from the standard examples in that the distinction between lower and upper wall is more marked and the lower wall less curved. Its shape and decoration are closely paralleled at Lefkandi (Popham, Sackett, and Themelis 1979–80:302, fig. 9B [for shape], fig. 9A [for decoration]), although the piece is clearly of local manufacture. The earliest example of the shape, **T101-9**, was found among the fire-affected sherds of Tomb 101. The shape is consistent with the Type 1 lekanis, but is somewhat smaller and thicker walled. The lower body is curved, the upper wall vertical and surmounted by a knobbed, almost horizontal rim. Nonjoining fragments preserve a horizontal ribbon handle, consistent with other examples of the shape. The lower wall is decorated with three thin bands, above which is a broader band; another band lies immediately below the rim; the interior is painted. The overall decorative scheme is similar to that of the one-handled cups from the same tomb (**T101-2–T102-6**).

The chronological range of Type 1 lekanides appears to be fairly well defined. The shape appears among the earliest tombs of the cemetery and is common in Early Protogeometric. The three complete specimens (**T47-3**, **T51-3**, **T124-3**) were all associated with ash-urns that are Protogeometric. The earliest is **T101-9**, which is associated with an ash-urn stylistically Submycenaean. Relatively early is the rim fragment **T104-15**, from the same tomb as the large belly-handled amphora **T104-1**; the fragments in Tombs 25, 113, 115, 116, and 117 may also be broadly assigned to the earlier part of Protogeometric. The shape continued to be produced during the course of Protogeometric, but this variety with tall foot appears to have been discarded during the later stages of the period of use of the cemetery, at which time it is replaced by the low-footed variety, Type 2.

In Macedonia the shape is rare during the Early Iron Age on the basis of what is currently published. There is at least one example at Vergina (Andronikos 1969:181–182, fig. 32, pl. 75, AΘ1 [referred to as *braxypous kylix*]), another from Toumba Thessaloniki (Andreou and Kotsakis 1996:372, fig. 3, no. TKA 1114 [Phase 2]), and a very likely local Mycenaean antecedent of the shape is known at Kastanas (Podzuweit 1979b:213, fig. 21, no. 9) and Assiros (Wardle 1980:250–252, fig. 14, no. 31). For the more recently published lekanides (Schalen) from Kastanas see Jung 2002: pl. 44, nos. 407-409; also pl. 29, nos. 297-306; pl. 52, no. 452; pl. 53, nos. 453-455. Outside Macedonia the basic shape appears to be confined to the Thessalo-Euboian sphere (Popham, Sackett, and Themelis 1979–80:303, nn. 152–154; cf. Catling and Lemos 1991:31–32), although a comparable tall-footed variety is known on Cyprus (Pieridou 1973: pl. 3, nn. 1–4 [*diota kypella*]; cf. Benson 1973: pl. 42, no. K38; pl. 16, nos. K34, K36), and a spouted example remarkably similar to **T51-3** is known from Kos, Serraglio Tomb B (L. Morricone 1978:392, fig. 875, inv. 889). Among the several varieties of "shallow bowl" at Lefkandi, the closest to the Toronean are two Middle Protogeometric vessels (Popham, Sackett, and Themelis 1979–80:302, fig. 9B, pls. 97, 106, nos. S18.1, S51.4; cf. also Catling and Lemos 1991:31–32, 104–105, nos. 181–198), as well as an import, perhaps even Toronean, assigned to Subprotogeometric (Popham, Sackett, and Themelis 1979–80:353, pl. 181); related examples from Thessaly are illustrated by Verdelis (1958:37–38, pl. 12, nos. 139–141). As a group these are considered by Desborough (in Popham, Sackett, and Themelis 1979–80:303) to represent probably a lo-

cal shape with no apparent antecedents either in Late Helladic IIIC or Submycenaean. It could be suggested, however, that a possible Mycenaean antecedent is the shallow bowl, Furumark Shape 295 (cf. Mountjoy 1986:153, fig. 197, type A). An example of the shape is found in the Granary Class (Wace 1921–23:33, fig. 9c) and also in the Bronze Age levels at Lefkandi (Popham and Milburn 1971:347, fig. 8, no. 1; note the examples from Kastanas and Assiros Toumba cited above). The shape is very well represented in Late Bronze Age Cyprus (see Karageorghis 1974: pls. 57–61, 73–39; cf. Yon 1971: pl. 37, no. 141; also Karageorghis 1963: pl. 32, no. 6). The shape is virtually absent, however, in Early Iron Age Athens, although there is an example of similar form from the Erechtheion Street cemetery, dating to the period of transition from Submycenaean to Early Protogeometric (Brouskari 1980:25–28, pl. 5a, no. 26 [EPK 555]).[32] There is also a coarser, unpainted example of the shape, equipped with spout, from Asarlik (Forsdyke 1925:212, pl. 16, no. A1104, from the same tomb as the vertical-handled amphoriskos A1103; cf. Paton 1887:69, fig. 4).

Type 2. Lekanis with low ring base (**pl. 324**)

The Type 2 lekanis is far less common than Type 1 and can be dated to the later stages of the period of use of the cemetery. Four pieces assigned to this class are **T81-2**, **T83-2**, **T108-7**, and **6**. Of these only **T81-2** preserves a complete profile and may be taken as representative. The vessel has a low ring base with very narrow resting surface and a flat underside; there is a groove at the junction of base and body. The lower wall is shallow and curved, becoming vertical toward the top, as with Type 1, but is surmounted by a broad outcurved rim that is offset from the body by a slight carination. The rim flares to a rounded lip; the rim top may be either flat or obliquely cut. Two horizontal ribbon handles attached to the rim and upper wall tend to rise slightly above the level of the rim top. The base and lower wall are reserved, whereas the remainder of the body and rim (but not the lip edge) are painted, as are the outer faces of the handles. The interior is painted and the rim top barred, with the strokes arranged in groups around the rim. The same details of shape and decoration are shared by the fragmentary **T83-2**, **T108-7**, and **6**, except that in all three there is a thin reserved band on the upper wall in the area immediately below the handles (the rim top of **T83-2** is evidently reserved, those of **T108-7** and **6** are clearly decorated with strokes).

Of the four examples of this type, **T81-2** and **T83-2** were found in tombs where the ash-urn was an amphora with belly and shoulder handles and are late in the period of use of the cemetery; the contexts of **T108-7** and **6** were uninformative (**T108-7** may be intrusive to Tomb 108 given that it is unburned, whereas the other sherds recovered from the tomb pit were clearly fire affected). This variety of the shape is also found in the Terrace V kiln (**KP-11**), establishing that the shape continues to be produced into the eighth century B.C., well after the period of use of the cemetery (Papadopoulos 1989a:33, 41, ills. 30–31).

There is a near identical parallel to **T81-2** from the small Sanctuary of Dionysos and the Nymphs at Aphytis in Chalkidike that was in use from the eighth century into the Classical period, from a context that is clearly post-Protogeometric (Polygyros museum, inv. 270; Gioure 1971), and a similar lekanis from Vergina (Petsas 1961–62a: pl. 150γ, no. Π61). A related, but not identical shape is known at Lefkandi, confined almost exclusively to the settlement and dating to the Subprotogeometric period (Popham, Sackett, and Themelis 1979–80:303, fig. 9C, type B; see pls. 15, 18, 25, 28, 273, esp. nos. 324, 844–847; cf. Catling and Lemos 1991:31–32, which are earlier and somewhat different). A similar "bowl" is also known from Nea Anchialos in Macedonia (Sakellariou 1965:421, pl. 471b). At Torone as in Chalkidike generally the shape enjoys a long history, both as lekanis and as larger lekane, well into the Archaic and Classical periods (Paspalas 1995; Cambitoglou, Papadopoulos, and Tudor Jones 2001:477–483; the shape is represented in the pre-Persian debris in D. Robinson 1950:49, pl. 4, no. P4; 1933a: pl. 25, P28A–B; related are a series of bowls from Chios: Boardman 1967:115–117, eighth–seventh centuries B.C.; cf. also Mellaart 1955:131, pl. 1, nn. 7, 9, from southern Anatolia).

Lekanis fragments of uncertain type

Two small rim fragments, **T84-4** and **72**, form a distinct group related to both Type 1 and Type 2

lekanides but differing from them in the manner of decoration. The exterior of **T84-4** is decorated with a tremulous line above a band, and **72** has a zigzag enclosed by bands with more bands below; the rim tops of both are barred, but poorly preserved. The former comes from a tomb belonging to the later stages of the period of use of the cemetery and the latter should be contemporary, if not slightly later. A fragmentary example from the Toumba building at Lefkandi may be compared, but is earlier (Catling and Lemos 1991: pls. 10, 49, no. 190).

V. THE KRATER

The krater was a comparatively popular shape used, or reused, as ash-urn, and a number of krater fragments were encountered among the fire-affected sherds associated with tombs in the area of the Early Iron Age cutting (see chapter 4). A few fragments (**11**, **34**, **40**) also derive from various deposits on Terrace V; worth noting here are the fragments **63**, **78**, and **85**, which are from imported kraters.

Judging by the better preserved examples of the shape, there are two basic types of krater at Torone: an earlier low-footed variety characterized by a diameter at rim significantly greater than the height of the vessel, and a later variety with a tall conical or flaring foot where the rim diameter is only slightly greater than the height. There are in addition a number of kraters that preserve features of both discerned types, treated below as Transitional from Type 1 to Type 2. The development from a low foot to a taller one is closely paralleled in Athens (Desborough 1972:153; see also Catling and Lemos 1991:339–341 for a useful summary of the shape). It is also worth mentioning that Kalapodi has produced a number of krater fragments in stratified levels of the Late Bronze and Early Iron Age (Jacob-Felsch 1996). Although generally speaking the Torone krater rims are closer to those of early Protogeometric date at Kalapodi, rather than those that are late Mycenaean, very few krater bases survive at Kalapodi, and there are no complete profiles that would allow a closer comparison between the Torone and Kalapodi kraters.

Type 1. Krater with low foot (**pls. 325–326**)
Two examples of this type preserve complete profile, **T102-1** and **T116-1**, and both are interesting for their shape and decoration. The context of **T102-1** has been fully outlined in chapter 3, and Tomb 102 may be reasonably dated to Early Protogeometric (the date appears to be verified by the fact that the kraters published in Catling and Lemos 1991:25–31 [Middle Protogeometric] are all equipped with taller bases). The vessel has a height of 0.265 m and a rim diameter of 0.335–0.370 m. The base is a flat disk, slightly misformed (cf. similar bases on early amphorai, above); the lower wall is shallow and slightly curved, and the upper wall ascends almost vertically to a knobbed rim with rounded outside edge and is flat on top. Two thick horizontal handles, round in section, are attached to the upper wall and rise at an angle of about 45° to the level of the rim. The decoration consists of a broad band on the lower wall immediately above the base, above which are three thinner bands. The outer faces of the handles are painted, the paint extending onto the body. A broad band extends from the rim onto the upper body from which hang pendent a row of mechanically drawn semicircles (this vessel preserves one of the earliest instances of mechanically drawn pendent semicircles; cf. those on the shoulder of the amphora **T114-1**). The rim top is barred but poorly preserved.

The second krater, **T116-1**, is unique in that it is the only vessel of the period at Torone to preserve a figurative representation (Papadopoulos 1990). In shape it is similar to **T102-1**, with almost identical proportions (H: 0.264 m; D [at rim]: 0.382 m), but differs in that it has a low ring base with a fairly broad resting surface; a body that is slightly less curved; and a short horizontal rim, flat on top, with a small upturned lip or hook along its upper outer edge. The lower wall is decorated with two horizontal bands that are at some distance from the base and there are two similar bands at midpoint. The exterior edge of the rim is reserved but there is a band on the upper wall immediately below; the rim top is decorated with linked Xs. Only the lower (outer) face of the handle is painted, with the paint extending onto the body in the form of a curious upward curve (both this upward curve and the linked Xs on the rim are decorative elements not met on other local tomb pots). The horizontal bands and the handle decoration serve to emphasize the handle zone, which bears the figurative scene. Unfortunately, the vessel is only partially preserved and although the entire

base and most of the lower wall are there, only about one-half of the upper wall and about one-quarter of the rim were recovered. Moreover, the surface is worn and the vessel was mended in antiquity, indicating it saw service before reuse as an ash-urn. The figured scene, painted in red against a prominent creamy slip, is conceivably a row of birds and represents one of the few instances in Greek lands of figurative work for this period (see Kübler 1943: pl. 27; Benson 1970:32–37; Coldstream 1977:61; 1984; Kopcke 1977; Papadopoulos 1990; cf. Brock 1957: pl. 4, no. 45; Marwitz 1959; Boardman 1960a:130, pl. 31, no. I11; Desborough 1972:194–195, pl. 42B; Sackett 1976:123–124, figs. 5–6, pl. 16; Popham, Sackett, and Themelis 1979–80:127–128, 348, fig. 4, pls. 210, 270; Popham, Touloupa, and Sackett 1982a:218, pls. 29a–c; Lemos 1994). For a full discussion of the krater with comparanda see Papadopoulos 1990:13–24, pl. 5. Since the publication of the krater in 1990 I am now not as convinced as I once was that the scene represents birds. The central motif bears a very close resemblance to some Early Iron Age representations of ships, particularly that published by van Doorninck, Jr. (1982:277–280, figs. 1–4) and that from Fortetsa first published by Brock (1957: pl. 135; van Doorninck, Jr. 1982:281, fig. 6A; see also Basch 1987:159, fig. 320 and 164–201 for representations of Early Iron Age ships more generally). The problem, however, with categorically accepting the scene as a ship lies in the triangular motif at the center, which seems to define a closed triangle, rather than a shape that extends to form the central portion of a ship. Also problematic are the two partially preserved motifs to the left and right of the central motif. Whether bird or ship (I now believe the interpretation of a ship more likely) the scene on the krater is a welcome addition to the corpus of Early Iron Age figured representations.

In other parts of Greece during the Protogeometric period the krater with flat disk or low ring base is not commonly met—or rather, the available material is too fragmentary to permit a clear picture. Only Crete has produced any number of low-footed kraters (e.g., Brock 1957:160–161, pl. 16, no. 221; pl. 22, no. 317; pl. 28, no. 428; cf. Rocchetti 1967–68:186, fig. 9, nos. 23–24; Warren 1984–85:127, fig. 13; Coldstream and Catling 1996:368–372) and there are some in Athens (Desborough 1952:92–98; 1972:153; Kraiker and Kübler 1939:127–130; Lullies 1952: pls. 103–104: 1–2); elsewhere the standard form is equipped with either a conical or a tall flaring foot (Popham, Sackett, and Themelis 1979–80:339–341; cf. Catling and Lemos 1991:25–31; Sipsie-Eschbach 1991: pl. 26, no. 1). The shape of both **T102-1** and **T116-1** is, however, remarkably close to kraters of Late Helladic IIIC,[33] and some form of continuity in the development of the shape from Late Mycenaean into the Early Iron Age seems clear enough, even though little is known of the krater during the period of transition.[34] The decoration of **T102-1** is clearly Protogeometric and its context, as well as that of **T116-1**, cannot be significantly earlier or later than Early Protogeometric (the fire-affected sherds in both tombs are clearly Early Iron Age; see especially **T102-2** and **T116-2**).

Among the fragmentary kraters few can, with any certainty, be classed under this type, although two are worth noting. **T79-1**, like **T116-1**, was placed into its tomb mended, with the base broken prior to its interment. Its shallow and comparatively wide lower wall, as well as the preserved diameter at the juncture with base, indicate it is close to the proportions and form of Type 1. The rounded rim of **T117-12** is not unlike that of **T102-1** and the two are probably not far apart in time; **T117-12** is equipped with a spout (for spouted kraters cf. Broneer 1939:351, fig. 25b–c [rounded rims], 354, fig. 28 [spouted varieties]; Hänsel 1979a:190, fig. 15, no. 8; Jung 2002: pl. 20, no. 222; 380–385, nos. 281, 282; cf. Broneer 1933: 369, fig. 42).

Transitional type (**pls. 327–328**)

The three vessels considered under this heading are **T48-1**, **T62-1**, and **T76-1**; of these the better preserved **T48-1** may be taken as representative. The vessel has a thick and comparatively tall ring base with a broad, flat resting surface. The body differs from that of Type 1 in that the upper wall is taller and more noticeably vertical; the result is a comparatively deeper bowl. Proportionately, height and rim diameter are more similar to one another, although rim diameter is still greater to height. The handles are those of Type 1, but the rim is horizontal, quite broad, flat on top, and with

a squared or beveled outside edge. A new feature, also found on kraters of Type 2, is a small ridge on the upper wall below rim, a feature that Desborough (in Popham, Sackett and Themelis 1979–80:340) refers to as "strengthening ridges" (cf. Rocchetti 1967–68:186, fig. 9, no. 24). The form of the base more closely approximates the low feet on Attic kraters (Desborough 1952:92–98; 1972: 153), and similar heavy ring bases are known at Lefkandi, although rarely are they as thick as **T48-1** (Popham, Sackett, and Themelis 1979–80:340; cf. Catling and Lemos 1991: pl. 60; cf. also Thessalian examples from Iolkos: Sipsie-Eschbach 1991: pl. 42, no. 8). The horizontal rim is standard for Protogeometric kraters wherever they are found,[35] and also common is the small ridge below (Desborough 1952:92–98; Bass 1963:359, pl. 83, fig. 15; Hommel 1959/60: pl. 51; Popham, Sackett, and Themelis 1979–80:340–341; McDonald, Coulson, and Rosser 1983:165, fig. 3.49, type C; Wells 1983b:241, fig. 183). Both the horizontal form of the rim and the small ridge below enjoy a Mycenaean pedigree (Broneer 1939:351, fig. 25g–h; 353, fig. 27; Mountjoy 1986:175, fig. 225).

As for decoration, the base is reserved; there are five thin bands on the lower wall below a broad band or area painted solid, above which, in turn, are two more thin bands. Rim top and outside edge of rim are reserved and the area below the rim and above the ridge is painted. The handles are painted and the paint extends for some distance onto the body. The upper wall, thus defined, is decorated with ten sets of mechanically drawn concentric semicircles on either side of the vase. Four sets hang pendent from the ridge, four stand upright on the uppermost of the bands, and two sets on each side are set sideways from the handles—an interesting and rather uncommon combination of mechanically drawn semicircles (cf. Andronikos 1969:174, fig. 25, pl. 45, no. N36, which has only pendent semicircles preserved). The combination of pendent and standing semicircles is not common, although it does appear, interestingly enough, in Ithakesian Protogeometric from Aetos (see Desborough 1952: pl. 37, no. 34, also no. 17; Coldstream 1968: pl. 47c–d; Heurtley and Lorimer 1932–33:43, pl. 3; for Ithakesian see further the references given under Type 1 skyphoi, pp. 442–443). Alternating upright and pendent semicircles also appear at Knossos (Boardman 1960a:130, pl. 31; cf. also the Attic krater fragment, with similar rim and ridge, with semicircles set on their sides: Graef, Hartwig, Wolters, and Zahn 1909: pl. 9, no. 273). A small skyphos fragment from the Toumba building at Lefkandi has alternating pendent and upright semicircles (Catling and Lemos 1991: pl. 49, no. 157). It should be noted that the decoration of **T102-1** is poorly preserved and may originally have had more semicircles.

A similarly heavy base and almost identical system of banded decoration are preserved on the fragmentary **T62-1**, although there is a further band at the junction of base and body. As preserved, the vessel appears even deeper and proportionately less wide, approaching the dimensions and proportions of some skyphoi (since the rim is not preserved the attribution of **T62-1** as krater remains unverified, although I am fairly sure it is not a skyphos). The third, fragmentary, example, **T76-1**, also has a band at junction of base and body; it has a heavy ring base with an undercut resting surface. A fragment from the upper wall, immediately below the rim, preserves portion of a raised band or ridge similar to that of **T48-1** but with incised strokes (often referred to as a "serrated band": see Desborough 1952:96).

In almost all the features described above the three Transitional kraters resemble those of Type 2, lacking only the tall foot. All three are difficult to date on the basis of internal evidence, as in each case they represent the ash-urn and only pot recovered from the tomb. Their heavy ring bases, however, as well as the semicircles on **T48-1** would reasonably place them as chronologically transitional between Types 1 and 2. Worth noting here is the kiln krater **KP-4**, which also has a ring base but one that is considerably less heavy (Papadopoulos 1989a:30, 38–39, ills. 18–19). It differs from the tomb kraters not only in the manner of decoration, but also in the fact that the body is much deeper and the upper wall more incurved (cf. also the low foot and incurving body of the krater from Nea Ionia: Smithson 1961:167–168, pl. 29, no. 48, which Desborough [1972:153, pl. 29] dates to the latest stages of Late Protogeometric; cf. the krater fragment: Green 1979: pl. 1, no. 3).

Type 2. Krater with tall foot (**pl. 329**)
As with the local skyphos, the adoption of a tall foot on the krater seems to owe its inspiration to outside influences. Kraters of this type are to be found over a wide geographical area during the period,[36] and fragments of several imported kraters to Torone (**63, 78, 85**) should be of this type. In discussing the type from several sites, Desborough (1952:92–98; Popham, Sackett, and Themelis 1979–80:341; cf. Bass 1963:358–359, pl. 83, fig. 15; Wells 1983a: 46–47, n. 195) ultimately traced the form back to Athens. It is interesting to note, however, the tall foot on the black-slip krater **T104-2**, which may be securely dated to Early Protogeometric.

Three fragmentary kraters may be classed with certainty as tall-footed: **T33-1**, **T35-1**, and **T58-1**. Of these, only **T58-1** preserves complete profile. The tall foot can be either conical (**T35-1**, **T58-1**) or flaring (**T33-1**); a common feature is a ridge, or ridges, on the exterior of the foot, especially near the juncture with the body (**T35-1**, **T58-1**; cf. the foot of Kraiker and Kübler 1939: pl. 63, inv. 532). On **T33-1** there is a deep groove at the juncture of base and body. The lower wall rises rather steeply and the upper wall ascends almost vertically, resulting in a form proportionately deeper than Type 1. Only **T58-1** preserves rim, which is horizontal and broad, flat on top, and tapering toward a rounded outside edge. There is a ridge with incised strokes ("serrated ridge") below rim.[37] The handles, as preserved on **T35-1** and **T58-1**, are of the normal horizontal variety and there is no evidence at present of double or bridged handles as on **T104-2** and the kiln krater **KP-4**, which are particularly common in Thessaly (see Heurtley and Skeat 1930–31:30) and Euboia (see Catling and Lemos 1991: pls. 17–18a, pl. 19, no. 328, 342, pl. 22, no. 369, pl. 58, no. 369 [skyphos], also pl. 27, no. 453 [belly-handled amphora]; cf. Schilardi 1979: pl. 151a [Paros]).

As for decoration, all three examples are too poorly preserved to establish recurring features. The decoration of **T58-1** is similar to that of **T48-1**, with four thin bands on lower wall below a broad band; the paint extends from the handles onto the body and the upper wall above the ridge is painted; nothing, however, is preserved on the handle zone. Similar bands are also found on the lower body of **T35-1**, and there is a further band on the upper part of the foot; the foot of **T33-1** is also painted. Among other fragmentary kraters **T40-1** probably belongs to this type on the evidence of its steep lower wall and the preserved diameter at junction of base and body, features close to both **T35-1** and **T58-1**.

In other parts of Macedonia the wheelmade krater is a poorly represented shape in the Early Iron Age. There is one example from Vergina with a tall foot and double handles, but the vessel has a flaring rim with rounded lip (Andronikos 1969:174, fig. 25, pl. 45, no. N36). The shape is similar to **T30-1**, here classified as a skyphos (cf. the "skyphoid kraters" in Wells 1983a:47–49, 83–84, 93–95, 108–109). Fragments only from several other Macedonian sites may be classed as krater (cf. Heurtley 1939:235, no. 475; 237, no. 492; also the Late Bronze Age examples from Kastanas and Assiros: Podzuweit 1979b:213, fig. 21, no. 9; Wardle 1980:250–252, fig. 14, no. 31; Jung 2002).

Krater fragments of uncertain type (**pl. 330**)
In addition to the vessels discussed above there are a good number of krater fragments too poorly preserved to ascertain type. Three rim fragments, **T24-4**, **T118-7** and **T104-11**, are characterized by a rim form very similar to **T58-1** (Type 2), but none has the ridge below. Of these **T104-11** is of interest in that it can be dated to Early Protogeometric. Two other fragments, **11** and **40**, share a similar rim form, but one that is not exactly paralleled by the rims of Types 1 and 2, although the form is closest to **T102-1** (Type 1). In both cases the upper wall terminates in an outward thickened rim with rounded outside edge that is flat on top. **11** preserves one set of mechanically drawn concentric circles on the upper wall below a band. This is one of only two instances of full circles, as opposed to semicircles, found on local kraters, the other being the fragment **34** (cf. H. Walter 1968:91, pl. 1, no. 11). It is worth adding that **11** has a whitish slip not unlike that of **T102-1** and **T116-1**. A band, similar to that on **11** is found on **40**, extends over the exterior face of the rim, and below which are two tremulous lines; the body fragment **T105-3**, also with tremulous lines, is probably from the same vessel. The rim top of **11** is barred, with individual strokes arranged in groups of three; the rim top of **40** is decorated

with mechanically drawn arcs (cf. **T25-3**). Both fragments are perhaps best compared with kraters of Type 1, but may be related to the lekanis.

A more unusual rim form is found on **T109-2** and **T111-3**, both deposited in their respective tomb pits as fire-affected sherds. Although both fragments are small and preserve no paint, they are clearly from medium-size to large open vessels. The upper wall is vertical and terminates in a thickened knobbed rim with double concavity on top; **T109-2** is also equipped with a bridged spout. Although here listed as kraters, both fragments may be from some other open vessel form, perhaps even large lekanides (cf. the spouted lekanis **T51-3** and the fragment **T117-11**). Both are early: **T109-2** is among the earliest pots in the cemetery.

The following fragments are clearly from kraters but are too poorly preserved to be of much value: **T32-1**, **T103-1**, **T115-6**, **T115-7**, **34**. The body fragment **34** preserves one partial set of mechanically drawn concentric circles. The fragmentary **T79-1** has already been mentioned under Type 1.

MISCELLANEOUS

The five quite distinct shapes that follow each represent the only example of the vessel type known to date, with the exception of the five fragmentary one-handled cups from Tomb 101. The "amphora/pyxis" **T45-1** and the lid **T88-2** are both clearly local; the kantharos **T13-1** and the jug **46**, which share similar decorative elements, are of slightly atypical fabrics, although both are probably local products. The one-handled cups **T101-2–T101-6** are also probably local.

VI. THE ONE-HANDLED CUP (**PLS. 420–423**)

There are only five examples of the one-handled cup, **T101-2–T101-6**; all are fragmentary, and all were encountered among the fire-affected sherds of Tomb 101. The fabric of all five cups, which is similar to **T96-1**, **T101-9**, and **T101-10**, is a little atypical. I had originally suspected that this entire group, which is Submycenaean, was imported and perhaps Attic, but elemental analysis (see appendix E) indicates they are unlikely to be Attic, and neither do they match with any of the reference groups for Euboia, Thessaly, the Argolid, or Crete. Although the results of the elemental analysis cannot provide an absolutely conclusive answer, it is perhaps better to regard the fabric of this whole group as local.

The shape is characterized by a low base, curved lower wall, vertical upper wall, and a flaring rim with rounded lip. One vertical handle, either with concave upper face (**T101-2**, **T101-5**) or more oval in section (**T101-4**), is attached from body directly to rim. The interior is painted except for a reserved band at rim; the exterior face of the foot may be painted (**T101-2**) or reserved (**T101-3**, **T101-6**). The lower wall is decorated with two or three thin bands, above which is a slightly broader band (**T101-2**, **T101-3**, **T101-6**); on all five examples there is a thin band immediately below the rim on the exterior. The upper wall may be decorated with a wavy line as **T101-2** and **T101-3**; the upper face of the handle is invariably painted.

This is a standard Submycenaean shape (Furumark 1972a: Shape 217; Desborough 1972:39–41; 47, fig. 10; Mountjoy 1986:200, fig. 268; for the Late or Subminoan version see Betancourt 1985:187, fig. 132B; cf. Rocchetti 1974–75:250, fig. 112; 275, fig. 152d), found in Athens and on Salamis (Kraiker and Kübler 1939:72, pl. 23, inv. 437; pl. 36; Styrenius 1962:115; Brouskari 1980: 22, pl. 3g, no. 13, EPK 542; there are more unpublished examples from the tombs and various other deposits in the area of the later Athenian Agora), and is particularly common at Lefkandi (Desborough 1972:41; Popham, Sackett, and Themelis 1979–80:293–297). Its Mycenaean ancestry is well established (Furumark 1972a: Shape 215; cf. Shapes 211–214, 216–217; Mountjoy 1986:146, fig. 183), and the shape is known in the local Mycenaean ware of Assiros Toumba (Wardle 1980:251, fig. 14, no. 29), and a few examples from Schicht 12 at Kastanas have been recently published by Jung (2002: pl. 29, nos. 307–311). Few if any of the one-handled cups from Iolkos in Thessaly are stylistically comparable, nor do they appear to be as early as those from Torone (Sipsie-Eschbach 1991).

Two more cup fragments should be noted here: the rim fragment **T118-9** and the base fragment **T118-10**, which are probably from the same vessel, although this is not absolutely certain. Both are very poorly preserved, but they are clearly

fragments of a one-handled cup or cups rather than skyphoi. The low ring base of **T118-10** is of a type more prevalent in Attic and Euboian Submycenaean than in Protogeometric (see Kraiker and Kübler 1939:72, pl. 23, inv. 437; pl. 36; Styrenius 1962:115; Furumark 1972a: Shape 217; Desborough 1972:39–41; 47, fig. 10; Popham, Sackett, and Themelis 1979–80:293–294, pl. 98, S19.1; pl. 99, S24.1; Brouskari 1980:22, pl. 3g, no. 13; Mountjoy 1986:200, fig. 268). Chemically, the fabric of **T118-9** and **T118-10** clusters with that of **T101-2–T101-6** (appendix E), although visually there are certain differences.

VII. THE KANTHAROS (**T13-1**, **PL. 331**)

The vessel has a low ring base and a rather deep curved body with wheelmarks prominent on the interior; the tall vertical rim, offset from body, terminates in a plain rounded lip. Two vertical high-swung handles, thin in section, are attached from the junction of body and rim directly to lip. Base and lower wall are reserved, whereas the remainder of the body is painted solid; the rim is decorated with a row of crosshatched triangles. The upper faces of the handles and the interior are painted.

The handmade version of the shape is popular at Torone (see below) as it is in Macedonia generally, whereas the wheelmade version is comparatively rare. There are three wheelmade kantharoi from Vergina (Andronikos 1969:182–185, fig. 33, pl. 54, nos. Υ2, Υ8; pl. 73, no. AZ21), and some from Tsaousitsa (Casson 1919–21:22, fig. 16; 1923–25: pl. Id) and Nea Anchialos (Sakellariou 1965, pl. 471γ). Wheelmade kantharoi are, however, a hallmark of Thessalian Protogeometric, and particularly close to **T13-1** is the series from Marmariani (Heurtley and Skeat 1930–31:26–27, fig. 12, Class 13; Béquignon 1937: pl. 22, nos. 6, 8; Desborough 1952:138–139, 149; Verdelis 1958: 29–32, pls. 9–10), but they have been found also at Theotokou, Kapakli, and elsewhere; their absence at Halos, in the far south of Thessaly, has been noted by Desborough (1952:152). In Thessaly the kantharos, along with the wheelmade version of the jug with cutaway neck, represent wheelmade translations of popular handmade forms that are considered a development of Late Protogeometric (Desborough 1972:213; in Heurtley and Skeat 1930–31:16–19, figs. 5–7; 26–27, fig. 12, the handmade kantharos is designated Classes 5 and 6, the wheelmade Class 13), and one of the notable independent ceramic achievements of the region (Snodgrass 1971:61–62). This type of kantharos is not commonly found in Euboia or the Cyclades (Popham, Sackett, and Themelis 1979–80:349). The paucity of the wheelmade version of the shape at Torone, at least as tomb furniture, is noteworthy and a connection with Thessaly seems reasonable enough, although the quantity of local handmade versions of the shape should not be overlooked. One detail worth noting, however, is that the vast majority of the Thessalian wheelmade examples are flat based, as are the few from Vergina, whereas **T13-1** stands on a ring base (of the twenty-one kantharoi published by Heurtley and Skeat [1930–31:26–27], only two [nos. 110, 111] appear to have a ring base; cf. Verdelis 1958:29–31). Although details of the fabric of **T13-1** are a little unusual, the vessel is best seen as local. In fabric and feel it is different from the pottery of Marmariani and the Thessalian generally that I have seen.

VIII. THE JUG WITH CUTAWAY NECK (**46**, **PL. 332**)

The vessel has a low ring base, a globular body, and a comparatively tall vertical neck terminating in a plain rim; the neck is cut away on one side; the cutaway is not as pronounced as that on the local handmade jugs. A vertical handle, with concave upper face, is attached from the shoulder to the cutaway part of the rim. There is a painted band at the juncture of base and body and two thin bands at the midpoint, above which is a broader band. The shoulder is decorated with a row of crosshatched triangles (cf. **T13-1**); neck, rim, and interior at rim are painted, as are the upper and outer faces of the handle, with the paint extending onto the body. The fabric and feel of **46** are more consistent with standard local pottery and are slightly different from **T13-1**.

As with the kantharos, the wheelmade jug with cutaway neck has a strong Thessalian flavor and is often considered a Thessalian creation (Heurtley and Skeat 1930–31:20–21, nos. 31–47 [Class 8], pl. 3; Desborough 1952:135–137, 150, 152; 1972:213; Verdelis 1958:19–22, nos. 36–42, pl. 6; Snodgrass 1971:61–62), adapted from the handmade version

of the shape, which itself may have been introduced to Thessaly from Macedonia (Desborough 1952:136, 166; cf. Popham, Sackett, and Themelis 1979–80:325). Unlike the kantharos, the jug with cutaway neck is also found in the neighboring region: there are eight such jugs in the local clay from tombs at Lefkandi and at least one from the settlement, all dating to the later part of Late Protogeometric and Subprotogeometric I (Popham, Sackett, and Themelis 1979–80:234–235 [including P23.1, pl. 141, which has two necks]; for the Late Geometric version at Lefkandi, see pls. 39–40), and a ninth-century B.C. example is known from Skyros (Doumas and Marangou 1978:192, no. 43; cf. Coldstream 1977:41). There is one wheelmade and painted jug of this type at Vergina (Andronikos 1969:176–177, fig. 26, pl. 34, no. D22; the vessel has a flat base); elsewhere in Macedonia, although there is a tendency during the Early Iron Age to adapt traditional handmade shapes such as the jug to the wheel, wheelmade versions are not often painted like their Thessalian counterparts (see especially Casson 1919–21:22–24, figs. 17, 21b, class B; 1923–25:20, fig. 9).

As was the case with the kantharos **T13-1**, a Thessalian connection seems reasonable for **46**, although it should be stressed that there are certain differences in details of shape and decoration between it and the normal Thessalian (and Lefkandian) variety that are noteworthy. First, in the matter of size, the jugs of Marmariani (Heurtley and Skeat 1930–31:20–21) have an average height of 0.210 m (the smallest 0.180 m, the largest 0.380 m); among the jugs from Kapakli the smallest is 0.225m high, the largest 0.307 m (Verdelis 1958:19–22), whereas **46** stands only 0.151 m tall and is considerably smaller than most of the Thessalian examples. It is interesting to note that of the eight jugs placed in tombs at Lefkandi, all but one are smaller than **46** (from T15.5, the smallest [H: 0.068 m] to P23.8 [H: 0.131 m]); the exception is the unique jug with two necks (Popham, Sackett, and Themelis 1979–80: P23.1). Second, the Thessalian jugs are seldom as rounded as **46** and their necks are normally taller in proportion; moreover, all but two of the jugs from Marmariani have a flattened lip (Heurtley and Skeat 1930–31:20). There are also differences in decoration: Thessalian jugs, like those of Lefkandi, are invariably decorated in the dark-ground system, and it is common to find, in the former at least, decoration on the neck (although the necks of some are painted solid). Thus the reserved lower body of **46** provides a notable contrast. Combined, these differences are marked; although the inspiration for **46** may be Thessalian, the possibility that at Torone the shape (as with **T13-1**) was adapted independently from the common handmade version should not be dismissed (the decoration of **46** is not unlike that found in a series of small Cretan jugs that normally have a trefoil or plain round mouth: see Boardman 1961:97, pl. 31, no. 432 [Late Protogeometric], with references to parallels from Knossos).

IX. THE "AMPHORA/PYXIS" (**T45-1**, **PL. 334**)

In shape **T45-1**, strictly speaking, is a flat-based amphora with horizontal handles rising vertically. I add the term "pyxis" in order to distinguish the form from other amphora types, and because the vessel is not unlike several contemporary pyxides in other parts of Greece (e.g., Bohen 1988; Papadopoulos 1998b). The vessel has a flat base, a globular body with point of maximum diameter set rather high, and a short concave neck offset from the body by a slight ridge (much worn); a horizontal knobbed rim, flat on top, tapers to a rounded outside edge. Horizontal handles, round in section, are attached to the shoulder and rise vertically to a level just below the rim. Above the painted base and lower body are two thin bands. The outer faces of the handles are painted with the paint extending onto the body for some distance, emphasizing the handle zone. Neck and rim are painted, as is the interior of the rim; the rim top is evidently barred but very poorly preserved. The handle zone on the preserved side of the vessel is decorated with three sets of mechanically drawn concentric circles, each set separated from the other by a thin vertical band, creating a panel effect unique at Torone. The precise date of **T45-1** in the course of Protogeometric cannot be determined accurately as the vessel was the ash-urn and the only pot recovered from its tomb.

The basic shape, minus the handles, has a general likeness to the standard globular pyxis common in Athens, Lefkandi, and elsewhere (Desborough 1952:106–112, pl. 8; 109 for a list of

examples outside Attika; Popham, Sackett, and Themelis 1979–80:327–330; Bohen 1988). The only close parallels to the shape and decoration of **T45-1** are offered by the distinctive series of Cretan vessels normally referred to as "necked pithoi" (the term was coined by Payne 1927–28:233–234, 268; the Knossian material is listed and described in Brock 1957:147; see also Desborough 1952:243–245; Coldstream 1994a), sometimes "stamnoi" (e.g., Rocchetti 1974–75:175, fig. 5c; 206, fig. 52b; 270, fig. 141; the name is fully discussed in Papadopoulos 1998b:117). Brock distinguishes three varieties of the shape on the basis of handle type: **T45-1** may be compared to his type A. Two particularly close parallels come from Fortetsa tombs Q and IV (Brock 1957:147; 16, pl. 8, no. 117; 24, pl. 14, no. 206 [= Desborough 1952: pl. 35 (Q.1, IV.1), both of which Desborough assigns to Protogeometric]; cf. also 39, pl. 27, nos. 382, 387; pl. 8, no. 131; pl. 22, nos. 282, 347). The shape is considered a local Cretan development of the Protogeometric period and the type (especially variety A) does not appear to survive much beyond Early Geometric (Brock 1957:147; cf. the "amphoriskos" in Coulson, Day, and Gesell 1983:401–402, fig. 6, no. 11; see also Levi 1967–68:93, fig. 43; Rocchetti 1969–70:66, fig. 35), although an example dating from the Orientalizing period is described by Coldstream (in Coldstream, Callaghan, and Musgrave 1981:153, pl. 25, no. 71; cf. also 145, pl. 17, no. 1; 151, pl. 21, no. 57) as a late revival of a Protogeometric shape. A related shape, slightly later than the main Cretan series and referred to as "amphora," is found on Thera (Dragendorff et al. 1903:57, fig. 193; 61, no. 212), but beyond this I know of no comparable form from other parts of the Aegean. It should be noted that the majority of Cretan necked pithoi are somewhat larger than **T45-1**, normally 0.10 m taller or more (Coulson, Day, and Gesell 1983:401–402, fig. 6 is comparable in size, and there is a pyxis of related form that is smaller: Coldstream, Callaghan, and Musgrave 1981:154, fig. 4, pl. 26, no. 78). It may be that **T45-1** was a local version of a standard central or southern Greek pyxis to which the Toronean potter simply added two handles resembling those of amphorai.

X. THE LID (**T88-2**, **PL. 335**)

It appears that the standard type of lid at Torone for closed vessels of the period was a base—that is, a single fragment preserving the entire base of another vessel—that was reused and crudely worked by chipping and smoothing in order to fit the mouth of a particular vessel. Tall flaring or conical bases of skyphoi, lekanides, and kraters were popular as lids, as were amphora bases (see **T20-2**, **T21-2**, **T26-2**, **T47-2**, **T51-2**, **T99-2**, **T100-2**). A distinct shape made specifically as lid, however, was rare and is represented only by the unique example **T88-2**. Unfortunately, it was recovered in fragmentary state, poorly preserved, and its precise position within the tomb was not determined. Given its size, it is unlikely it served as lid for the ash-urn **T88-1** (see chapter 3 for details).

The shape of **T88-2**, as preserved, is characterized by a flat top and sloping sides; the rim/resting surface was not preserved. Two handle scars on top attest the existence of a handle, probably an arched band. The sides are decorated with horizontal bands defining rows of tremulous lines. The top is reserved except for a band around the edge; the interior/underside is unpainted. The lid top is 0.080 m in diameter.

The shape of this lid is interesting in that it differs in almost all respects to the normal type of lid of the later Protogeometric period usually associated with pyxides (for pyxis lids see Kübler 1943: pl. 20; Popham, Sackett, and Themelis 1979–80:328, fig. 17; Bohen 1988) or amphorai (cf. Kübler 1943: pl. 12, inv. 2131; also pl. 8, inv. 2012); it resembles more closely an earlier variety, without handles (such as Kraiker and Kübler 1939: pl. 21, inv. 420), associated with the belly-handled amphora with short straight collar neck, a shape that does not survive the transitional period between Submycenaean and Protogeometric (Desborough 1952:20; 1972:33). This variety of lid enjoys a Mycenaean pedigree and may be traced back to the end of Late Helladic IIIA:2 (Furumark 1972a: Shape 334; Mountjoy 1986:120); the shape is popular during Late Helladic IIIB–C, but becomes rare during Submycenaean since the two vessel forms with which it is associated, the collar-necked jar (amphora) and the straight-sided alabastron, fall out of favor; the development of these

shapes is well traced by Mountjoy (1986:120, fig. 147; 154, fig. 199; 180, 183, figs. 257, 200; cf. Iakovides 1969–70, vol. 3: pl. 35, no. 1115; pl. 84, no. 217; Schilardi 1977: pl. 188b; 1981b:171, fig. 14; Renfrew 1985:166, fig. 5.9, no. 313). The standard Mycenaean type is normally pierced on top and does not have a handle (the diameter range is normally 0.080–0.090 m); handled versions do exist, but these are less common and of more diverse shapes (Furumark 1972a: Shape 335; contrast, for instance, Blegen 1928:160, fig. 154, no. 585, with no. 586, and also with Mayence 1926: pl. IV, 13a–b; Åström et al. 1980: pl. 22, no. 5 [LA 25], pl. 23, no. 1 [LA 38]). Close to the general shape of **T88-2** are a number of lids of various dates from different parts of the Aegean; a Late Minoan III lid, with arched handle, from Knossos is similar (Hood and de Jong 1958–59:188, fig. 5, pl. 48b, no. 15 [D: 0.170 m]),[38] as is one of the seventh-century B.C. from the nearby Fortetsa tombs (Brock 1957: pl. 83, no. 1218 [D: 0.150 m]; for a variety of lids with and without handles from Karphi see Seiradaki 1960:26–27); a lid of Middle to Late Geometric date from Athens may be cited, which itself differs somewhat from the more usual varieties of that period (Brann 1962:68, pl. 19, no. 328 [D: 0.200 m]). The same basic type may be found in plain domestic ware of the late fifth century B.C. in Athens (Sparkes and Talcott 1970:195–196, 345, pl. 68, no. 1546 [D: 0.224 m]), and in a handmade form of Early Bronze Age date from Samos (Milojcić 1961: pl. 48, no. 4). These few parallels serve to illustrate that, although not common in individual sites where it is found, the type is a persistent one and its occurrence over a broad geographical area and chronological span is perhaps best explained by its functional shape. I know of no comparable lid that may be securely dated to Protogeometric,[39] and its existence at Torone may be a purely local affair, which developed out of a Mycenaean tradition.

Local wheelmade pots of undetermined shape

Three vessels are listed in the conspectus of pottery under this heading: **T39-1**, **T117-13**, and **19**. **T39-1** and **19** are fragments preserving a low ring base, the shape of which could not be determined, and **T39-1** is either a skyphos (Type 1) or a small amphora/iskos. **19** may have been a lekanis (Type 2) or possibly an amphora. More interesting is the small rim fragment **T117-13**, possibly from a shape not otherwise represented among the tomb pottery. The fragment is clearly from a very small open vessel with an estimated rim diameter of 0.110 m; it has a slightly curved upper wall and a short knobbed rim, flat on top and with rounded outside edge. The interior is painted and the rim top evidently barred. It finds no exact parallel among the open vessels discussed above but its designation as "small bowl" seems reasonable and it may therefore be related to the lekanis; beyond this little can be said.

A note on local "Geometric" from Terrace V

The pottery from the kiln, dating to the eighth century B.C., has been listed in chapter 2 and fully published elsewhere (Papadopoulos 1989a). Stylistically contemporary with it are a number of fragments encountered in various deposits on Terrace V, mainly topsoil or the Classical levels (deposit type 3). Only a selection of this fragmentary material is catalogued (chapter 2); fragments of Geometric or Subprotogeometric date from other parts of the site (including material published in Cambitoglou, Papadopoulos, and Tudor Jones 2001) are also listed in chapter 2. Although this material is quantitatively meager and mostly preserved in small fragments, its main value lies in the fact that it establishes continuity in the local ceramic tradition in the period immediately following that of the use of the cemetery. This is now supplemented with the material encountered in the excavations of the settlement on Promontory 1 (Cambitoglou and Papadopoulos 1988; 1990; 1991; 1994). The pieces briefly discussed in this section are all of local clay (the imports are treated separately below) and together all this material points to the existence of a fully fledged, developed local Geometric style. The very existence of such material from a Macedonian site is of some importance in itself (see, for example, Coldstream 1977: 19, 209).

The small rim fragment **50** is almost identical in details of shape and decoration to a series of Late Geometric one-handled cups common in Euboia (cf. Popham, Sackett, and Themelis 1979–80: pl. 62, no. 216; pl. 51, nos. 218–222; Andreiomenou 1981b:213, fig. 55a, no.3; 1984: pl. 24,

nos. 59–60; pl. 25, nos. 65–67, 69–72, 73–77); shape and decoration also recall a number of Attic Late Geometric kantharoi (Kübler 1954: pl. 87, inv. 364, 817; pl. 88, inv. 1341; cf. Young 1939:40, fig. 24, no. IX.11 [cf. 46, fig. 32, no. XI.5]; Brann 1962:52, pl. 10, no. 173; Knigge 1966:114, Beil. 65, Tomb 206, no. 2; Coldstream 1968: pl. 15c; Mylonas 1975, vol. 3: pl. 423, nos. Δ14.284, Δ14.291). **70** differs from **50** only in the matter of decoration, which consists of a zigzag enclosed by bands on the rim exterior and what appears to be another band preserved on the body at the break. A similar zigzag enclosed by bands is also found on the lekanis rim fragment **72**, which is not paralleled in any examples of this shape encountered in tombs (cf. **T84-4**). Another fragmentary vessel encountered on the terrace with no parallel among the tomb pottery is **71**; the shape is best described as a miniature belly-handled amphoriskos, but only portion of the upper body, one handle, neck, and rim are preserved. A number of earlier vessel forms are listed in the catalogue (chapter 2) for comparison, but the closest parallels to the shape are offered by Attic belly-handled amphoriskoi of the Late Geometric period (Mylonas 1975, vol. 3: pl. 422a, esp. no. G18.185; cf. Kübler 1954: pl. 110, inv. 259; Rhomaios and Papaspyridi 1930: pl. 4, nos. 10, 15–22; Courbin 1954:178, fig. 36 [Argos]; and cf. Randall-MacIver 1927: pl. 41, no. 13 [Calabria Grave 108]).

Particularly interesting is the rim and handle fragment of a krater, **79**. The vertical upper wall curves in to a knobbed rim that is flat on top; a distinctive spur handle with a double attachment to the wall is pierced vertically. The upper wall is decorated with five vertical strokes to the left of which is an unidentified motif; there is a horizontal band at junction of rim and wall above which is a row of Ss; the rim top is decorated with solid triangles (for Ss and solid triangles see Coldstream 1968:396–397). The handle attachment is framed by a thin continuous line that follows the contour of the handle, and the handle top and lower raised attachments are decorated with diagonal strokes. Both shape and decoration may reasonably be assigned to Late Geometric. The Ss find close parallels on kraters especially from Chios (Boardman 1967:105–115, pls. 19–28, esp. 106–107, figs. 62–63; 113, fig. 68, no. 129), and the decoration of the upper wall is fairly standard for Late Geometric from most regions. Only the handle is odd; it is related to the stirrup handle common on kraters from Middle Geometric on (see Coldstream 1968: pls. 5f, 17f, 19h, 30a, e, 33e–f, g, 39j, 44h, 52d, 60e, 63a, g, 64g), but it lacks the horizontal member below; a Late Geometric spur handle from a bowl at Lefkandi appears to be related (Popham, Sackett, and Themelis 1979–80:72, pl. 57, no. 324; cf. also pl. 38, no. 29; pls. 52, 63, nos. 232–233). It is also worth comparing the related, but different, "trigger" handles on Thessalian cups (Skeat 1934: pl. II, nos. 5–7 [no. 6 = Coldstream 1968: pl. 32a]), as well as their Boiotian and Attic counterparts (Skeat 1934: pl. II, nos. 8–10), and spur handles are not uncommon on Macedonian handmade vessels (see Andronikos 1969:220, fig. 61, no. X9; Romiopoulou 1971b:355, fig. 3, no. 5).

A few other pieces worth noting here include the amphora shoulder fragment with crosshatched panels or squares, **65**, which may be later than the amphorai with crosshatched triangles (cf. Bernard 1964:121, fig. 33, no. 134 [Thasos]; on the chronology and foundation of Thasos see further A. J. Graham 1978:61–98; also the crosshatched panels on the Geometric skyphos: Béquignon 1937: pl. 22, no. 9), as well as two amphora fragments, **68** and **94**, preserving pendent semicircles on the shoulder. Pendent semicircles do occur occasionally on tomb amphorai (cf. **T88-1**, **T114-1**) and are also found on the amphora fragment from the kiln, **KP-10**, but the bands above and below the semicircles on **68** are not found on the pottery from the cemetery. The decoration and feel of **94** is closer to **KP-10** than it is to **T88-1** and **T114-1**.

Decorative elements

Apart from simple horizontal bands, individual decorative elements on local wheelmade pottery are relatively rare. A list of these is provided here in order to facilitate cross-reference. Far more important than the breakdown of individual motifs is the way decorative elements are placed or combined on individual shapes, and this has been treated in the typology under individual vessel forms. Vessels and fragments where the decoration is either too poorly preserved to determine, or uncertain, are not included in this list; neither are imported vessels.

Motif	Catalogue Numbers		Shapes Represented
1. *Mechanically drawn concentric circles.* Individual sets range from 2–7+ circles. There is normally a small dot at center, although there are exceptions. The sets of circles on **T84-1** are filled with solid hourglass ornaments. Compare also the unidentified, partially preserved, circular motif on **T122-1**.	T44-2 T45-1 T51-1 T67-1 T77-1 T84-1 T104-1 T118-2 T124-1 1 9	10 11 27 32 34 39 41 66 93 KP-5 KP-6	*Amphorai:* **19** *Kraters:* **2** *Amphora/Pyxis:* **1**
2. *Mechanically drawn concentric semicircles.* **a**. *Upright or standing semicircles.* Individual sets range from 3–7 arcs. **T74-1** has solid hourglass filling ornaments.	T28-4 T48-1 T52-1 T73-1	T74-1 T104-9 T125-1 8	*Amphorai*: **7** *Krater:* **1**
b. *Pendent semicircles.* Individual sets ranging from 3–8+ arcs.	T48-1 T82-1 T88-1 T102-1	T114-1 68 94 KP-10	*Amphorai:* **5** *Kraters:* **2** *Skyphoi:* **1**
c. *Semicircles set sideways.*	T48-1		*Krater:* **1**
3. *Wavy line(s).* **T95-1** may have a wavy line.	T96-1 T101-2 T101-3	T104-1 T134-1 KP-7	*Amphorai:* **3** *Amphoriskoi:* **1** *One-handled cups:* **2**
4. *Tremulous line(s).* The tremulous lines on **T41-2** and **T75-1** approach zigzags.	T28-1 T37-1 T41-2 T44-1 T47-3 T52-1 T75-1 T78-1 T84-4 T88-2	T99-1 T105-3 T107-1 T117-8 T124-1 T125-1 40 41 73	*Amphorai:* **4** *Amphoriskoi:* **5** *Skyphoi:* **3** *Lekanides:* **4** *Kraters:* **2** *Lid:* **1**
5. *Zigzag.* The amphora fr. **36** may be decorated with zigzag on shoulder	T27-1 T123-1	70 72	*Amphoriskoi:* **2** *Open vessels:* **2**
6. "*Ugly-sausage*" motif (only on skyphoi). **a.** *Continuous or single "sausage."*	T23-1 T101-7	T106-1 T108-1	*Skyphoi:* **4+**
b. *Opposed or confronted "sausages."*	T25-1 T30-1 T85-1 T103-1	T105-1 T110-1 T117-1 38	*Skyphoi:* **8+**
c. *Either a or b* (too poorly preserved to be certain).	T62-1 T98-1 T103-2 T105-4 T109-4 T119-2	T119-3 T128-3 28 44 45	*Skyphoi:* **11**

Motif	Catalogue Numbers		Shapes Represented
7. *Arcs (hand drawn).* One example only (Final Mycenaean/Submycenaean); the motif is related to one normally referred as "tassel pattern" (cf. Mountjoy 1986:195, fig. 258, no. 10 (= Furumark 1972a, Motif 72). Compare also the mechanically drawn partial arcs on **KP-5** (of postcemetery date); as well as the mechanically drawn arcs on the rim tops of **40** and **T25-3**.	T101-1		*Amphoriskos:* **1**
8. *Necklace pattern.* Cf. Mountjoy 1986:195, fig. 258, no. 11 (Submycenaean).	T9-1		*Amphoriskos:* **1**
9. *Crosshatched triangles.* Crosshatching is preserved on the upper shoulder of **T68-1** but it is uncertain if this was related to triangles.	T13-1 T56-1 T81-1 T82-1 T83-1	T122-1 24 39 46 71	*Amphorai:* **7** *Amphoriskos:* **1** *Kantharos:* **1** *Jug:* **1**
10. *Crosshatched panels or squares.*	65		*Amphora:* **1**
11. *Crosshatched lozenge chain.* One example only, from the kiln (postcemetery date).	KP-7		*Amphora:* **1**
12. *Parallel vertical strokes arranged in groups ("metope pattern")* Compare the vertical (or slightly slanted strokes) on the fragment **50**; also the vertical strokes, arranged in groups, alternating with Xs on **KP-4**.	T82-1		*Amphora:* **1**
13. Ss. One example only, postcemetery date.	79		*Krater:* **1**
14. Xs. One example only, from the kiln, postcemetery date. Compare the linked Xs on the rim top of the krater T116-1.	KP-4		*Krater:* **1**
15. *Figurative representation.* One example only; main preserved figure bird or ship.	T116-1		*Krater:* **1**
16. *Vessels decorated only with bands or areas of solid paint.* Vessels that may originally have had other motifs (which are not preserved) are not included here.	T20-1 T51-3 T55-1 T60-1 T69-1 T81-2 T83-2	T94-1 T108-7 T109-1 T115-1 T120-1 KP-8 KP-9	*Amphorai:* **6** *Amphoriskoi:* **3** *Skyphoi:* **1** *Lekanides:* **4**

B. LOCAL HANDMADE POTTERY

The handmade pottery of Torone is perhaps the most distinctive aspect of the local potters' craft and arguably includes some of the finest products of the local ceramic tradition. It is worth noting here that the few examples of potters' marks encountered among the tomb pottery (see chapter 6) were only found on handmade shapes (Papadopoulos 1994). The strong local—north Aegean—character of this pottery has already been alluded to, but however firmly fixed the local handmade ware of Torone in a Macedonian tradition there are certain noteworthy differences between it and the wares of other northern sites. This is hardly surprising as Macedonia covers a large and fairly diverse geographical area (Hammond 1972), and the influences and trends current at a coastal site on the far southern tip of Sithonia would naturally be different from

those of mounds in central and western Macedonia (Wardle 1980:262). This aspect is not peculiar to Torone, for as Wardle, the excavator of Assiros Toumba, has noted, few of the vases from that site have exact parallels in both shape and decoration to those from sites further north or east (Wardle 1980:263). Indeed, comparisons of material from Assiros in the Langadas Basin and Kastanas on the Axios have yielded some important differences (Hänsel 1979a:167–207; Wardle 1980: 261–265; Hochstetter 1984:290–293). Perhaps the most striking feature of Torone is the strong influence from central and southern Greece of the Submycenaean and Protogeometric styles of pottery, with the result that wheelmade vases far outnumbered the handmade. In contrast, the quantitative study of the pottery from Kastanas revealed that 64 percent of the total at that site was handmade.[40] At Vergina only 58 wheelmade vessels were encountered among the 544 excavated by Andronikos, or about 90 percent handmade (Andronikos 1969: 193–194; Radt 1974:116; Desborough 1972:217), while at Assiros, as Wardle (1980:260) states: "no Protogeometric imports or imitations or any other wheelmade ware was found in this level (Early Iron Age Phase 2), apart from the Mycenaean survivals."

A detailed study of trends, developments, connections and influences in the various parts of Macedonia is presented by Hochstetter (1984) in a meticulous study of the handmade pottery of Kastanas. Hochstetter (1984:277–309) notes similar basic lines in the development of handmade wares in central Macedonia, as well as in eastern Macedonia and Thrake (Hochstetter 1984:309–319; see further Theocharis 1971: map fig. 5; Koukouli-Chrysanthaki 1970; 1971; 1973–74; 1980; 1992; Lazarides 1973; Grammenos 1975; 1979; Grammenos and Fotiadis 1980), whereas the situation in western Macedonia appears to reveal closer links with Epiros and northwest Greece generally (Hochstetter 1984:319–325; cf. Wardle 1980:263–264; also Benac 1980:270–277; Schachermeyr 1980:271–300, distinguishes between der Kreis um Bouboutsi and der Kreis um Vergina und Vardaroftsa), with similar connections also noted for northern Thessaly during the Early Iron Age (Hochstetter 1984:329–337).[41]

Against this backdrop the local situation at Torone is interesting: the distinctive burnishing of Toronean handmade is discussed below, and differences in details of shape of individual vessel forms from those of other Macedonian sites are noted in the shape studies/typology. Certain shapes well represented in the local repertoire such as the tripod cauldron are rare in other parts of Macedonia, whereas others conspicuous at many Macedonian sites are not found at Torone. To what extent this impression is determined by material exclusively from tomb contexts is difficult at present to evaluate. Certainly the excavations on Promontory 1 have yielded no unexpected Early Iron Age shapes and, indeed, preliminary study of the material tends to support the picture as represented by the cemetery material. Elsewhere in Macedonia both cemetery and settlement contexts are well represented (Hochstetter 1984:278–309).

Incised decoration, frequently met elsewhere in the region during the Late Bronze and Early Iron Ages, is rare at Torone (for incised decoration on Macedonian Early Iron Age handmade pottery see Heurtley 1939:232, fig. 105; 236, fig.110; Andronikos 1969:191–193; Radt 1974: pl. 34; Wardle 1980:257, fig. 16; 260, fig. 19; Hochstetter 1984: pls. 62–151; and cf. level 8 [early ninth century B.C.], pls. 152–172), as are various grooved, channeled, and relief wares, which once dominated discussions of early Macedonia and northern invaders (for these see Andronikos 1969:185–190; Wardle 1980:253–265 [cf. "turban," "pie-crust" decoration, etc.]; Hochstetter 1984:188–194 [cf. Heurtley 1939:98–99, 103–104; 1925]). As both Wardle (1980:263) and Hänsel (1976:88–117) note, many of the new traits of decoration belong to a broad spectrum of pottery groups encountered over a wide area, from the Middle Danube to the Black Sea, and from the Troad to Macedonia, which develop at the end of the Bronze Age (cf. Bouzek 1969b:41–45; 1983). The channeled "Lausitz" pottery, which Heurtley (1939:103) conceived of as influencing Macedonian ceramics by way of direct invaders, is an idea that Wardle (1980:230) and others have laid to rest (see especially Behrends 1982). The application of paint on handmade pottery, more prevalent in Epiros and Albania (Vokotopoulou 1986) and in the Macedonian Late Bronze Age (Heurtley 1926–27; 1939:227–229; Schachermeyr 1980:271–291; Hochstetter 1984: 181–188; 1982), but lingering on into the Early

Iron Age at certain sites, mainly in western Macedonia (Casson 1926a: figs. 41, 63; Heurtley 1939: pl. 23x; Romiopoulou 1971b:353–357, figs. 1–3) and also at Marmariani (Heurtley and Skeat 1930–31:15, fig. 5; 17, fig. 6; 18, fig. 7; 42, fig. 17; pls. I–II: cf. Schachermeyr 1980:309–316), is not encountered at Torone.

However notable these differences and variations may appear, it is clear, nevertheless, that the Early Iron Age handmade pottery of Torone owes a great deal to the Macedonian Bronze Age tradition, especially in the case of overall shapes, which is perhaps best seen when comparing pottery assemblages from Macedonian sites with those of areas beyond.[42] Again, the evidence from Assiros and Kastanas may be taken to point. At Assiros, Wardle (1980:261–265; also 1983:291–305) noted certain links with the lower Danube and Bulgaria, as well as similarities and differences with other Macedonian sites; he emphasizes, however, that these are influences only, which modified rather than supplanted existing pottery types and he concluded that the Early Iron Age potters of Assiros were descended from Macedonian Bronze Age ancestors. At Kastanas certain links with sites in southern Yugoslavia are attested in the Early Iron Age on the basis of the distribution of certain shapes, with the Axios usually considered as the primary means of communication (Hochstetter 1984:345–358, 378, 380, figs. 59–60), but that direct links with other neighboring regions, including southwest Yugoslavia, Albania, Bulgaria, and Romania, were limited (Hochstetter 1984:358–375; cf. Snodgrass 1965). At both sites contacts with central and southern Greece were far less pronounced than those of Torone.

Yet however strong the influences from the south were at Torone, the local handmade tradition maintained a vigorous and independent trajectory (cf. D. French 1966:110). Direct contact with other Macedonian sites at Torone is attested by a number of imported handmade vessels encountered in several tombs and dating to various stages of the period of use of the cemetery. The quantity of these handmade imports is certainly not great, but they stand apart from the local handmade pottery in details of shape, the manner of burnishing, and in fabric and feel (treated separately below; for the distinction between "local," "provincial," and "imported" classes of pottery at Assiros, see Jones 1986:108–110, 494). It remains difficult, however, in the current state of knowledge, to isolate elements diagnostic enough to establish more precisely from which quarter of the north their origin derives. With the exception of Koukos (French 1966:103–110; Carington Smith and Vokotopoulou 1988; 1989; 1990; 1992), there are no published sites of Late Bronze or Early Iron Age date on the peninsula of Sithonia, although there are a number of contemporary settlements, in close proximity to one another, at the head of the Toronean Gulf in the vicinity of Olynthos (Heurtley 1939:xxii–xxiii, sites C1–2, C4, C7–8; of these, Early Iron Age material was recovered from the table at Olynthos [cf. Wace 1914–16:11–15; Robinson 1933a:17–25] and at Ormylia 1 and 2; Late Bronze Age material is known from Agios Mamas, Molyvopyrgo, and Ormylia 3; see now Smagas 2000:50–54), as well as several sites on the west coast of Chalkidike, on the eastern shore of the Thermaic Gulf (including Kritsana: Heurtley 1939:17–22 [cf. Rey 1917–19:163, fig.129]; and sites C5, C6: Heurtley 1939:xxiii [= Wace 1913–14:128, sites B12, B15]; see also French 1967), with which, it seems reasonable to assume, Torone maintained some form of contact throughout the period. Moreover, communication by sea with sites on the plain of Thessaloniki and, from there, with those sites upstream along the Axios, Gallikos, and Haliakmon (though see Fotiadis 2001), would involve no great difficulty (Heurtley 1939:xxii–xxiii; cf. Woodward and Cooksey 1918–19; Casson 1918–19:60–63; for the Thermaic Gulf and changes since antiquity see Papakonstantinou-Diamantourou 1971: pl. 39; 1977:348, fig. 3). It is interesting to note here the results of clay analyses of a sample of Late Bronze and Early Iron Age sherds from Assiros, which indicated that the samples classed as "Provincial Mycenaean," that is, implying a source in Macedonia other than Assiros, may well have been produced at a coastal site in Chalkidike (Wardle 1980:252; Jones 1986:494). Bouzek (1986) prefers to see such a production center near the Axios estuary.

General characteristics

The differences between local wheelmade and local handmade fabric are, visually, rather marked;

the differences being analogous to say "fine" and "cooking" wares of later periods (see Pierce in Cambitoglou, Papadopoulos, and Tudor Jones 2001: esp. 473–493, also 495–513; cf. Brann 1962:29). Furthermore, there are two "varieties" of clay used for handmade vessels; the two are essentially the same, differing primarily in the quantity of visible inclusions. One variety, a very coarse fabric, is used for only three shapes: the pithos, pitharion, and tripod cauldron. A somewhat less coarse or semicoarse variety is used for all other vessel forms, principally those traditionally associated with eating, drinking, and pouring. The differences between the two, in this case, being analogous to the difference, for example, between "Attic cooking ware" and "Attic pithos fabric" as defined by Brann (1962:29) for fabrics of the Late Geometric and Protoattic periods from the Athenian Agora, although it should be stressed that the only handmade vessel form from the Terrace V cemetery that may have served as cooking pot was the tripod cauldron (for the funerary uses of the tripod cauldron, see chapter 4).

From a functional point of view, handmade vessels were not used only for the more traditional domestic duties such as cooking or storage; in this respect it is worth noting that pouring vessels, for example, were almost exclusively handmade. Handmade vessels deposited in tombs served specialized, prestigious, and ideological needs as much as any wheelmade and painted pottery. The apparent dichotomy between local handmade and wheelmade wares at the site and in the region raises many questions concerning the specialization and organization of pottery production, some of which have already been touched on. The question of household production as opposed to specialist potters within the community, or even itinerant potters, are aspects that are to some degree hampered by the lack of more significant stratified settlement material. In the present state of knowledge it remains difficult, for example, to establish if the use, or reuse, of particular shapes in a funerary context reflects the situation in the living settlement, or whether specific shapes were made especially for the dead. There are many useful indications, such as a level of standardization among handmade shapes (at least those used in tombs), and the fact that handmade burnished pots were fired in the same kiln on Terrace V in the period following the use of the cemetery (see chapter 4; Papadopoulos 1989a). There is also the evidence provided by accounts of traditional potters of modern Greece and related areas, accounts that quite often provide diverse models of organization and production (R. Jones 1986:849–880; see further Hampe and Winter 1962; 1965; Matson 1972; 1973; Birmingham 1967; Hankey 1968; Blitzer 1984; 1990; Voyatzoglou 1984; Betancourt 1984b; R. Johnston 1974; Pieridou 1960; Cuomo di Caprio 1983).

Both the coarse and semicoarse varieties of clay are employed for vessels shaped by hand without the use of a continually revolving wheel (kick-wheel), although a simple turntable or disk must have been used in shaping many vessels, especially the larger pithoi and jars (cf. Jones 1986:866, fig. 12.8). All handmade vessels are burnished (the larger ones are wet-smoothed), but unslipped. The normal semicoarse variety of clay can be described as not thoroughly levigated or intentionally tempered and highly micaceous. Inclusions are many, usually small to medium-sized and mainly white and light-colored. In the majority of cases the visible mica is golden and ranges from fine specks to small and medium flakes; in some pieces silver mica is more prevalent, while in others the proportion of silver and golden mica is about equal. A good deal of variance may be observed in the color of the clay, achieved according to the conditions of firing; as with wheelmade pottery, such differences are often to be found on the one pot. Clay color varies from a bright, deep red (e.g., **T41-3**) to gray (e.g., **T82-3**); shades of red, reddish yellow, and brown may all be found (in Munsell terms anything around 2.5YR 6/6–6/8 to 5/6, 5/8, and 4/8; common is 5YR 7/6, 7/8, 6/6, 6/8, 5/6, and 5/8 as is 7.5YR 6/6, 6/8, 5/6, and 5/8). The most common color is close to reddish yellow 5YR 6/6–6/8. Occasionally, a more yellow color is achieved, not unlike that of Yellow Minyan (e.g., **T10-1**), and sometimes a mottled effect involving two colors (red and gray, or yellow and gray, e.g., **T10-1a**). In many cases the clay core has fired a different color, normally darker, and often the interior surface has fired consistently one color, the exterior another; the exterior is also prone to partial or localized discoloration (gray or black).

The semicoarse variety of clay was used for a number of shapes ranging from the common jugs with cutaway necks and kantharoi to larger two-handled jars. These vessels are characteristically thin walled, in many cases very thin walled. The texture of the clay is somewhat harder than that of wheelmade vessels, and its special qualities are its lightness, a much reduced porosity, and good resistance to heat; the feature of heat resistance was especially evident in the case of fire-affected sherds, with handmade fragments invariably better preserved than their wheelmade counterparts.

Another characteristic is the burnished finish of the pot. Burnishing for both open and closed vessels was essentially achieved by paring (cf. Brann 1962:29)—that is, scraping back or rubbing the surface of a vase either with a knife or, more likely, with a simple wooden or bone implement or a pebble while the clay was leather hard. This technique resulted in visible tooling marks that were normally executed horizontally around the upper body on both open and closed shapes, vertically on the necks on closed vessels and curved on the lower body, following the contour of the pot, with the tooling marks more often than not arranged diagonally opposed to each other. The interior surface of open vessels was similarly burnished, so too the upper neck and rim on the interior of closed vessels. This distinctive burnishing normally produced a dull finish, although in many cases a slight sheen or luster was achieved. This method of burnishing was applied to the vast majority of vessels of the semicoarse variety of clay, although a few exceptions, where the surface was burnished smooth, are known (see, among others, **T21-1**, **T69-2**, **T67-3**, **T13-2**, **T133-1**). The distinctive tooling marks, especially when executed in different directions on the surface of the pot, tending to highlight the various components of the vase—body, neck, rim—may represent a conscious attempt at decoration. Moreover, this type of burnishing differs slightly from that of other contemporary Macedonian handmade wares, and in this respect the large body of material from the cemetery at Vergina may be compared (Andronikos 1969:193–223; Radt 1974:116–123). The standard fabric of the Vergina handmade wares is similar to that of Torone but with fewer variances in the fired color of the clay; vessels are usually thicker walled. Wardle (1980:256) noted that a characteristic of the Early Iron Age handmade pottery of Assiros was a ware similar to that of the Bronze Age, but rather thinner and harder. The Toronean is thinner still when compared to handmade pottery from Assiros.

The method of burnishing seen on the Vergina handmade pottery, in the majority of cases, was evidently performed in two stages. First, the surface was roughly pared or scraped back and then more carefully burnished a second time in order to produce a smooth surface. Faint tooling marks from the first stage are sometimes visible on parts of the pot where the smoothing of the second stage was not so carefully performed (some of the Early Iron Age pottery from the area around Dion was burnished smooth, whereas others preserve faint tooling marks on parts of the surface). Occasionally the tooling marks are more pronounced, but by and large the surface of the Vergina pottery was burnished smooth, as was that on most of the contemporary handmade wares from other Macedonian sites (cf. Rey n.d.:1–9; Schmidt 1902; 1905; Traeger 1902; Heurtley 1927; 1939:232–239; Romiopoulou 1971b; Wardle 1980:256–261; Hochstetter 1984: 394–406); the same holds true for the handmade vessels from Marmariani (Heurtley and Skeat 1930–31:13–16). Exceptions to a smooth burnished surface are known (compare the four imported fragments classified below as "central Macedonian Burnished Ware"), but rarely are the tooling marks as pronounced or as arranged as the Toronean. Worth noting is a handmade jug with cutaway neck from Skyros that is so close in the manner of burnishing to those of Torone, in addition to other similarities in details of shape and fabric, that it may well represent a Toronean import. The vessel comes from one of the tombs excavated by Stavropoullos; I have it listed in my notes as A36 ΣII, although it was difficult to read the inventory number. There are another three handmade jugs among the 150+ vases from the four tombs excavated by Stavropoullos, which do not resemble so closely the Toronean (the most complete list of these vases is Desborough 1952:165–166; see also 1980:55, n. 7; cf. Dawkins 1904–05:79, fig. 3b; Wace and Thompson 1912:209, fig. 144b; Hansen 1933:119, fig. 53; Lemerle 1937:473; see further Hansen 1951:57–63).

It is important to stress that the distinctive burnishing of the Toronean Early Iron Age handmade pottery differs from that of the later stages of the period referred to by Heurtley (1939:107) as "scraped vertical lines." Although the technique is similar, the latter is quite different in that the marks are deeper, they are set further apart from each other, and are invariably vertical, often running the whole length of the body of the vase. Moreover, Heurtley's scraped vertical lines are most commonly found on wheelmade vessels of forms different from those of Torone. Wheelmade vessels with scraped vertical lines are found in small quantities at Torone in contexts of the Archaic through Classical periods (referred to as "Torone Scratched Ware" in the context pottery books). The same form of scraping is also found at Olynthos (Robinson 1933a: pl. 21, P21), and on the High Table at Axiochori/Vardarophtsa in contexts postdating ca. 600 B.C. (Cuttle 1926–27:233–235, pl. 15), as well as on some coarseware vessels of Classical date from the Athenian Agora (Sparkes and Talcott 1970:373, pl. 94, nos. 1958, 1953), which are considered non-Attic.

The local handmade pottery made of the coarser variety of clay—the pithoi, pitharia, and tripod cauldrons—is significantly thicker walled; the range of impurities parallels the semicoarse variety except that the impurities are larger and more frequent. Mica content tends to be more consistently golden and with much larger flakes visible. The fabric fires more evenly and there are far fewer of the variances in color noted with the previous variety; a color range in the vicinity of brown 7.5YR 5/4, yellowish red 7.5YR 5/6, and reddish brown 5YR 5/4 is most common. Of the three vessel forms represented, the pithoi and tripod cauldrons are almost always burnished smooth both on interior and exterior, with the finished surface normally quite dull. The pitharia, on the other hand, are burnished in a manner similar to vessels of the semicoarse variety of clay, but with the tooling marks broader and slightly more shallow, often producing a finish with a slight sheen.

A close inspection of the handmade pottery also provides some useful information concerning technical aspects of how individual pots were made and here the closed vessels, especially jugs, were particularly instructive. The advantage of the jug is that being such a small closed vessel the potter could not adequately finish the interior of the pot once the vessel was formed; thus certain features are preserved that on open vessels would later have been smoothed or burnished away. Two details that all jugs shared in common was a sharp angle, often with a very slight overhang of clay, at the juncture of body and neck on the interior, and a noticeable projection of clay at the lower handle attachment on the interior. These features indicate that both the neck and the handle were made separately from the body of the vase and subsequently attached. The neck itself was made from a flat piece of clay rolled over to form a cylinder; the rim neatly trimmed with a sharp tool and cut away on one side, accounting for the distinctive lip described here as chamfered (the wall thickness at neck was often different from that of the body of the vase). The neck was then attached to the previously formed body, thus creating the sharp junction on the interior that corresponded to a groove on the exterior; the latter was probably incised in order to mask any smears that may have formed during the process. The upper part of the handle was attached directly to the rim; the lower part was attached by piercing the body of the vessel, which accounts for the visible projection of clay on the interior (see especially **pl. 439c**), and it is customary to find more noticeable tooling marks around the base of the handle on exterior. This practice appears to be quite standard for Macedonian handmade wares (see, among others, Hänsel 1979a:193, fig. 16, no. 11; Wardle 1980: 257, fig. 16, nos. 41, 44), and is also found in the handmade pottery of other regions, including Cyprus.[43] These features are also found on the local two-handled jar (for the projections of clay on interior associated with the handle of **60** see **pl. 341b**), but are never as pronounced as in the case of the jugs because the potter could more easily finish off the interior of the larger vessel, removing any projections of clay and generally smoothing the surface. With open vessels the finishing of a pot was more complete and consequently production marks are seldom found. Nevertheless, a slight thickening on the interior of several kantharoi and cup/kyathoi indicated that the lower part of the handle was probably attached by piercing. The offset and thickened rims of

kantharoi and cup/kyathoi (primarily Type 1), and perhaps also the thickened rims of bowls with square-cut handles, were such as to suggest that they were most probably made separately and subsequently attached to the body.

On one example of a two-handled jar (**T130-1**) and on two only jugs with cutaway neck (**T58-2**, **T125-2**; cf. the imported **T111-4** and **54**), the outer faces of the handles are diagonally grooved. These are similar to fluted, grooved, or twisted handles that are a feature of Macedonian handmade wares of the Late Bronze and Early Iron Ages (cf. Heurtley 1939:98–99, 104; 216, fig. 87a–f, h; 233, fig. 106; Wardle 1980:256, fig. 16, no. 44; 260, fig. 19, nos. 51–53; Hochstetter 1984:53, fig. 12; 57, fig. 13 [Hochstetter's Types 1a–1d]), but the grooving on the few examples at Torone is never as pronounced as elsewhere in Macedonia; the general paucity of this feature is in itself noteworthy. The term grooved is here preferred to twisted as only the outer face of the handle was thus decorated; "twisted" would imply that the grooves were continuous around the handle, which is not the case at Torone.

One further detail worth noting are the impressions left by a tool used in the production process at various points on the poorly finished interior surface of the jug **T60-2**. The tool left small pronglike impressions, clearly visible in good light, not unlike those of a diminutive fork, but its exact function is unclear. One possible explanation is that the tool was used to stabilize the pot from the interior while the exterior was being burnished, the neck of the vessel being too narrow to allow the potter to get his/her hand inside.

Shape studies: Typology

In the typology that follows my aim is to define the main shapes of local handmade pottery represented among the tomb material, noting such chronological pointers and trends as may seem valid on the basis of internal evidence provided by tombs where handmade and wheelmade pottery was found together.

XI. THE TWO-HANDLED JAR (AMPHORA)

There are two main varieties of this shape, the belly-handled and the neck-handled; the former is the more common. Both types bear a general likeness to a number of shapes common all over Macedonia in the Late Bronze and Early Iron Ages,[44] but exact parallels for details and proportions of shape are rare. Moreover, this type of vessel, especially the belly-handled variety, is one of the few that finds related handmade vessel forms in southern Greece, especially in the Argolid, in contexts ranging from Submycenaean through Geometric.[45]

Type 1. Belly-handled jar **(pls. 336–341)**

There are at least nine examples of this type: **T18-1**, **T63-1**, **T100-1**, **T118-1**, **T128-1**, **T130-1**, **T132-1**, **T133-1**, and **60**. The shape is characterized by a flat base, globular body with the point of maximum diameter normally set toward the upper part of the vessel, and a tall vertical or sometimes concave neck that flares out to a chamfered lip. The junction of body and neck is usually marked by a sharp angle on the interior, corresponding to a groove on the exterior, although on **T133-1** a gentler curve is met. Horizontal handles, attached by piercing (as described in the preceding discussion), are placed on the belly normally just above the point of maximum diameter; the handles rise at an angle of about 45° or more, sometimes with a distinct upward curve. The handles are usually round in section (**T18-1**, **T63-1**, **T118-1**, **T130-1**, **T133-1**, **60**), but sometimes square (**T100-1**, **T128-1**); in the case of the fragmentary **T132-1** the preserved handle is almost triangular in section, more closely resembling the handles of Middle Helladic vessels (cf. Immerwahr 1971: pl. 22, nos. 324, 329; Dietz 1991:190–191, fig. 58, nos. AI-3, 4), although the fabric does not seem Middle Helladic; the handle of **T130-1** is diagonally grooved (see above; cf. Andronikos 1969: pl. 73, no. AZ28). The normal pare-burnishing is encountered on most examples except **T118-1** and **T133-1** (cf. **T132-1**; also the jugs **T13-2**, **T67-3**). Knobs or mastoi are found on the body of **T100-1**. Mastoi or knobs, normally rather larger, are common on related vessel forms at Vergina (Andronikos 1969:205, fig. 44; 206, fig. 45; cf. 214, fig. 54, nos. A22, N11). The overall effect of the mastoi is, in appearance, not unlike the well-known—and earlier—face-jars of Troy (e.g., Schliemann 1884:186–187, nos. 97–98; 191, 100; Blegen et al. 1950: fig. 131b, C30; see also fig. 131a, C12; with

related examples from Chios [Hood 1981:404, fig. 183, no. 1242]; for the relationship of Macedonian wares to those of Troy see Wardle 1980:259; Hochstetter 1984:373–375; cf. Blegen et al. 1958: 4, 142), which gives the vessel something of an anthropomorphic touch. Incised "decoration" (probably a potter's mark: Papadopoulos 1994: pl. 115f; see chapter 6) occurs on only one example, **T118-1**, and comprises five short strokes arranged vertically in line on the upper shoulder, but only on one side of the vessel (contrast, for instance, true incised decoration, e.g., Heurtley 1939:232, fig. 105; 236, fig. 110; cf. Wardle 1980:257, fig. 16, nos. 41, 43–44; 260, fig. 19, no. 53).

Examples of the shape preserving complete profile range in height from 0.180–0.250 m. The squatter **T128-1** (H: 0.142 m) is not common, and otherwise there is little to distinguish between other examples of the type as the general shape appears to be rather standard. Chronologically, few jars of this type were encountered in tombs with wheelmade pottery and it remains difficult to establish their chronological range. **T118-1** may be assigned to the earlier stages of Protogeometric on the basis of the fragmentary amphora **T118-2**, and a similar date is indicated for **T128-1** (associated was the fire-affected base fragment of a Type 1 skyphos, **T128-5**). **T100-1** was located only centimeters from the Submycenaean Tomb 101 in the area of the Early Iron Age cutting and may be slightly earlier than the others. Apart from this, little can be said concerning date.

In addition to these nine vessels there are two catalogued rim fragments, **T113-11** and **75**, that would almost certainly belong to this type of jar; the context of the former would suggest a date in the earlier to developed stages of Protogeometric.

Smaller variety **(T21-1, pl. 342)**
A unique example, smaller than the standard belly-handled jar (H: 0.120 m) and of more open form (the rim diameter is almost that of the point of maximum diameter on body). The base is flattened, the body globular but of slightly more ovoid form, and the rim sharply everted, offset directly from the body by a groove on exterior, with no real neck; the lip is chamfered. Two horizontal handles set high on the shoulder tend to rise vertically to a level just below the lip. The exterior surface is burnished smooth.

The vessel was the ash-urn of Tomb 21 and serving as its lid was the reused base of a Type 1 lekanis (**T21-2**), which would broadly date the tomb to Protogeometric. I know of no exact parallel for the shape in Macedonia, although it is similar to a number of related forms (cf. some of the smaller varieties listed above; particularly close is Petsas 1961/62a: pl. 150b, no. N27; the more open form is generally closer to Andronikos's two-handled open pots: Andronikos 1969:213–215, fig. 54; a larger jar, with vertical handles, from Kastanas has a similar ovoid body and everted rim: Hochstetter 1984: pl. 104, no. 5).

Type 2. The neck-handled jar **(pls. 343–344)**
Two examples only, both of similar shape and size: **T19-1** and **T46-1**. The shape is of the belly-handled type (with flat base, globular body, tall vertical or concave neck, flaring rim, and chamfered lip) but slightly smaller (H: ca. 0.170 m), and differs only in the matter of the handles, which are set vertically from the upper shoulder to the neck (on **T46-1** the upper handle attachments are well down on the neck; on **T19-1** the upper attachments are not preserved). The handles of **T46-1** are plano-convex in section, those of **T19-1** (judging by the preserved lower attachments) are oval. The surface of **T46-1** is pare-burnished, but with the tooling marks only faintly preserved; the more worn surface of **T19-1** was evidently burnished smooth.

The contexts of both vessels were uninformative as to date, although it seems reasonable to assume on the basis of the similarity of overall shape that the neck- and belly-handled varieties were produced concurrently. It is worth noting that at Vergina the neck-handled version is much less common than its belly-handled counterpart (Andronikos 1969:192, fig. 38, pl. 30, no. A13; cf. also the hydria shape: Andronikos 1969:210, fig. 49; Radt 1974:120, pl. 36, nos. 12–14).

Wheelmade vertical-handled version **(T17-1)**
T17-1 is unique among the tomb pots: it represents the only instance of a wheelmade vessel in the fabric normally used for handmade pottery. The only other instance was the case of the kiln pot **KP-13** dating to the second half of the eighth century B.C. The clay of **T17-1** has all the normal

impurities of the handmade semicoarse variety, but only a fine dusting of mica; it is probably local but the possibility of it being an import from elsewhere in Macedonia is noted (for a fuller description see chapter 3; the fabric is close in appearance and feel to that of the kiln pithos **KP-1**). The shape is that of a two-handled jar translated to wheelmade. The base is flat (in proportion the diameter of base is slightly smaller in relation to height than in the handmade versions of the shape), the body globular and somewhat taller in proportion; neck and rim are not preserved and only the lower attachment of one vertical handle, oval to strap in section, was found (the only other instance of a strap handle of this type was that of the handmade vessel **KP-14** encountered in the kiln). Whether the vessel is neck- or shoulder-handled could not be determined. The interior and exterior surfaces were finished smooth on the wheel, with turning marks visible; the vessel was neither burnished nor slipped. It served as ash-urn and only pot in the northernmost of the cremation tombs near the edge of the terrace, and thus could not be dated by associated finds. The phenomenon of wheelmade versions of handmade shapes, coupled with the introduction of new wheelmade shapes, is amply recorded in later contexts of the Early Iron Age at many Macedonian sites.[46] This, along with the similarities noted between **T17-1** and some of the kiln pottery, would suggest that the vessel was among the very latest of the tomb pots.

XII. THE JUG

Some fifty jugs—complete, semicomplete, or represented only by sherds—have been catalogued, but uncatalogued are many more fragments from the various deposits on Terrace V and also from tombs in the area of the Early Iron Age cutting that yielded fire-affected sherds. The popularity of the shape as an offering in both inhumation and cremation tombs and as a pouring vessel associated with funerary ritual is outlined in chapter 4; the jug was never used as ash-urn.

Two types of jug are distinguished—the jug with cutaway neck and the jug with a plain round mouth. The latter is a rare and late variety, attested to date by only one certain example (**T81-3**). Among the fifty catalogued examples there are, however, a good many base and body fragments that preserve nothing of the rim, making it impossible to establish the type with absolute certainty. Judging by details of shape, the vast majority, if not all of these were fragments of jugs with cutaway neck. Among them, several of the semicomplete examples (often preserving entire body and part of the lower neck but not the rim) are discussed below and compared with jugs that preserve complete profile. Particularly fragmentary examples, especially base and body fragments, are best listed here, classified as of uncertain type: **T42-2**, **T42-3**, **T56-2**, **T60-2**, **T68-2**, **T80-2**, **T88-3**, **T102-3**, **T104-17**, **T122-2**, **3**, **17**, **42**; all thirteen pieces preserve portion of base, and all thirteen are pare-burnished.

Type 1. Jug with cutaway neck **(pls. 345–365)**

The jug with cutaway neck was the most common of all handmade vessels deposited in tombs. Its presence is as well attested in the earliest tombs (Final Mycenaean/Submycenaean, Tombs 6, 7, 101 [and cf. 10]), as it is in the very latest (Tombs 77, 81, 82, 84). The shape itself is one of the characteristic hallmarks of Late Bronze and Early Iron Age Macedonia and its ancestry may be traced back into the Macedonian Early Bronze Age.[47] The basic shape may derive from a gourd (for illustrations of cuttings required on gourds to form the distinctive Early Minoan type of jug see Betancourt 1985: pl. 2A–B, pl. 3C). Typologies of the shape have been presented from settlement material at Kastanas (Hochstetter 1984:48–58) and from cemetery material at Vergina (Andronikos 1969:194–201), Vitsa Zagoriou in Epiros (Vokotopoulou 1986:236–241), and Thasos (Koukouli-Chrysanthaki 1992:397–399). Its penetration into Thessaly has been well recorded (Heurtley and Skeat 1930–31:13 [Group I, Class 1], 14, fig. 4; Desborough 1952:136, 166; 1972:206–216; Snodgrass 1971:61–63; Popham, Sackett, and Themelis 1979–80:324–325), and it has been suggested that the few handmade examples of the shape found at Lefkandi probably owe their origin to central northern Thessaly (Popham, Touloupa, and Sackett 1982a:235; 234, pls. 18, 22, fig. 7, T41.12, T39.18; Popham, Sackett, and Themelis 1979–80:325, where it is noted that the type is not found south of the site), although some of the more recently published handmade pieces from Lefkandi display strong Macedonian characteristics (Catling

and Lemos 1991:65, 131, pls. 40, 74, no. 806). It has already been noted that at least one of the handmade jugs found on Skyros may be a Toronean import, or at least Macedonian.

At Torone the shape appears to have changed little throughout the period of use of the cemetery and although minor differences in details of shape and in overall proportions are noted, it remains difficult to attach chronological significance to such features as the form is by and large standard. The shape is characterized by a flattened base and a globular body that may be rounded (**T6-1**, **T10-2**), of squatter form (**T52-2**, **T58-2**, **21**), or sometimes almost biconical (**T74-2**, **T77-2**, **T81-4**, **T82-3**). The neck varies in height but is normally tall and invariably offset from the body by a shallow groove at the junction with body on the exterior, which corresponds to an angle formed on the interior. The neck is usually slightly concave in profile and most often quite upright, although on some (earlier) jugs it tends to slope back. The rim is chamfered and the neck cut away on one side. A vertical handle is attached directly to the cutaway part of the rim with the lower attachment joined to the body by piercing. Handles may be round, oval, or plano-convex in section. Exterior surfaces are almost always pare-burnished, normally with the characteristic tooling marks running vertically on the neck, horizontally on the upper body, and diagonally opposed on the lower wall.

As for chronological development, the following general guidelines may be noted, but it is stressed that the discerned features are by no means hard and fast chronological indicators.

Three jugs may be safely dated as Submycenaean: **T6-1**, **T7-3**, and **T101-14**; a fourth, **T10-2**, is perhaps contemporary. Of these, the fragmentary state of **T101-14** is such as to make details of shape difficult to reconstruct, and only the base and body of **T7-3** were preserved. Nevertheless, there are certain features common to this group not often encountered on later jugs. The base tends to be only slightly flattened (not so distinctly flat) and the body more rounded, almost spherical. The neck is shorter in relation to the body than on most other jugs and tends to slope back. Of the two complete examples **T6-1** and **T10-2** are 0.176 m and 0.225 m high, respectively.

Of the remaining jugs four (**T77-2**, **T81-4**, **T82-3**, **T84-2**) may be dated to the very latest stages of the period of use of the cemetery, but for the rest, which constitute the majority, establishing a precise date within the course of the period is largely a matter of speculation. For the time being, it seems wiser to group these together noting such characteristics as are evident. The following complete or semicomplete vessels where the overall details of shape are clear may be singled out for discussion: **T26-3**, **T41-3**, **T52-2**, **T58-2**, **T70-2**, **T73-2**, **T75-2**, **T86-2**, **T114-3**, **T124-2**, **T125-2**, and **T125-3** (the following, more fragmentary examples, are listed for comparison: **T21-4**, **T43-2**, **T74-2**, **T103-5**, **T104-16**, **T106-3**, **T115-11**, **T117-18**, **2**, **21**, **90**). Taking these collectively, there is, first of all, a good deal of similarity among the various examples of this group, and second, they differ in points of detail from the first four jugs discussed here. Generally speaking, the body has become smaller and has been "pushed down" to define a more squat profile. On some examples (e.g.,**T52-2**, **T124-2**), the point of maximum diameter is toward the middle of the body, but in the majority it lies toward the upper part of the vessel; this is especially pronounced in the case of **T26-3**, **T58-2**, **T75-2**, **T86-2**, and **T114-3** (cf. also **T70-2**, **T73-2**, **T125-2**). Only in the case of **T41-3** are the overall proportions of shape similar to those of the earlier group, although the vessel is considerably smaller (PH: 0.140 m, originally only fractionally taller). Another difference from the jugs of the earlier group is that the neck has become taller and more upright. Most commonly, the neck is vertical and flares out only fractionally toward the lip (cf. **T52-2**, **T70-2**, **T73-2**, **T114-3**, **T124-2**, **T125-2**, **T125-3**); in the case of **T58-2** the neck is slightly more concave and somewhat wider. Jugs of this group have a height consistently in the range of 0.140–0.170 m.

The four jugs dating to the very latest stages of the period are **T77-2**, **T81-4**, **T82-3**, and **T84-2**; none is preserved entirely and thus it would be hazardous to dwell too much on them. One feature they do share in common is that the body has become slightly taller in proportion and with a tendency almost to the biconical (especially on **T77-2**, **T81-4**, **T82-3**); this feature is also encountered

on **T38-2**, the date of which could not be precisely determined, as well as on the jug **T74-2**, the context of which would suggest a slightly earlier date. It is also noted that the walls of these later jugs are a little thinner than before and that the base is more distinctly flat (the base may be occasionally slightly pushed up on the underside as on **T84-2** and **T84-3**; but cf. also the bases of **T70-2**, **T75-2**, **T86-2**, **T114-3**).

Decorative elements on jugs are very rare. Incised decoration is found on only one jug, **T75-2**, which is certainly local (cf. **T109-5**). Three arrow-shaped motifs (resembling opened parasols), filled with short neatly executed strokes, were incised prior to firing on the shoulder, each above a mastos. The motifs and the thinness of the incised lines find no exact parallel (not unlike is the incised decoration on a small sherd tentatively dated to the Late Bronze Age from Paradeissos [Klisi Tepe] in eastern Macedonia: see Hellström and Holmberg 1978:142, fig. 2; for other pottery from this site see Felsch 1973; also Papadopoulos 1994). Mastoi are a little more common but still rare, encountered on only five jugs: **T70-2**, **T75-2**, **T86-2**, **T114-3**, and **T125-2**. The best preserved is **T86-2**, where there is a mastos at the lower handle attachment, and three placed on the body at the point of maximum diameter equidistant from one another. A similar arrangement is likely for **T75-2** (although only two of the mastoi on the body are preserved), and on **T70-2** there is a mastos at the base of the handle, but only one very faint "pinched knob" on the body opposite, which may be accidental. The more fragmentary **T114-3** and **T125-2** preserve one and two mastoi, respectively, on the body at the point of maximum diameter.[48] The earliest of the five jugs with mastoi is **T114-3** (earlier Protogeometric: cf. the jar with mastoi, **T100-1**, which is contemporary or earlier). Diagonally grooved handles, which, along with twisted handles, are common elsewhere in Macedonia (Hochstetter 1984:57, fig. 13; and Wardle's comments in Popham, Touloupa, and Sackett 1982a:235), are found on only two Toronean jugs (**T58-2**, **T125-2**; cf. the jar **T130-1**). Potters' marks were found on four jugs (**T38-2**, **T41-3**, **T75-2**, **T82-3**), always at the base of the handle (see chapter 6).

Three atypical jugs (local or imported)

The three jugs discussed here, **T13-2**, **T67-3**, and **T109-5**, are presented separately from the main group of jugs discussed above on account of differences in shape, elements of decoration (in the case of **T109-5**), and, to some extent, fabric and feel. Details concerning the fabric of each piece are provided in the catalogue in chapter 3); all three may be either local or imports from elsewhere in Macedonia (they have not been elementally analyzed).

T109-5 may be dated among the earliest pots from the cemetery (Final Mycenaean/Submycenaean). The vessel has a rounded body that is somewhat thicker walled than normal and a very tall neck flaring out to a chamfered lip. The handle was attached by piercing, with a very conspicuous projection of clay on the interior (**fig. 165e**; **pls. 439a–c**). It is decorated with incised lines and notches that are rather deep, in contrast to the finer incision of **T75-2**. This manner of decoration, unique at Torone, finds close parallels especially from sites in central Macedonia (Heurtley 1939:236, fig. 110d, n, r [Perivolaki/Saratsé]; 235, no. 478 [Tsaousitsa]; Hochstetter 1984: pl. 31, no. 10; pl. 40, nos. 1–6, 8–10; pl. 51, no. 13; pl. 58, no. 11; pl. 141, nos. 3–4; pl. 147, no. 7; pl. 198, no. 7; Wardle 1980:257, fig. 16, nos. 41, 44, and the amphora no. 43; cf. Forsdyke 1925:20, fig. 7, A91.6, A92.1; Gardner and Casson 1918–19). The shape is particularly close to a jug from Patele in western Macedonia (Heurtley 1939: pl. XXIIIy), and a jug from prehistoric Emporio may also be compared (Hood 1981:391, fig. 176, no. 1161).

The two other jugs, **T13-2** and **T67-3**, may be grouped together; their contexts indicate a date no more precise than Protogeometric. Both have rounded bodies (although that of **T67-3** is somewhat squatter) and necks a little more concave than normal. They differ from the main series of local jugs in two respects: first, **T67-3** has an articulated handle with a flattened upper part unique at Torone, and the handle of **T13-2** is unusually round in section. Second, the surfaces of both vessels are burnished smooth, in contrast to the normal pareburnishing of the Torone jugs. Both these features, as well as their overall shape, find close parallels in jugs from Vergina, Tsaousitsa, and Thasos.[49]

Type 2. Jug with round mouth **(pl. 366)**
There is to date only one certain example of this type, **T81-3**, which may be dated to the very latest stages of the period of use of the cemetery on account of the ash-urn of the tomb **T81-1**. The shape is characterized by a flattened base, rounded body, comparatively short vertical neck, and a small flaring or outturned rim. There is a scraped groove at junction of body and neck, but no corresponding angle on the interior as is the case with jugs with cutaway neck; the round mouth is slightly warped. A vertical handle attached to point of maximum diameter (but with no clear projection on interior), rises vertically to a level above the rim, although the upper part of the handle is not preserved. The handle section, which is oval to round, becomes progressively thicker toward the top. The surface is pare-burnished. This type of jug differs from that with cutaway neck in details of shape, such as the handle, rim, and shorter neck, and it has a diameter at rim proportionately greater than the majority of jugs, defining a more open form (**T81-3** in terms of size and shape could almost be classed as a one-handled cup were it not for the neck; close in general shape are Hochstetter's cups of Type 3: Hochstetter 1984:71, fig. 17; cf. Romiopoulou 1971b:355, fig. 3, nos. 3, 2a; 359, fig. 6, nos. 27–30). Its size (H: 0.107 m) is smaller than even the smallest examples of jugs with cutaway neck (e.g.,**T38-2**, **T41-3**, **T82-3**). These differences make it highly unlikely that any of the jug fragments listed above as uncertain belong to this variety.

This type of vessel has a long history in Macedonia, one that may be traced back to Late Neolithic (cf. Mylonas 1929: fig. 48; Heurtley 1939: 152, no. 114), and the basic form continues through the Bronze Age (Heurtley 1939:166–231, various examples). During the Early Iron Age the jug with round mouth tends to be outnumbered by that with cutaway neck (see Hochstetter 1984:53, fig. 12; the variety with round mouth [Type 5] remained fairly standard at Kastanas, occurring in Levels 18 through 2), although parallels to **T81-3** may be cited from sites over a wide area of Macedonia.[50]

XIII. THE MULTIPLE VASE (**PL. 367**)

The single example, **T69-2**, is a small double vase complete except for the upper part of the connecting handle. Its precise date within the course of the period is difficult to establish, but judging by the ash-urn of the tomb, **T69-1**, it probably belongs to the later, rather than the earlier, part of the period of use of the cemetery. The vessel is composed of two small round-mouth jugs, not unlike **T81-3**, but with taller and narrower necks. The shape of each jug is characterized by a rounded, almost spherical, body, a tall vertical neck, and a short everted rim. These are connected by a central rib, rectangular in section, that divides toward the top, with attachments directly to the rim of each jug; the two are further connected by a common handle, the top of which is not preserved. The exterior is burnished smooth (in fabric and feel **T69-2** is particularly close to **T21-1**).

The idea of a composite vessel, of whatever form, appears to be common in many regions at different times. Mycenaean composite vessels are well attested, especially during Late Helladic IIIB–IIIC:1 (Furumark 1972a:69, Form 99, Types 324–332: to Furumark's list add especially the eight from Achaia: T. J. Papadopoulos 1978/79:105–107, figs. 172–173, 262–173; see further Lacy 1967:213, Shape 5; 211, fig. 84c; Karageorghis 1965b: pl. 35, nos. 1–3), and in Crete they enjoy a longer life span (Furumark 1972a:69, n. 6; cf. Atkinson et al. 1904: figs. 135–136, pl. 4, no. 2; pl. 11, no. 12; Renfrew 1985:171, fig. 5.10, nos. 93–95). Similar vessels are not uncommon in contexts ranging from Submycenaean through Early Geometric (there are eight from Lefkandi—three SM, four EPG, one SPG: Popham, Sackett, and Themelis 1979–80:311–312, n. 218, with parallels from Chalkis, Kos [cf. Desborough 1952: pl. 30], and Corinth [Weinberg 1943: pl. 10]; add the example from Cyprus: Pieridou 1973:90, form 9, pl. 25, nos. 6–7), and further examples of the Bronze Age, outside the mainstream of Minoan and Mycenaean ceramic history, may be cited from Poliochni, Leukas, Rhodes, Kephalovryson, and Voidokoilia.[51] Further afield examples from Albania (Hammond 1974:139; also 1971: pl. 35, no. 10; Aliu 2004: various examples pls. XXXIV-XXXV), the former Yugoslavia (Bouzek 1969b:44, B1; 1985:188, fig. 94, no. 2; Gimbutas 1965: pl. 70, no. 2), Hungary (Childe 1929:284, fig. 154c [Pannonia]; 290, fig. 161 [Vattina]), Italy (Randall-MacIver 1927:236, fig. 89, pl. 46, nos. 1–2), and Asia Minor (Forsdyke 1925:11,

fig. 18, no. A63; pl. II, no. 62) may be noted, and Furumark (1972a:69, n. 5) also referred to related types in Egypt and Palestine. The occurrence of this type of vessel over a large geographical area and chronological span argues that significance should not be attached to the incidence of a composite vessel, but rather to the shape of the individual forms it is composed of. The shape of the double jug **T69-2** belongs to a local Macedonian tradition (see the comparative material listed for the jug Type 2 above; mention should also be made of a miniature bronze pendant from Chalkidike in the form of a composite vessel comprising two jugs sharing a common handle: Kilian-Dirlmeier 1979: pl. 81, no. 1453), and it is highly unlikely its translation to a composite form owes any inspiration to centers outside Macedonia. Although not very common, multiple vases similar to **T69-2** are known at a number of Macedonian sites, including Patele, Axiokastron, and Kastanas.[52]

XIV. THE KANTHAROS

The kantharos may be divided into two basic types according to the variety of handles and the rim form. Type 1, with vertical high-swung handles, may be further divided into two varieties: one with broad, thin handles, and a smaller variety with rounded handles. Type 2, with vertical handles surmounted by disk knobs, is attested by only one certain example. These two types correspond with Types 1 and 2 at Koukos (Carington Smith 1991: 347, pls. 1–3). According to the evidence thus far published from Koukos, Type 1 first appears at the very beginning of the Early Iron Age and probably went out of use before the end of the period, whereas Type 2 first appears in the early first millennium B.C. and continued at least into the Archaic period (Carington Smith 1991). A third type of kantharos at Koukos—with vertical handles extending upward into a stem surmounted by a button or cone (Carington Smith 1991:347, pl. 4)—that flourished in the seventh century B.C. remains unattested at Torone. The kantharos, as tomb furniture in the Terrace V cemetery, saw service as *kterisma* in both inhumation and cremation tombs and as lid for the ash-urn in cremation tombs; it was also encountered in fragmentary (but rarely fire-affected) state as, presumably, a vessel for drinking or eating associated with funerary ritual (see chapter 4); it was never used as ash-urn (cf. the wheelmade kantharos **T13-1**).

Type 1. Kantharos with vertical high-swung handles **(pls. 368–371)**

Nine examples may be listed for this variety: **T10-1**, **T10-1a**, **T10-3**, **T75-3**, **T82-4**, **T82-5**, **31**, **67**, and **74**. The assignment of the fragments **31**, **67**, and **74** to this type is certain on account of the distinctive rim form, which is different from all other handmade open vessels. Although examples of this type are not numerous, their chronological span appears to cover most of the period of use of the cemetery. Three kantharoi were associated with Tomb 10 and therefore probably belong to the earlier stages of the period; a further two found in Tomb 82 belong to the very latest stages, having been recovered from the same tomb as the pendent semicircle skyphos **T82-2.** The contexts of **T75-3**, **31**, **67**, and **74** were less informative as to date. Judging by the examples from Tombs 10 and 82, this type of kantharos appears to have remained standard, with no major discernible difference between the earlier and later pieces.

The shape is characterized by a flattened base; the lower wall rises at an angle of about 45° to the point of maximum diameter, which is set high, and the upper wall curves in to an offset rim marked by a scraped groove on the exterior, corresponding to a slight thickening on the interior. The rim itself is short, upright, and terminates in a chamfered lip. Two vertical handles, broad and thin in section with the outer edges chamfered, are attached to the upper wall and rise vertically to a level well above the rim where they curve over and are attached directly to rim top (the handles were probably attached to the body by piercing). The interior faces of the handles, immediately above the junction with rim, are invariably ornamented by a deep circular to elliptical impression created by the potter's finger, resulting in a slight bulge or boss on the other side (**figs. 69a**, **b**, **d**; **138e**). Judging by my own hand, impressions of this size (some of which preserve traces of the potter's fingerprint) could only be made with the index or forefinger, not the thumb (for fingerprints on pottery and their archaeological potential see Åström and Eriksson 1980; fingerprints are also found on some local wheelmade pots; all instances of tolerably

well-preserved fingerprints are noted in the catalogue). It is possible that these bosses may have imitated rivets in a metal prototype (cf. Carington Smith 1991:338–339). As for size, examples of this variety have a height (base to rim) consistently in the range of 0.080–0.120 m; the rim diameter is usually 0.145–0.200 m (most often ca. 0.150–0.160 m), and a diameter at base normally 0.070 m. Exterior and interior surfaces are characteristically pare-burnished. Potters' marks at the base of the lower handle attachment on one side of the vessel were encountered on two kantharoi, **T10-1** and **T10-3** (see chapter 6; Papadopoulos 1994:449, fig. 8, B4–B5).

The basic shape of this variety has a long ancestry, which in Macedonia may be traced back to the Early Bronze Age (Heurtley 1939:179, no. 229; see further Heurtley and Hutchinson 1925–26: pl. IV, no. 12; Heurtley 1939:183, no. 258). It is one of the characteristic shapes of Middle Helladic all over Greece (whether wheelmade as Gray or Yellow Minyan and related wares, or handmade and of coarser fabric),[53] during which time it is especially well represented in Chalkidic sites, particularly at Agios Mamas and Molyvopyrgo (Heurtley 1939:89–92; 208, nos. 383–384; 209, nos. 389–393; 210, nos. 396–397; see further Heurtley and Radford 1927–28; for local and imported Minyan pottery at Torone see Papadopoulos in Cambitoglou, Papadopoulos, and Tudor Jones 2001:273–291; Cambitoglou and Papadopoulos 1991:165, fig. 21, pl. 24, no. 5; 1993). In the Early Iron Age the basic shape is well established in the Macedonian repertoire but few sites provide exact parallels in details of shape to this distinctive type at Torone, with the exception of nearby Koukos.[54]

Small variety **(pls. 372–373)**

There are two examples only, **T1-2** and **7**, neither of which can be precisely dated on the basis of associated pottery, although **T1-2** may date to the earlier part of the period of use of the cemetery. The basic form is similar to that of the kantharos Type 1 described above, but the small variety differs not only in the matter of size but also in certain details of shape. The base is only slightly flattened and the body more rounded, defining a form deeper than that of the larger variety. The upper wall curves in to the rim, which in the case of **T1-2** is short and flares out very slightly to a chamfered lip; the rim of **7** is taller, proportionately more narrow, and terminates in a plain rounded lip (**7** could be described as having a true neck). Two vertical handles, oval to round in section, are attached at point of maximum diameter, rise to a level above the rim, curve over, and attach directly to rim top. The exterior surfaces of both vessels are burnished smooth, although there are tooling marks on the interior of **T1-2**. On **7** there is a small mastos on either side at the point of maximum diameter (cf. especially Hochstetter 1984: pl. 39, no. 10 [Level 14b]). The fabric of **7** is also somewhat more coarse than normal (more consistent with that used for pithoi, pitharia, and tripod cauldrons) and the wall considerably thicker. It has been noted above that **7** may well be of Early Bronze Age date (see chapter 2 for comparanda).

As with other handmade shapes, this variety has a long history in Macedonia and particularly close to the shape (and fabric) of **7** are numerous Early Bronze Age examples from Armenochori and other sites (Heurtley 1939:192–194, nos. 320–349; 188, nos. 285–290 [Armenochori is located in the Tserna valley some five kilometers east of Florina]), although the basic form changed little over the course of several centuries and the same shape is well attested in Macedonia in Late Bronze and Early Iron Age contexts.[55]

Type 2. Kantharos with vertical handles surmounted by a disk knob **(pl. 372)**[56]

Only one example, **T7-2**, which may be assigned as Final Mycenaean/Submycenaean on account of the stratigraphical interrelation of Tombs 6 and 7 with Tomb 96; the shape is closely related to the cup/kyathos Type 2 (**T10-4**). The base and body, as well as the size and overall proportions, are identical to kantharoi of Type 1, differing only in the form of the rim and the type of handles. The upper wall curves in to a thickened rim, which is obliquely cut. Two vertical handles are attached from the point of maximum diameter to the top of the rim and rise well above the level of the rim; the lower part of each handle is round in section, the upper part plano-convex. The top of each handle is surmounted by a knob, the upper face of which is a flattened disk. Exterior and interior surfaces are pare-burnished.

The closest parallels to **T7-2** are offered by some ninety-nine vessels from Vergina referred to by Andronikos as *diota me diskomorphon apolexin lavon* (Andronikos 1969:202–204; cf. 221, fig. 65 with the tall stemmed foot), but which differ from the Toronean example in that they invariably have an offset rim that is normally quite tall. Elsewhere in Macedonia two-handled vessels with this distinctive handle type are not all that common. A few examples from Konstantia Almopias (Chrysostomou 1995) and the cemetery at Stavroupolis in the area northwest of Thessaloniki (Lioutas and Gkioura 1997:326, fig. 8, far left) may be cited. Related handle types are met on a number of one-handled cup/kyathoi (see below), as well as on a few two-handled "bowls" that may be dated to later stages of the Early Iron Age (cf. Heurtley 1939:239, no. 499 [= Robinson 1933a: pl. 23]; Hochstetter 1984: pl. 240, no. 1 [Level 3, which postdates ca. 700 B.C.]). This handle type does not appear to predate the onset of the Early Iron Age, although a possible Bronze Age candidate, dating to the sixteenth century B.C., is offered by a single fragment from Kastanas (Hochstetter 1984: pl. 1, no. 10 [level 19]; Andronikos [1969:202, nn. 4–5] cites the jug Heurtley 1939: 162, no. 157 [Late Neolithic] as a forerunner, as well as Italian parallels dating to the first half of the second millennium B.C.; both seem somewhat remote as immediate predecessors).

XV. THE CUP/KYATHOS

There are four cup/kyathoi. The shape is closely related to the kantharos and, like it may be divided into two types primarily on the basis of handle type. Unlike the kantharos, however, three of the four cup/kyathoi saw service as ash-urn (the three examples of Type 1 were all ash-urns; **T10-4** [Type 2] was an offering associated with inhumation Tomb 10).

Type 1. Cup/kyathos with vertical high-swung handle (cf. kantharoi Type 1) **(pls. 375–376)**

Not one of the three examples of this type, **T43-1**, **T57-1**, and **T66-1**, can be dated precisely: **T57-1** and **T66-1** were the only vessels in their respective tombs, and the only vessel associated with **T43-1** was the fragmentary handmade jug **T43-2**. Of the three, **T43-1** and **T57-1** form a group that is related to the kantharos Type 1, but with some differences. The base is more rounded and the body proportionately deeper, with the upper wall rising vertically to an everted rim, offset from the body, terminating in a chamfered lip. One vertical high-swung handle, thin and broad in section, is attached from upper body to rim, rising well above the level of the rim. The interior face of the handle of **T57-1**, immediately above the juncture to rim, has two finger impressions, one on top of the other, unlike the kantharoi where there is only one; the upper part of the handle of **T43-1** is not preserved. Interior and exterior surfaces of both vessels, as well as **T66-1**, are pare-burnished.

T66-1 is of similar form, but differs in that the upper wall curves in to a slightly thickened rim, which is identical to that of the cup/kyathos Type 2. The handle, however, is consistent with Type 1, being vertical, high-swung, thin and broad in section, but with no finger impressions on the interior face. There is a potter's mark at the base of the lower handle attachment (see chapter 6; Papadopoulos 1994:449, fig. 8, pl. 115a, B7). The height of all three vessels is consistent with kantharoi of Type 1, as is the rim diameter of **T43-1** and **T57-1**, although that of **T66-1** is slightly smaller.

The same basic form is common all over Macedonia during the Early Iron Age, although exact parallels to the Torone type are few (cf. Casson 1919–21:20, fig. 13, top right; 1923–25:10, fig. 3e; Heurtley 1939: pl. 23s; Andronikos 1969:215–218, figs. 55–57, pl. 62, no. AΓ12; Romiopoulou 1971b:359, fig. 6, nos. 27–30; Hochstetter 1984: 66–78, esp. 71, fig. 17; 74, fig. 18, notably type 4 [Late Bronze to Early Iron Age]; cf. Heurtley and Radford 1927–28:163, fig. 38); its pedigree is well attested in earlier periods.[57]

Type 2. Cup/kyathos with vertical handle surmounted by a disk knob (cf. kantharoi Type 2) **(pl. 377)**

A single example, **T10-4**, is very closely related to the Type 2 kantharos and, like it, dates to the earlier part of the period of use of the cemetery. Details of shape, size, handle type, and burnishing are as **T7-2**, but with only one handle (the vessel is not complete, but there was enough of the rim on the side opposite the preserved handle to verify that the vessel was one-handled).

The one-handled version of the shape has a much wider distribution in Macedonia than its

two-handled counterpart, and, as noted above, the distinctive handle type appears to be confined mainly to the Early Iron Age. At Kastanas there is a closely related type that is common in Levels 13 through 4 (i.e., ca. 1190 to shortly after ca. 700 B.C.), represented by some thirty-four examples (see Hochstetter 1984:74–75, fig. 18, type 6b; cf. Heurtley 1939:235, nos. 476–477 [Tsaousitsa]; 236, nos. 486–487 [Perivolaki/Saratsé]; 239, no. 500 [Olynthos]; Forsdyke 1925:17, pl. III, A78; cf. 21, fig. 28, A96.1; see further Casson 1919–21:20, fig. 13; 1923–25:10, fig. 3g, i, j; 1926a:138, fig. 47). It is interesting to note that although at Vergina the two-handled version is well represented, the one-handled version is rare with only one example, as far as I know, from the tombs excavated by Andronikos (1969: pl. 65, AΓ44), although some partially preserved examples might also be one-handled.

XVI. THE BOWL WITH SQUARE-CUT HANDLES (**PLS. 378A–C**)

Although at least fifteen examples of this shape are catalogued from tombs and various deposits on Terrace V, fourteen are represented by sherds only, either handle fragments (**T112-7**, **T113-13**, **T113-14**, **T113-15**, **T114-6**, **29**, **51**, **81**) or rim fragments (**T102-4**, **T113-16**, **T117-16**, **T117-17**, **13**); only **T67-2** was recovered complete (the figure of fifteen represents the minimum number of certain examples of this shape). The fragments catalogued as **T101-12** preserve handle and rim. The shape was popular in funerary ritual and the majority of listed fragments were fire affected; **T67-2** served as the lid/cover for the ash-urn of its tomb, but the shape was never used as ash-urn.

The chronological span of the listed pieces tends to be confined to the first half of the period of use of the cemetery. **T101-12** is Submycenaean and **T102-4**, **T112-7**, and **T114-6** are probably contemporary with Early Protogeometric; on the basis of the evidence recovered to date, no example of the shape can be assigned with certainty to the latest stages of the period.

Taking **T67-2** as representative, the shape is characterized by a broad flattened base, a deep body with curved lower wall, and a vertical upper wall surmounted by a vertical rim thickened slightly on the interior. The exterior face of the rim essentially continues the line of the wall although there is a slight concavity at the junction of rim and body (this together with a thickening on interior may indicate that the rim was made separately from the body and subsequently attached; on some rim fragments, such as **13**, the thickening on interior is minor, and there is no corresponding concavity on exterior); the lip is chamfered. The listed rim fragments are all consistent in form and this distinctive type of rim is not found on other handmade open vessels. The most characteristic feature of the shape are the handles; these were formed from a flattened piece of clay with the edges neatly cut (chamfered) to define, more or less, a square, with a round hole cut out of the center. They were subsequently set upright on the rim, with the lower edges curving out to meet the rim (**fig. 123b**). Some of these handles are not unlike, but not the same as *some* of those described elsewhere as "wishbone" (see Heurtley 1939:224, no. 452; 225, nos. 456–457; Wardle 1980:245, fig. 9, no. 1; 248, fig. 12, no. 26; Hochstetter 1984: pl. 264, no. 15). In terms of size, **T67-2** has a height (base to rim) of 0.123 m, a rim diameter of 0.205 m, and a base diameter of 0.095 m; some of the listed fragments are clearly from smaller vessels (cf. **T101-12**, **T113-15**), whereas others may well be larger (e.g., **29**). Judging by the preserved examples, all pieces appear to be pare-burnished.

Similar vessel forms with related handle types are common throughout Macedonia in contexts of the Late Bronze and Early Iron Age, although once again parallels identical in all respects to the version at Torone are few.[58]

XVII. THE PITHOS (**PLS. 379–382**)

Of the sixteen fragmentary pithoi catalogued fifteen are from tombs, and the rim fragment **30** came from deposit type 4 (the quantity of pithos fragments from deposit type 4 was not great; apart from **30** only a few body fragments were recovered). Three of the sixteen, by far the best preserved, were used as a kind of bedding for inhumations (**T1-1**, **T7-1**, **T12-1**; see chapter 4). The fragmentary body of **T89-1** served as ash-urn, whereas the remainder were fragments used either as lids/covers or chocking sherds in cremation tombs. Their chronological span covers the entire period of use of the cemetery, but their fragmentary state impedes detailed analysis. Not one

of the pithoi from Terrace V was recovered anywhere near complete, nor did any preserve complete profile. The following are body fragments preserving no decoration nor any other diagnostic feature: **T24-2**, **T25-2**, **T28-3**, **T34-2**, **T89-1**, **T104-3**, **T105-2**, **T107-2**, **T108-2**, and **T114-2**; the remaining six may be singled out for discussion.

Judging by the fragmentary **T7-1** and **T12-1** there appear to be two broad categories of pithos represented in the tomb material: one with a wide neck and mouth (**T7-1**), and another where the upper body curves in rather noticeably to a narrower neck and mouth (**T12-1**); the fragmentary body of **T1-1** seems to belong to the second category, as do the later, and much better preserved, kiln pithoi **KP-1**, **KP-2**, and **KP-3** (Papadopoulos 1989a:36–37, ills. 12–15). A similar division was noted for the fragmentary Protogeometric pithoi at Asine (Wells 1983a:69), and at Kastanas the twelve distinguished types of rim were all of the narrow-neck variety (Hochstetter 1984:142–155, esp. 147, fig. 39). Not one of the Torone pithos fragments preserved any trace of the base, although many body fragments preserved a lower wall that clearly tapers toward the base (**T12-1**, **T1-1**, and cf. **T89-1**, **T107-2**). A narrow flat base (as on the kiln pithoi **KP-l** and **KP-2**), or a pointed base may be assumed, similar to those elsewhere in Macedonia (Hochstetter 1984:152, fig. 40), and consistent with the two basic types of base found on Mycenaean pithoi (Furumark 1972a:74). All fragments are thick walled and most would represent very large vessels; the preserved height of **T1-1** and **T12-1** is 0.598 m and 0.567 m, respectively, and both would have been considerably larger in their original state. The near complete **KP-1** has a height of 0.678 m, and the fragment **T7-1**, among others, should be from a vessel that originally may have had a height exceeding 1.0 m. The point of maximum diameter on **T12-1** is 0.720 m. A pointed-base pithos of Geometric date from the settlement on Promontory 1 at Torone would have stood, in its original state, to a height of about 2.0 m (Cambitoglou and Papadopoulos 1994: pl. 21.5; cf. Sapouna-Sakellarakis 1998:72, fig. 26 [Euboian Kyme]).

Three of the listed pithos fragments preserve portion of rim (**T7-1**, **T12-1**, **30**), but in the matter of rim form there was no consistency. The tall neck of **T7-1** terminates in an outward thickened rim, flat on top, with the outer edge chamfered (for the comparatively vertical, as opposed to more flaring, neck and rim of **T7-1** cf. Marinatos 1936: fig. 24; for an earlier [Subminoan] version see van Effenterre 1948: pl. 38, Tomb 27). **T12-1** has a knobbed rim, almost horizontal, flat on top, with a slight thickening on interior and two grooves along the exterior face, whereas **30** has a short vertical rim, becoming slightly thicker toward the top, with the rim top marked by a slight concavity (it is possible **30** is of Early Bronze Age date). The rims of the kiln pithoi are different again (Papadopoulos 1989a:36–37, ills. 12–13, 15).

The bodies of the vessels were built up by hand, although it is likely that a simple turntable or potter's disk—not a continually revolving kick-wheel—was used in the production process (see Hampe and Winter 1962: pl. 4.4; Jones 1986:866, fig. 12.8). Interior and exterior surfaces are well finished (wet-smoothed), normally producing a dull, smooth surface. Incised or impressed decoration, usually applied to a band or cord of clay and subsequently attached to the body, appears to be relatively common. A simple raised cord decorated with incised strokes or notches (rope pattern) is found at the junction of body and neck on **T7-1** and **30**; the former also has lightly incised diagonal strokes around the outside chamfered edge of the rim. There is an undecorated raised band of clay on the body of **T46-2** (similar to raised bands, usually with incised decoration, on the body of some of the Vergina pithoi: Andronikos 1969: pl. 134 [middle row, left and bottom]; cf. Hochstetter 1984: pl. 192, no. 3); the body fragment **T27-2** has two roughly parallel rows of impressed circles executed on a slightly raised band. Impressed circles are particularly common on coarse ware vessels at Karphi on Crete (Seiradaki 1960:29, pl. 12a; cf. the stamped concentric circles on pithos fragments from a Geometric Well at Knossos: Coldstream 1960:170, pl. 47d, nos. 120–124), but are also common elsewhere in Greece (e.g., Heurtley and Lorimer 1932–33:53, fig. 31, nos. 98–99 [Ithaka]; Young 1939:189, fig. 139, no. C164 [Athens]; McDonald, Coulson, and Rosser 1983: pls. 3-113, 3-114 [Nichoria]; Jacob-Felsch 1996: pls. 6, 29, nos. 128, 130 [Kalapodi]; Sapouna-Sakellarakis 1998:

98, fig. 38:2 [top left, Euboian Kyme]). It is worth noting that neither applied nor impressed decoration was encountered on the kiln pithoi.

The pithos is well represented in Macedonia from the Neolithic period through the course of the Bronze Age and into the Early Iron Age, but few pithoi are adequately published with drawings and photographs (Casson 1926a:134, figs. 42–43; Heurtley 1939:33, 38, 64, 98, 100, and esp. 218, pl. 20, no. 420; Andronikos 1969:221–222, pls. 134–135; note also the remarkable painted pithos: Petsas 1964:255–258), except for the mainly fragmentary material from Kastanas, which displays a good deal of variety in details of shape (Hochstetter 1984:142–155). Moreover, many of the features found on the Toronean, and Macedonian, pithoi are closely paralleled in Mycenaean pithoi from southern centers, especially those from Athens (Furumark 1972a:74–76, Shape 13 [variety A with flat base, B with pointed base]; for Athens see especially Broneer 1939:397, Shape 26; 399, fig. 80; Hansen 1937:565–566, fig. 18; for Minoan pithoi see especially Betancourt 1985:50, fig. 30 [EM]; 63, fig. 44b, pl. 15a–b [MM]; 63, fig. 44a, pls. 8a, 16d–f, 26a, c–d [LM-Subminoan]), as well as on later Geometric pithoi (in addition to those already cited see Brann 1962:27, 29, 56, pl. 12, no. 220; Mussche 1967:38, fig. 43; Cambitoglou et al. 1971:52–56). It is important to note, as Wells (1983a:69) remarks, that the shape is poorly represented in contexts of the Protogeometric period, but the few that are published from central and southern Greece preserve features also very similar to those of Torone.[59]

XVIII. THE PITHARION (**PLS. 383–385**)

There are thirteen examples of this shape recovered from tombs. As tomb furniture the pitharion could serve as ash-urn, and was also found in fragmentary and burned state in a number of tombs that yielded remains of the pyre. Fragments of pitharia, like those of pithoi, were also used as lids/covers and chocking sherds in a number of cremation tombs. The shape, as represented by the preserved examples, appears to be of one basic type, although individual vessels may vary considerably in size. The shape is here presented in two varieties, a larger and a smaller one. This division is perhaps best highlighted in the case of Tomb 118, which yielded an example of both (**T118-3**, **T118-4**, **fig. 174c–d**); a few examples of the smaller variety do not have handles. Chronologically, the two varieties appear to be contemporary, and their chronological span covers most of the period of use of the cemetery. **T52-3**, **T95-2**, and **T104-19** are all contemporary with earlier and developed Protogeometric based on the ash-urn of each respective tomb; **T22-3** is contemporary with Late Protogeometric, being from the same tomb as the imported amphoriskos **T22-2**.

Larger variety with horizontal handles

Eight examples can be assigned to this variety: **T22-3**, **T38-1**, **T52-3**, **T53-2**, **T95-2**, **T104-19**, **T113-1**, and **T118-4**. Of these, only the fragmentary **T38-1** preserves complete profile. The shape is characterized by a flattened base, a tall ovoid body, and a tall concave neck with a flaring rim and chamfered lip; the junction of body and neck is offset by a small ridge. Two horizontal handles, thick and round in section, are attached to the upper body. **T38-1** has a height of 0.363 m, a base diameter of 0.100–0.110 m, and a rim diameter of 0.175 m; judging by the other fragments (especially **T22-3**, **T95-2**, **T113-1**, and **T118-4**, where enough of the vessel was preserved to estimate overall size with reasonable clarity), the majority would have been of similar dimensions, although **T113-1** is slightly smaller. The exterior surface and the interior of neck and rim are pare-burnished, but with tooling marks marginally broader and shallower than those on vessels of the semi-coarse variety of clay, and often preserving a good surface with a slight sheen.

The basic form of the Toronean pitharion finds a number of related shapes in other parts of Macedonia, with perhaps the closest parallels offered by a few large vessels from Vergina.[60]

Smaller variety, with or without handles

Five examples under this heading are **T31-1**, **T49-1**, **T70-1**, **T118-3**, and **T126-1**. The largest, **T70-1**, is a near replica, in terms of shape and proportions, of **T38-1** but has a height 11 cm less than its larger counterpart (H: 0.250 m). **T118-3** is considerably smaller, with an original height approximately one-half that of **T70-1** (PH: 0.106, original height less than ca. 0.130 m), and with a

more noticeably rounded body defining a squatter form; a similar, more rounded body is also found in the case of the fragmentary **T49-1**. The two remaining vessels, **T31-1** and **T126-1**, have slender ovoid bodies, similar to the proportions of **T38-1**.

T70-1 and **T118-3** are both equipped with two horizontal handles set high on the body like those of the larger variety. **T49-1**, with base and most of the body preserved, yielded no trace of handles; similarly, no handles were preserved on the fragmentary **T31-1**, where approximately one-half of the vessel lengthways was recovered (only the base and lower body of **T126-1** were preserved). Enough was therefore preserved of these two vessels to establish that there was no space for two handles (**T31-1** preserved the characteristic ridge at junction of body and neck, and a neck of concave profile; enough nonjoining fragments of the neck of **T49-1** were recovered to establish that it too was of the same form as the better preserved **T70-1** and **T38-1**, but without handles). Exterior surfaces, as well as the interior of neck and rim, are burnished in the same manner as the larger pitharia, with the exception of the rather poorly finished **T49-1**.

XIX. THE TRIPOD CAULDRON (**PLS. 386–392**)

A minimum of twenty-six tripod cauldrons were recovered from tombs and various contexts on Terrace V: **T6-3**, **T7-4**, **T25-4**, **T47-4**, **T70-3**, **T99-3**, **T101-11**, **T104-18**, **T113-17**, **T114-7**, **T115-12**, **T115-13**, **T116-4**, **T117-19**, **T118-11**, **T121-2**, **T123-2**, **T123-3**, **T123-4**, **T123-5**, **20**, **22**, **23**, **76**, **77**, **88** (the fragment **88** was found in the 1975 excavations at the Gate Area: Cambitoglou, Papadopoulos, and Tudor Jones 2001:293–308). All these are fragmentary, and from the examples recovered from tombs it would appear that in the majority of cases their broken state was intentional. The various uses of the tripod cauldron as tomb furniture and its ritual and domestic vicissitudes are discussed more fully in chapter 4. Although no tripod was preserved complete, there are enough fragmentary examples to establish the salient features of the shape. Of the twenty-six catalogued pieces, those that can be dated on the basis of associated finds all appear to belong to the earlier part of the period of use of the cemetery. Fragments of tripod cauldrons were not encountered in the latest tombs, whereas the occurrence of the shape in some of the very earliest dated tombs is amply attested (especially the fragments recovered from Tombs 6, 7, and 101 [Final Mycenaean/Submycenaean]; and Tombs 104 and 115 [Early Protogeometric]); the latest tripods are perhaps those from Tomb 123, on the evidence of the style of the ash-urn of the tomb, **T123-1**. It is stressed that this picture is one based purely on the evidence of tombs and all that may be stated on the basis of hard evidence is that the popularity of the tripod cauldron as a funerary vessel diminished in the later stages of the period. It is, however, worth noting that the handmade vessel from the kiln, **KP-14** (Papadopoulos 1989a:42, ill. 38–39), is probably a chytra rather than a tripod and, if so, it may be that the tripod cauldron as a cooking pot was replaced by the chytra either during the later stages of the period of use of the cemetery or during the period immediately following.

The shape is characterized by a rounded body that is comparatively deep (see especially **T70-3**, **T47-4**, **T99-3**, **T123-2**, **T123-3**). The upper wall curves in slightly toward the top and is surmounted by a neck, which normally has a concave profile (**T25-4**, **T47-4**, **T70-3**, **T115-12**, **T123-2**, **T123-3**), but is occasionally more vertical (cf. **T99-3**); the junction of body and neck is often, but not always, marked by a slight ridge, a feature particularly evident on three of the tripods from Tomb 123 (**T123-2**, **T123-3**, **T123-4**). The rim flares out to a chamfered or sometimes more rounded lip (in the case of **T99-3** the rim is slightly more outturned); the following fragments also preserved portion of rim: **T25-4**, **T47-4**, **T70-3**, **T104-18**, **T115-12**, **T117-19**, **T123-2**, and **T123-3**. The vessel stands on three legs that could vary from being quite thick, and oval to almost square in section (e.g., **T7-4**, **T47-4**, **T70-3**, **T99-3**, **T113-7**, **T115-12**, **T115-13**, **T118-11**, **T123-2**, **20**, **23**, **76**, **77**, **88**) to legs that were considerably thinner and rectangular in section, with their edges sharply cut (e.g., **T6-3**, **T101-11**, **T114-7**, **T116-4**, **T123-3**, **22**). The legs are characteristically quite tall and taper toward a thin, rounded resting surface. Handles are preserved on **T25-4**, **T47-4**, **T99-3**, **T115-12**, **T123-2**, **T123-3**, **T123-4**, **T123-5**, and **76**, and these could be either vertical (**T25-4**, **T99-3**, **T115-12**,

T123-2, **T123-3**) or horizontal (**T47-4**, **T123-4**, **T123-5**; in the case of **76** too little is preserved on the handle scar to determine whether it is vertical or horizontal; cf. also **T113-17**). In the case of fragments preserving vertical handles it is invariable that the handle was part of the same attachment as a leg, and that both were formed together and subsequently attached to the body of the cauldron (see especially **T99-3**, **T115-12**, **T123-2**, **T123-3**, **T25-4**), with the upper part of the handle attached directly to rim. In the case of fragments preserving horizontal handle, there is no associated leg with either **T123-4** or **T123-5**, and with **T47-4** the horizontal handle is attached only partly over the uppermost portion of one leg. Conversely, a good many fragments preserve portion of body and leg attachment but no trace whatsoever of a continuing handle (see especially **T70-3**, **T118-11**, **T123-3B**, **23**, **88**). Consequently, although no tripods are preserved complete, it seems reasonable to assume that individual vessels could be equipped with one or two, but not three handles, and that there is every likelihood some vessels may have had one vertical and one horizontal handle. Whether vertical or horizontal, handles are thick and round or oval in section.

As for the size of individual tripods, there appears to be a general consistency among the better preserved fragments (especially **T47-4**, **T70-3**, **T99-3**, **T123-2**, **T123-**3),[61] although among the more numerous fragments preserving only portion of leg there is a good deal of variety from very large legs (e.g., **T7-4**) to diminutive ones (e.g., **T114-7, T116-4**). In the majority of cases interior and exterior surfaces, including the faces of the legs and handles, are burnished smooth, although often faint tooling marks are visible, especially toward the upper body and around the leg and handle attachments. The fact that some tripod cauldrons perhaps saw service first as domestic cooking pots, indicated by the partial blackening of most fragments that were not subsequently burned as part of the funerary ritual, may suggest that the more common pareburnishing was not considered necessary for a vessel designed to be placed directly over the fire.

The tripod cauldron, both as a coarseware cooking vessel and as a finer wheelmade and painted form, is well known in Minoan[62] and Mycenaean[63] ceramic history, and particularly close to the Toronean tripods are many coarseware Mycenaean examples from Athens.[64] The shape, both in fine and coarseware varieties, continues to be found at a number of sites during the Protogeometric and Geometric periods,[65] and in its monumentalized form in bronze is well known at Olympia (Willemsen 1957; Schweitzer 1971: ch. 7; Coldstream 1977:333–339; Maass 1978; 1981; Heilmeyer 1982:39–45, figs. 29–32; for bronze tripods elsewhere see Benton 1934–35; Touloupa 1972; Maass 1977), Delphi (Perdrizet 1908:59–72; Rolley 1977), and even earlier in the Minoan and Mycenaean world (e.g., Matthäus 1980; cf. Onasoglou 1995: fig. 56:2, pls. 1, 10b, 11) and in Cyprus (H. Catling 1964:169–170, 190–223). But whatever ubiquity the shape enjoys in Greece, it is conspicuously absent in the local Macedonian repertoire. By 1939 there were almost none known to Heurtley (the only legged vessels he mentioned are Neolithic: see Heurtley 1939:150, no. 91 [four-legged]; 161, no. 148 [three-legged "table" = Mylonas 1929: figs. 62b, 63, pl. 2]; 162, no. 161), and since that time the excavations at Kastanas, Assiros, and Vergina have yielded no certain examples. Hochstetter (1984:179–180) discusses a number of legged vessels preserved only as fragments; some are from vessels that are anthropomorphic or zoomorphic, while others (e.g., Hochstetter 1984: pl. 280, no. 3) are from vessels that bear no resemblance to the Torone tripods; only one fragment may be of a similar vessel (Hochstetter 1984: pl. 93, no. 1). The only exception is Koukos in Sithonia, which has yielded numerous tripod cauldrons (Carington Smith 2000:219–225, fig. 1, pls. 1–3). It would appear that the standard type of cooking vessel elsewhere in Macedonia was the stand or *pyraunos* (see Wardle 1980:249, fig. 13; Hochstetter 1984:155–164; there is also a curious variety of cauldron/stand with two broad legs from Vergina that is somewhat later: see Petsas 1961/62a: pl. 146γ, 147β; for related stands in Italy see Scheffer 1981), or a more simple pot with a rounded base (e.g., Heurtley 1939:234, nos. 472–474). There are fragments of tripod legs at Thasos postdating those of Torone (Bernard 1964:134–136, figs. 46–48), but beyond these the rarity of the shape in the north Aegean would argue that the existence of at least twenty-six examples at Torone, and numerous more at nearby Koukos, was the result of influence

from the south or that the shape evolved, as it did further south, from a local Mycenaean tradition.

Local handmade vessels of undetermined shape

The following fragmentary pieces could not be assigned with any certainty to any of the established types: **T11-3**, **T61-1**, **T101-13**, **T113-12**, **T117-20**, **18**, **47**, and **52**. The majority appears to be of local fabric, but their fragmentary state was such as to preclude any firm statement in this regard.

T11-3 preserves portion of a vertical handle, oval in section, with a small pinched-up knob or mastos at its base; it closely resembles the handles of jugs such as **T75-2** and **T86-2**, but is considerably smaller than all other jugs. The fragmentary ash-urn of Tomb 61 (**T61-1**) preserves portion of base and body of a small closed vessel; the body is globular and the base only slightly flattened; the exterior surface was evidently burnished smooth and the interior poorly finished. The vessel, however, does not appear to be a jug and its shape and manner of burnishing are closer to those of the small two-handled jar **T21-1**, which also was an ash-urn.

The fire-affected rim fragment **T113-12** is in details of shape not unlike rims of tripod cauldrons, but its fabric, although rather gritty, is not of the normal coarse variety and more closely resembles the semicoarse; as such, it may represent a larger variant of the two-handled jar. Another poorly preserved rim fragment, **52**, is also fire affected. The piece is interesting as it preserves features unique among local Early Iron Age products; the vessel is of open form with a vertical upper wall surmounted by an everted rim that bears a slight concavity on top. A small flange was set on the interior at junction of body and rim, as if to serve as seating for a lid; the exterior is decorated with an applied strip of clay as shown (**fig. 60**). The fabric of **52** is consistent with that of the coarse variety of clay and the only established local vessel form that it brings to mind is the tripod cauldron; both the flange and the applied decoration are, however, atypical,[66] and the fragment more closely resembles some examples of the common type of Early Bronze Age jar (*Topf* or *Vorratsgefäss*: see Aslanis 1985:81, fig. 42 [Type 4]), some of which have the distinctive application variously referred to in the literature as "lunate lug" (Lamb 1936: pl. 37, no. 519; cf. the "spurred lunate lug" on pl. 34, no. 9; also pl. 46, nos. 1, 6, which are later), "curving rib" (S. Hood 1981: pl. 8d, nos. 305–306), "horseshoe in relief" (Hood 1982: pl. 81, no. 1807), "arcades forming lugs" (Benton 1938–39:2–3, pl. 1, nos. 5 [right], 6, 15), "τοξοειδῆ ἄτρηπα ὦτια" (Tsountas 1908:262, fig. 169 [cf. figs. 166, 172]; 373, fig. 302), and *Ohrengriff* ("ear-grip": see Aslanis 1985: pl. 74, no. 10).

The two small fire-affected handle fragments **T101-13** and **18** are closely related to one another; both are fragments of vertical handles, thin and rather broad in section, with the outer edges chamfered and their upper faces decorated with rather deeply gouged, roughly parallel lines. **T101-13** can be assigned to Submycenaean, but the context of **18** was uninformative; a similar handle from Late Bronze Age Axiochori/Vardarophtsa may be cited as a parallel (Heurtley 1939:216, fig. 87h).

More interesting is the fragmentary **T117-20** (**fig. 173t**); three nonjoining fire-affected fragments preserve a rounded, almost spherical body (base not preserved) and a short vertical neck terminating in a plain rim with chamfered lip. The upper portion of one handle stump is preserved, attached directly to rim. The handle is vertical, thin and rather broad in section, and pierced vertically in the center near its attachment to rim, with a corresponding hole pierced horizontally on the neck. On **figure 173** the vessel is reconstructed with two handles, although only one is actually preserved. The pierced handle may have served for the fastening of a lid, in a manner similar to that of pyxides (cf. Bouzek 1969b:53, fig. 7, no. C7; Sourvinou-Inwood 1975:175, figs. 1–2; Popham, Sackett, and Themelis 1979–80:328, fig. 17). Conversely, the pierced handle may have served the purpose of suspension, similar to much later aryballoi (e.g., Haspels 1927–28). The exterior surface, and neck on interior, are pare-burnished. The general shape of the body and neck, but not the pierced handle, find a number of related vessel forms elsewhere in Macedonia, which are, on the whole, larger (Wardle 1980:248, fig. 12, no. 21; cf. 257, fig. 16, no. 40); a miniature one-handled closed vessel from Athens, with a somewhat narrower neck, may be cited for comparison (Smithson 1961:169, pl. 32, no. 52; cf. also the small kantharos **7**, which is perhaps earlier).

Enough fragments of **47** were recovered to preserve a complete profile, which defines a cup shape with a distinctly rounded base and a vertical upper wall terminating in a plain rounded rim; no trace of a handle(s) was preserved. The fabric of the vessel is of the coarse variety, but the surface is unusual in that it is highly polished resulting in a good finish with a true sheen. The fragments of the vessel were encountered in the Early Iron Age deposit type 4, but its shape and distinct burnishing closely resemble vessels of the Early Bronze Age recovered in quantity in the Prehistoric levels on Promontory 1 (Cambitoglou and Papadopoulos 1988; 1990; 1991; 1994). If **47** is indeed of Early Bronze Age and not Early Iron Age date it is one of the few vessels of that period to have been found on Terrace V as residual material (see also **7**, **30**, **52**). The general shape of **47** finds a number of related Early Bronze Age parallels in other parts of Macedonia (cf. Heurtley 1939:168, no. 171; 183, no. 254; 184, no. 259; 190, no. 305; cf. also 137, no. 11, which is Early Neolithic). I know of no close Early Iron Age parallel.

C. BLACK- AND RED-SLIP WARE (WHEELMADE)

There are four examples of black-slip and one only of red-slip ware. Although distinctive, both appear to share a common fabric, which, on the basis of visual criteria, differs from that of the local wheelmade and handmade wares. The color distinction between the black- and red-slip wares is the result of controlled reduction and oxidation firing. The origin of the ware remains undetermined and although probably imported, the possibility of a local variant fabric (similar to the situation with the black- and red-slip ware of Lefkandi described as atypical local [Popham, Sackett, and Themelis 1979–80:346; Jones 1986:629]) should not be altogether dismissed. With regard to provenance, the chemical analysis provided no definitive clue: it is noted in appendix E that the examples analyzed match neither the majority of pottery from the kiln nor the local wheelmade samples, but a local origin cannot be excluded (of the black-slip **T24-3**, **T50-1**, and **T104-2** have been scientifically analyzed; **T47-2** and the one example of red-slip, **T111-1**, have not). The three black-slip ware pieces analyzed are similar in most elements to the three examples from Lefkandi that were found on analysis to be probable local products (Jones 1986:629), but they also lie within the ranges of the Torone kiln group (Type I). Any firm statement on the place of origin of this distinctive class of pottery would be premature, given the relatively small sample of this ware to have been analyzed. Black- and red-slip vessels are wheelmade and have a slip over most of the surface.

The angular form of some of the examples of black- and red-slip ware, notably **T47-2**, **T104-2**, and **T111-1**, is very metallic looking, which is further highlighted by the surface treatment that attempts to imitate the color and, up to a point, the surface texture of silver and gold.

1. BLACK-SLIP WARE (**PLS. 397–399**)

The list is small: two amphorai, **T24-3** and **T50-1**, the latter perhaps better described as amphoriskos, and two kraters, **T47-2** and **T104-2**. Chronologically, the group appears to be early; **T104-2** may be safely assigned to Early Protogeometric; the contexts of **T24-3** and **T47-2** are slightly later. Only the context of **T50-1** was uninformative as to date. All four vessels have a gray clay normally in the vicinity of 10YR 6/1 to 5YR 6/1 on the Munsell scale (the larger **T104-2**, although mainly gray, had fired other shades as well; see chapter 3 for full details), and are coated with a good semilustrous to lustrous black or gray slip with a rather soapy feel; the ware is remarkably close, in many respects, to that of Gray Minyan. The fabric differs from that of the normal local not only in color but also in the quantity and range of visible impurities. The clay is more dense and better levigated, with far fewer inclusions, although most pieces contain characteristically red-colored inclusions (conceivably grog). The mica content is significantly less than that of canonical local and is usually only a fine dusting of silvery surface mica. In the case of the large krater **T104-2** the range of impurities is greater; in addition to the red inclusions, white, yellow, and dark-colored inclusions are also visible, and there was almost no mica.

Only two shapes are represented, the amphora and the krater. The fragmentary **T24-3**, encountered among the fire-affected sherds of Tomb 24,

is difficult to reconstruct, but it shares many common features with the smaller and better-preserved ash-urn of Tomb 50 (**T50-1**). Both stand on a very low ring base and have horizontal handles set high on the body, tending to rise vertically. Horizontal ribbing is found on the neck of **T50-1** and there is a small mastos or knob preserved near the junction of shoulder and neck on **T24-3**.

The krater **T104-2** is one of the most remarkable vessels from the cemetery and must rank as one of the largest pots in Greek lands in the Early Iron Age (see **pls. 212–214** for the krater in situ). The shape is fully described in the catalogue (chapter 3), as is the incised decoration on the upper body and rim. The single fragment **T47-2**, preserving entire base and reused as lid for the ash-urn of Tomb 47, is undoubtedly from a similar krater; the form of the foot is very near to that of **T104-2**, differing only in that the exterior face is decorated with horizontal ribbing, not unlike that on the neck of **T50-1**.

The four vessels of this class instantly bring to mind the black-slip ware of Lefkandi, where black- and red-slip ware was produced in a fabric considered local during Middle Protogeometric through Subprotogeometric I (Popham, Sackett, and Themelis 1979–80:346–347); Desborough provides a list of vases of this ware found outside Lefkandi, which is restricted to Skyros, Thessaly, and possibly Tenos (Popham, Sackett, and Themelis 1979–80: 347, 410, nn. 461–463). However straightforward a connection between Torone and the Thessalo-Cycladic sphere may seem, there are important differences between the two groups. First, the fabric and feel of the pieces found at Torone are at variance with those found at Lefkandi (although the elemental study noted the possibility that the two might be related); second, and more important, there is nothing comparative at Lefkandi, nor in its related region, similar to both the shape and decoration of the black-slip pots at Torone. Again, it is important to stress that at both Torone and Lefkandi the quantity of pottery of this class is very small indeed, and it is this feature, perhaps more than any other, that links the material from Lefkandi with that from Torone. Wherever this class of pottery was made—its relatively small quantities may even argue for itinerant potters—it evinces a highly developed and skilled ceramic tradition, quite distinct from the normal pottery of Torone and Lefkandi.

Looking further afield, the black-slip ware found at Torone also falls under the rather more ubiquitous category of "gray ware." The term is a rather unfortunate one as it instantly connects wares of different regions, styles, and periods under a common heading on the basis of the fired color of the clay, which is achieved, whether intentionally or accidentally, by reduction firing (Jones 1986:414, 662, 757–760, 812). There is, for example, a "gray ware" in Levels 19–11 at Kastanas, but the range of shapes and the general characteristics of the fabric seem very different to the black-slip ware of Torone (Jung 2002: pls. 65–68). Buchholz (1973) noted the need for closer scrutiny of the material and its definition. Following Lamb (1930–31; 1931–32, esp. 51–56; 1932; Lamb and Brock 1930–31; also R. Cook 1972:338, 347), Buchholz (1973:180–181) distinguished, for example, between "Gray Lesbian bucchero" (which he refers to as "Polished Gray Ware") and other seemingly related fabrics such as "Etruscan bucchero." Buchholz, like Lamb, defines the area where this ware flourished as the Aiolic lands of Classical times, where, especially in Lesbos and northwestern Anatolia, it enjoyed a long tradition from the Early Bronze Age through the Classical period and down to Hellenistic times.[67] Individual elements observed on the black-slip ware at Torone often find related parallels further east. The distinctive double handles of **T104-2**—matched by a smaller krater from Koukos (Carington Smith 1991: 348)—are found, in fragmentary form, at Antissa on Lesbos (Lamb 1931–32:54, pl. 22, no. 21), and the mastos on **T50-1** is similar to that on an amphora from Troy (Blegen et al. 1958:171, 177, 213, fig. 264, inv. 32.14, Shape C50). Troy has also yielded many, mainly low-footed, kraters with combed wavy-line decoration, which vaguely resemble **T104-2** (see Buchholz 1973:182, no. 1, pl. 25D, with many similar vessels from Troy Settlements VI–VII), and incised decoration, often in the form of zigzags, is common on the so-called black-slip incised ware first noted by Daniel and believed to be of Cypriot origin (Daniel 1937:72–75, esp. 73, fig. 7, pl. VI; 1938:267; see further Desborough 1957:213, fig. 3; Benson 1972:91–92; 1973:98–102, 118, pl. 39; Bouzek 1985:198). Also worth

noting is a gray ware krater with pedestal foot and double handles from Fortetsa, which Brock considered an import (Brock 1957:128, pl. 109, no. 1481 [Tomb P; it is worth adding that kraters of similar shape, with double handles and pedestal feet but not in gray ware, are well represented in Crete: see Seiradaki 1960:25, fig. 17, pl. 9; Boardman 1960a:130, pl. 31, no. I.11).

Nevertheless, however close individual elements between Aiolic gray ware and the black-slip ware of Torone, there is nothing in the former that provides close parallels for the overall shape, general proportions, and decoration of the latter (for a general overview of the cultural connections between Troy and Macedonia see Hochstetter 1984: 373–375). In this respect, it is worth noting that **T47-2**, for instance, is much closer to the standard type of base found on Middle Helladic Gray Minyan goblets than on any contemporary related vessel form (cf., among others, Blegen 1921:43, fig. 59; Goldman 1931:136, fig. 183; Mylonas 1932: 65–67, figs. 38, 40; Verdelis 1951:139, figs. 8–9; Blegen, Caskey, and Rawson 1953: fig. 292a, Shape A64; Warren 1975:78); and the general shape of **T104-2** is closer to the form of the standard Thessalian Protogeometric painted krater than any krater in black-slip or gray ware (Desborough 1952: pl. 23, no. 143; Heurtley and Skeat 1930–31:33, fig. 13, pl. 10, nos. 140, 143; pl. 11; also 30, n. 1; cf. Sapouna-Sakellarakis 1998:94, fig. 5). It would seem reasonable, then, to conclude that the few examples of this ware at Torone witness a general family likeness with the wares of the Aiolian and Lefkandian spheres, but further evidence is needed to map out a more tangible connection.

2. RED-SLIP WARE (**PL. 400**)

One example only, **T111-1**, which saw service, surprisingly enough, as ash-urn. As with the black-slip ware, this vessel appears to belong to the earlier part of the period of the use of the cemetery although its exact date is far from precise. The fabric is similar to that of the black-slip, containing some red-colored and a small quantity of white and dark-colored inclusions as well as some fine mica, predominantly golden, but has fired a red color close to reddish yellow 5YR 6/6 on account of oxidization. The entire surface, except the underside, is covered with a good red slip.

The shape is unique and may be described as a stemmed kylix with horizontal handles, or a chalice. The form is angular and well made and has a remarkably metallic look to it. A tall stem splays out to a broad resting surface; four grooves at the base of the stem define three ridges not unlike those on **T47-2**. The body is carinated, with a shallow, almost horizontal lower wall and a vertical to slightly flaring upper wall. The rim is very slightly offset on the exterior only and has a plain rounded lip. Two horizontal handles, round in section, are attached to the upper wall and rise fractionally above the level of the rim. I know of no exact parallel for the shape. The general form recalls that of the Mycenaean stemmed kylix (Furumark 1972a, generally Form 79 [stemmed cups], Shapes 254–278), especially those that are plain or monochrome (see especially Mountjoy 1986:215, Shapes 263–269), but these are invariably equipped with vertical handles. A few of the Mycenaean kylikes, notably the one-handled variety (Furumark 1972a: Shape 267), have rather more angular bodies approaching the general form of **T111-1** (cf., among others, Theocharis 1961:58, fig. 59 [Iolkos]; L. Morricone 1972–73:205, fig. 107, inv. 1307 [Kos]; Wardle 1973:325, fig. 17, no. 147 [Mycenae]; Hiesel 1982: 435, fig. 53 [Tiryns]). The shape also recalls that of the Mycenaean stemmed bowl with horizontal handles (Furumark 1972a: generally Form 88, Shapes 303–306), although none of these have the angular proportions of **T111-1**. There is an interesting hybrid form of "bowl/kylix" at Knossos, the shape of which may be compared to **T111-1** (see Popham and Sackett 1984:165, pl. 82[I], pl. 160, no. 12, of Late Minoan II date), described as an "experiment quickly abandoned." There are also some interesting Mycenaean kylikes from Lesbos that were imitated in gray polished ware (Lamb 1930–31: pl. 28, no. 2; Buchholz 1973:180, pl. 25C). The Mycenaean parallels are, however, only general and any connection is far from clear.

Related red-slip wares have a distribution similar to that of the black-slip discussed here, being well represented at Lefkandi (Popham, Sackett, and Themelis 1979–80:347; Popham, Touloupa, and Sackett 1982a:233) and in Lesbos and related areas (see especially Lamb and Brock 1930–31: 157–162). There is, however, nothing from these regions close to the form and general proportions

of **T111-1** and, as with the black-slip, more information is needed before the connection between them and those found at Torone can be clarified.

D. IMPORTED WHEELMADE AND PAINTED POTTERY

The nineteen vessels listed under this heading plus the eight listed below under "Imported handmade vessels" (some complete, others fragmentary) are arranged according to the production center or general region from which they are thought to have originated. These divisions were originally made on the basis of style and general visual criteria. The fabric, shape, and decoration of a number of pieces suggested a likely source that was subsequently verified or at least supported by chemical analysis. A number of important questions, however, concerning provenance remained. The fabric of a number of fragmentary pieces was, visually, clearly not local or unlikely to be local, but a more exact source could not be suggested given the fragmentary state of the pieces in question; this was especially true in the case of a number of very fragmentary pieces recovered as burned sherds from various cremation tombs, for example **T113-9**, **T117-14**, **T117-15**, **T118-6**, **T118-9**, and **T118-10**.

Another problem was the macroscopic appearance of clearly local pottery, especially that from the Early Iron Age kiln on Terrace V, where a number of fabrics could be distinguished visually (Papadopoulos 1989a:26–27; cf. Whitbread, Jones, and Papadopoulos 1997). On account of these problems, and in order to better establish the suspected provenance of the more straightforward pieces, a program of physico-chemical analysis was initiated in 1987 with the Fitch Laboratory of the British School at Athens, and the results are presented in appendix E. The individual vessels assigned as imports below represent an amalgam of Richard Jones's analysis and my own, more subjective, visual observations. In many cases the results are not conclusive, and a good deal of doubt still exists in the case of a number of individual pieces. It is stressed that some of the divisions presented below should be regarded as tentative.

1. ATTIC

a. Final Mycenaean/Submycenaean

The one example, the skyphos **T101-8** (**fig. 157h; pl. 425**), is from the same tomb as the five one-handled cups discussed under local pottery. Although the skyphos is fragmentary and fire affected, the overall details of shape and decoration are fairly clear. The form of the vessel is standard for Submycenaean, as is the decoration (Desborough 1972:39, 46, fig. 9; Furumark 1972a, Shape 286; Mountjoy 1986:200, fig. 269); particularly close to **T101-8** are a number of skyphoi from the Athenian Kerameikos (Kraiker and Kübler 1939: pl. 23, inv. 513 [= Desborough 1952: pl. 10], which is identified by Ruppenstein [2001:174] following Frizell 1986: 78, fig. 62, as Argive; the decoration is also similar to a number of Attic Protogeometric skyphoi, e.g., Kraiker and Kübler 1939: pl. 67, inv. 546; Kraiker 1943: pl. 22, inv. 1072; cf. also Popham, Sackett, and Themelis 1979–80:111, S60.1; Weinberg 1943:3–4, pl. 1, no. 1). An Attic source for **T101-8** is verified by chemical analysis (appendix E).

b. Protogeometric

Among the most interesting of the imported vessels was **T93-1** (**figs. 149a–b**; **pl. 401a–b**), a large open vessel that saw service as ash-urn. Unfortunately, its fragmentary state is such as to make it difficult to reconstruct the shape with certainty. The vessel was clearly deposited into the tomb with the base broken and with nothing of the original resting surface preserved. The entire lower body is preserved, as are a few fragments of rim, handle scar, and a small fragment of the upper body preserving a slight carination. The upper wall curves slightly in to a rim which is flaring; a handle scar on upper body attests the existence of at least one handle, but it remains difficult to place with certainty the small body fragment preserving the slight carination. There is a "serrated" raised band of clay on the lower body (for similar raised bands see discussion under kraters). A possible reconstruction of the shape would define a krater form not unlike Courbin's "le cratère à anses horizontals" (Courbin 1966: pl. 36 [C 645]), but such a reconstruction is uncertain, especially as the

diameter of rim and upper body cannot be estimated with any precision.

Although there are no clear Attic parallels for the shape of **T93-1**, an Attic source is suggested by chemical analysis (appendix E). Various details of both shape and decoration of **T93-1** are closely matched on kalathoi from Crete and the Argolid, a shape that differs from the standard type of kalathos found in Athens and Euboia (for Attic and Euboian kalathoi see Kraiker and Kübler 1939: pls. 71–72; Desborough 1952:113–117; Popham, Sackett, and Themelis 1979–80:304–307). Among Cretan kalathoi it is common to find an outturned flaring rim and a flat disk base slightly articulated from the body, features that are preserved on **T93-1** (see Evans 1928:134; Desborough 1952: pl. 34, XI.9, VI.33; Brock 1957:162, pl. 3, nos. 1, 27, 14; pl. 11, no. 162; pl. 24, nos. 358, 346, 357; pl. 33, nos. 524, 418; Hood and Boardman 1961:74, nos. 19–23, fig. 9, pl. 10; Rocchetti 1967–68:200, fig. 36; 201, fig. 37). But the decoration of **T93-1** especially, as well as the fabric, are not consistent with Cretan. Also related in shape are Cypriot kalathoi, often decorated with crosshatched triangles (cf. Pieridou 1973:88, Shapes 2–3; pl. 5, nos. 1–10; Yon 1973; Karageorghis and des Gagniers 1974, vol. 2:1–3, 170; Karageorghis 1975: pl. 9, no. 12; pls. 30–31, nos. F1–F7). Closer parallels, especially in terms of decoration, are offered by kalathoi from Asine (Wells 1983b:210–211, fig. 154; 251, fig. 190, nos. 702–703; 269, 273–274, figs. 203, 206, no. 910; cf. the "tripod-kalathos" from Tiryns: Desborough 1952:208, pl. 28, no. 6; note also some of the Lakonian "flaring skyphoi": Coulson 1985:45–49, figs. 5–6), but these are, in the main, fragmentary and the connection between them and **T93-1** unclear (cf. also the Argive handmade painted pyxides: Wells 1983a:74–75, figs. 51–3; 1983b:218–219, figs. 163–164). Beyond noting these similarities with the Cretan and Argive material little can be said about the exact shape and date of **T93-1**.

2. EUBOIAN

The pieces assembled below match all but two of the Euboian imports found at Knossos in all elements, as well as the other Lelantine plain reference material. They are also chemically similar to several other groups, such as the coastal Thessaly group (see appendix E). As Jones notes (appendix E), several sources suggest themselves, of which the Lelantine plain could claim to be one—at least for some of the samples. He further notes that it is important to stress that a local source could account for others. I have arranged the likely Euboian pieces into two broad chronological categories of Developed Protogeometric and Late Protogeometric/Subprotogeometric (for a useful characterization of Euboian and Attic fabrics see Descoeudres and Kearsley 1983:13, 20).

a. Developed Protogeometric

AMPHORA (**48**, **49**, **84**)

The three amphora fragments, **48**, **49**, and **84**, presented here are almost certainly Euboian. **48** and **49** were found in deposit type 4 (Trench 25) and are perhaps from the same vessel; the third, **84**, was found in the area of the Early Hellenistic Gate during the 1975 excavation season in a deposit where the latest diagnostic material was of the fourth century B.C.

The shoulder fragment **48** preserves portion of one set of upright mechanically drawn concentric semicircles with a band below and what appears to be a central filling ornament in the form of a half hourglass, or triangle (cf. Popham, Sackett, and Themelis 1979–80: pl. 260d; pl. 17, nos. 220, 210; Catling and Lemos 1991: pls. 33–34, various examples; for Attic comparanda cf. Kraiker and Kübler 1939: pl. 57, inv. 565). The rim fragment **49** with its straight neck and everted rim clearly belongs to Desborough's belly-handled amphora of Class I (Desborough 1952:20–23; 1972:33, 36, fig. 3; 148; for the shape in Euboia see Popham, Sackett, and Themelis 1979–80: pl. 107, no. 56.1; pl. 112, no. 3.1; Catling and Lemos 1991: pls. 61–62, nos. 450, 452; for Attic versions cf. Smithson 1961:156, pl. 24, no. 3; Popham, Sackett, and Themelis 1979–80: pl. 175, T14.1; Brouskari 1980:23, pl. 4a, no. 15). The same amphora type is closely copied by the local potters. The small shoulder fragment **84** preserves portion of one set of mechanically drawn concentric circles above a band (cf. Popham, Sackett, and Themelis 1979–80; Catling and Lemos 1991 [passim]; for Attic cf. Kraiker and Kübler 1939: pl. 41, inv. 591; pl. 56, inv. 556; pl. 58, inv. 563; Kübler 1943: pl. 5,

inv. 915). The possibility of a closed vessel form other than amphora (e.g., hydria, jug) should not be altogether ruled out, although amphora seems more likely on the basis of wall thickness. All three fragments are best accommodated within a developed phase of Euboian Protogeometric.

SKYPHOS (**T127-1**)
The skyphos, **T127-1**, is preserved near complete. Particularly close in details of shape and in the manner of decoration is a skyphos from Chalkis, the shape of which is compared to Attic (Andreiomenou 1966:251–252, no. 3, inv. 1344, pl. XLVb). This type of skyphos with a good conical foot is characteristic of Attic Protogeometric (Desborough 1952:7ff; 1972:152), but its simple manner of decoration is not so common in Athens (the decoration corresponds to that of Desborough's [1952: 80, 89] Attic type V skyphoi). The type first appears at Lefkandi in Middle Protogeometric with contemporary parallels known from Thessaly, Skyros, and the Argolid (Popham, Sackett, and Themelis 1979–80:299; cf. Wace and Thompson 1912:209, fig. 144c; 211, fig. 146d; Hansen 1933: 119, fig. 53c; Frödin and Persson 1938:427, fig. 275; Desborough 1952:89; Verdelis 1958: esp. 8, no. 51). The decorative scheme of **T127-1**, as well as the form of its foot and the general proportions of body and rim, are closely matched on a one-handled cup of Early Protogeometric date at Lefkandi (Popham, Sackett, and Themelis 1979–80:294, fig. 7C).

b. Late Protogeometric/Subprotogeometric

AMPHORISKOS (**T22-2**)
The amphoriskos with handles from shoulder to lip, **T22-2**, is fully described in the catalogue (chapter 3); its attribution as Euboian is assured. Desborough (in Popham, Sackett, and Themelis 1979–80:311) lists six local vessels of this shape from the Palia Perivolia cemetery at Lefkandi, and a further three that are designated as Attic imports (Popham, Sackett, and Themelis 1979–80:348); more recent excavations at the Toumba cemetery at Lefkandi have yielded two more local examples (Popham, Touloupa, and Sackett 1982:232, pl. 18, no. 2; pl. 22 no. 10; the excavators chose to rename the shape "krateriskos," a term that is most confusing). Among these there is a good deal of variety both in details of shape and in the manner of decoration, although all may be safely assigned to the period Late Protogeometric–Subprotogeometric II (Popham, Sackett, and Themelis 1979–80:311). Similar variances are noted in the Attic version of the shape, which dates mainly to Late Protogeometric, although an earlier variety is known (Desborough 1952:40–43, pl. 6; 1972:146; Hampe and Simon 1959: pl. 1; Coulson 1983:357, fig. 1, pl. 69). **T22-2** finds no exact counterpart in terms of decoration either among the Euboian or the Attic varieties of the shape, but its closest parallels are offered by a series of small Euboian neck-handled amphorai and amphoriskoi, which are particularly close both in shape and decoration and which are mainly confined to Late Protogeometric–Subprotogeometric I (see, among others, Popham, Sackett, and Themelis 1979–80:309, fig. 12H, pl. 35 [P18.3]; pl. 132 [P13.2]; pl. 266a [S33.6]; cf. also the decoration on the Attic jug Rhomaios and Papaspyridi 1930: pl. 1, no. 2).

PENDENT SEMICIRCLE SKYPHOS (**T77-3**)
Six joining fragments preserve only a small portion of rim and upper wall of the skyphos **T77-3**. Although very worn and with little of the painted decoration preserved, the vessel is clearly an imported pendent semicircle skyphos; chemical analysis indicates a Euboian source. The piece is discussed more fully on p. 413, as is the one example of a pendent semicircle skyphos in local fabric (**T82-2**). The form of the rim of **T77-3** is consistent with Kearsley's Type 3, which is dated contemporary with Euboian Subprotogeometric and Attic Early Geometric-Middle Geometric I.[68]

c. Fragments of uncertain date
Three fragments of closed vessels, **T113-9**, **T117-15**, **T118-6**, and one from an open vessel, **T117-4**, are discussed here. All that was encountered of **T113-9** were two joining fragments preserving portion of body. The shape recalls that of the amphoriskos **T22-2**, but it is from a slightly smaller vessel; this, coupled with its rather more biconical form and the fact that there were no preserved traces of handles, might suggest a small one-handled closed shape such as a lekythos or jug. There is no shortage of related Euboian and Attic

forms, but the vessel is difficult to place chronologically as it finds parallels in both Submycenaean and Late Protogeometric.[69] Of similar form is the rather more fragmentary **T117-15**, which is closely related; among the minuscule fragments recovered of this vessel was a small portion of one vertical handle.

The two joining body fragments of **T118-6** are of another small closed vessel; any number of shapes may be suggested from an amphoriskos to a lekythos or jug (cf. **T113-9**). The curved wall and the preserved decoration, which consists of a reserved band with at least two diagonal lines above an area painted solid, also brings to mind the standard globular pyxis (which is never painted on the interior) common in Athens (Desborough 1952: pl. 8, nos. 575[7], 912[28], 913[28]; a similar decorative scheme is also met on Attic trefoil-lipped oinochoai: Desborough 1952: pl. 7, no. 2010) and Lefkandi (Popham, Sackett, and Themelis 1979–80:328, fig. 17, esp. E and C).

The fragmentary base and lower body of an open vessel, **T117-14**, is almost certainly from a one-handled cup rather than a skyphos. Similar cups with conical foot and with base and body painted are common in both Euboia (Popham, Sackett, and Themelis 1979–80:293–302, figs. 7–8 [cups and skyphoi]; cf. especially the cups pl. 152, P pyre 11.9; pl. 172, T7.2) and Athens (Desborough 1952: pl. 1, G82e–f; pl. 11, nos. 1104, 1082).

3. THESSALO-EUBOIAN

The vessels discussed under this heading may be assigned to this general region with reasonable certainty. Chemically they are close not only to Euboian but also to coastal Thessalian (appendix E; for Thessalian fabric see further Dakoronia 1982; Hourmouziades, Asemakopoulou-Atzaka, and Makris 1982:58, pl. 29). They are distinguished here from the more canonical Euboian on account of details of shape and decoration.

Vertical-handled amphoriskos **(T47-1)**
Shape and decoration of the vertical-handled amphoriskos, **T47-1**, are described more fully in the catalogue (chapter 3); the clay is micaceous but significantly different from anything local and the decoration is executed in a good semilustrous paint, which contrasts to the normal Toronean. I know of no exact parallel for **T47-1** that accounts for all aspects of shape and decoration; closest are a number of Thessalian amphoriskoi (cf. Wace and Thompson 1912:211, fig. 146 [Theotokou]; Heurtley and Skeat 1930–31: pl. 6, no. 81 [Marmariani]; Desborough 1952: pl. 21a; also an unpublished amphoriskos in the Volos Museum; cf. Verdelis 1958:11–12, pl. 3, nos. 9–10). A few amphoriskoi from Lefkandi are not unlike (Popham, Sackett, and Themelis 1979–80:309, fig. 12, esp. D; pl. 183, T26.15–17, the latter two with somewhat taller conical feet; see also Popham, Sackett, and Touloupa 1982a: pl. 22, nos. 5, 9), but the mica content and general feel of the fabric look different from normal Euboian. **T47-1** may also be compared to the shoulder-handled amphora from Dirmil (Bass 1963:359, no. 2, pl. 83, fig. 16), but is smaller and has a flaring, rather than everted, rim. In any case, the vertical-handled amphoriskos is a shape principally localized in the Thessalo-Cycladic-Euboian region (see discussion under the local vertical-handled amphoriskos) and the overall shape and the light-ground system of decoration of **T47-**1 might suggest a date in the earlier or developed part of Protogeometric rather than Late Protogeometric, but this is only a guess.

Krater **(63, 78, 85)**
Fragments of three kraters are here listed, although **63** may possibly be from a large "circles" skyphos rather than a krater; a Euboian or Thessalian origin is clear enough. **78** closely resembles the shape, decoration, as well as aspects of the fabric and feel of the well-known series of kraters from Marmariani (Heurtley and Skeat 1930–31:30–33); the fragment **85** is very similar. The more poorly preserved small body fragment **63** is much more difficult to place stylistically.

Of the three the best preserved is **78** (**pl. 402**). The upper wall of the vessel is decorated on either side (fragments from both sides of the pot were recovered) with three sets of mechanically drawn concentric circles above two thin bands; the lower wall appears to be painted solid. The system of decoration is typical for Thessalian kraters (Heurtley and Skeat 1930–31:30–33, pls. 9–11; Desborough 1952:142–145, pl. 23; circles without alternating vertical motifs are more common at

Kapakli: Verdelis 1958:22–26, pl. 7, no. 44; pl. 8, no. 47; no. 45; see also Doumas and Marangou 1978:193, no. 44 [Skyros]; Theocharis 1958:18 [Iolkos]), and enough fragments of the vessel were recovered, including the paint extending onto body from the handle stumps, to establish that it is a krater of the type with two rolled handles (Heurtley and Skeat 1930–31:30; Desborough 1952: 142). The small body fragment **85** is perhaps from a krater of similar form. The more problematic **63**, clearly decorated with sets of mechanically drawn concentric circles, may be compared to **78**, as well as to a series of related Attic, or Attic-inspired, shapes (for Attic kraters see above; for "circles" skyphoi see Desborough 1952: pl. 10–11; pl. 25, no. 3 [Tenos]; and especially larger examples such as pl. 16, nos. 146, no. 45 [Zagora]; cf. Sauciuc 1914: figs. 58–59; Paschalis 1925:585).

4. CYCLADIC

Jug (**T72-1**)
The jug **T72-1** (**pls. 333a–b**) served as ash-urn, and only pot, of Tomb 72; the upper neck and rim as well as part of the body were not preserved. In details of shape (notably the form of the base, the thin handle, and the narrow neck) and in manner of decoration, **T72-1** is almost identical to a trefoil-lipped oinochoe from Rheneia (Desborough 1952:157, pl. 18, no. A1461), differing only in that the point of maximum diameter on body is slightly wider (Desborough 1952:157; see also Rhomaios and Papaspyridi 1930: pl. 2, no. 1). Jugs of similar form are also common in Thessaly (Heurtley and Skeat 1930–31:19, fig. 8; 24, fig. 9; pls. 3–5; Desborough 1952: pls. 20, 21b, 22 [lower row]; Verdelis 1958: pls. 4–6) and Lefkandi (Popham, Sackett, and Themelis 1979–80:317, fig. 15; 322, fig. 16), but these are seldom decorated in a manner similar to **T72-1** with opposed diagonals on the shoulder and a reserved base and lower wall; the latter are features commonly found on other Cycladic shapes (cf. Dugas and Rhomaios 1934: esp. pl. XIV, nos. 58–60, 63; Desborough 1952: pl. 19, no. A1453; H. Walter 1968:92, pl. 2, no. 18). **T72-1** should belong to the latest stages of Protogeometric (Desborough 1952:157), or shortly after. I cannot suggest a more precise source within the Cyclades (for Cycladic fabric see Dugas 1925:107–115; Descoeudres and Kearsley 1983:18; Papadopoulos and Smithson 2002).

5. UNCERTAIN PROVENANCE

The two pieces discussed here, **27** and **64**, may well prove to be from one of the production centers or general regions already noted. They cannot, however, be assigned stylistically to any one center specifically and, as such, are best treated as uncertain.

Amphora(?) (**27**)
The shoulder fragment **27** from a large closed vessel, probably an amphora, may be dealt with quickly. The fragment is small, comparatively thin walled, and preserves portion of one set of mechanically drawn concentric circles. The fabric, macroscopically, is finer than local with almost no visible inclusions and only a fine dusting of surface mica. Chemically, the fabric of **27** matches with that of local, but the visual differences are rather marked. An Euboian, coastal Thessalian, or Argive source can be excluded, nor is it likely to be Attic (see appendix E).

Small closed vessel (**64**)
The various neck and body fragments of **64**, preserving portion of shoulder and neck of a closed vessel, have not been chemically analyzed. The shape is probably a one-handled jug or trefoil oinochoe, and possibly an amphoriskos or small hydria. Shape and decoration, the latter not conforming to anything local, are described in the catalogue (chapter 2). A similar decorative scheme is occasionally met on the necks of Thessalian jugs, but the motifs and their arrangement on **64** are different from those commonly found in Thessaly (Heurtley and Skeat 1930–31:48, fig. 19, pl. 3, nos. 42, 44, 47; pl. 4, nos. 50–51, 53–54, 56; pl. 5, no. 70, and cf. the amphora pl. 5, no. 74; cf. also the small hydria from Serraglio Tomb 3 on Kos: L. Morricone 1978:65, fig. 41). The closest parallels are offered by a series of jugs and other closed vessels from various sites in central-western Greece.[70] On the basis of these, a date for **64** in Late Protogeometric-Early Geometric/Subprotogeometric seems reasonable.

E. IMPORTED HANDMADE VESSELS

The eight pieces listed under this heading may be divided into two categories. The first comprises four fragments that share a common fabric typical for sites in central Macedonia. The second is a less homogeneous group of four vessels of different shape, mostly well preserved, which share a number of common features and which may derive from any quarter of Macedonia (see also the discussion above on three atypical jugs [**T13-2**, **T67-3**, **T109-5**], which may be local or imported from elsewhere in Macedonia). Chemical analysis (appendix E) conducted on some of the vessels under this heading suggests either a local source or one at no great distance from Torone. Although several of the pieces presented may prove to be local products, I have preferred to distinguish them from the more usual local handmade pottery—what may be termed canonical local—on account of their differences, visually, in terms of fabric and feel, which in some cases are significant) and also because of the fact that these vessels represent rare forms of shape, burnishing, and, in some cases decoration that are otherwise not found among the handmade vessels from the Terrace V cemetery.

1. CENTRAL MACEDONIAN BURNISHED WARE

There are small fragments only of four vessels of this ware: **T102-5**, **T111-4**, **53**, and **54**. The first two were fire-affected sherds encountered in the fill of Tombs 102 and 111, respectively, and both may be assigned on the basis of associated pottery to the earlier part of the period of use of the cemetery; **53** and **54** were recovered from deposit type 4 (Trench 25). All four fragments share a common fabric that may be described as fine, being well levigated with few or no visible impurities and only a dusting of fine mica. With the exception of **T102-5**, which was discolored due to burning, the fired color of the clay is consistent, with the clay core having fired gray and the surfaces a good brown color, close to reddish brown 5YR 5/3–4/4 (on **T111-4** closer to brown 7.5YR 5/4); there are none of the variances of color noted in the usual local handmade wares. Vessels of this ware are burnished, often with faint tooling marks visible, producing a good surface with a slight sheen (the tooling marks are not as pronounced as those on local products). The fabric is consistent with that of the standard handmade fine ware of many central Macedonian sites (cf. especially the characterization of this fabric, or one similar to it, at Assiros: Wardle 1980:244, 256), which, on the evidence of the quantitative notes of the material from Assiros, forms between 20 and 30 percent of any assemblage.

The four fragments of this ware at Torone represent two shapes. **T111-4** preserves portion of rim, neck, body, and entire diagonally grooved handle of the ubiquitous jug with cutaway neck; the handle fragment **54** is almost certainly of a similar vessel (for similar jugs see Wardle 1980:260, fig. 19, no. 51; Hochstetter 1984:53, fig. 12, Types 1a–d; 57, fig. 13 for the occurrence of the handle type; also pl. 88, no. 11; pl. 101, no. 5; pl. 140, no. 2; pl. 149, no. 3; pl. 181, no. 7; pl. 262, no. 5). The rim and body fragments **53** and **T102-5** are of bowls or basins (their fragmentary state makes it difficult to determine the exact shape), with a knobbed rim, flat on top, of a type not otherwise represented among the tomb pottery. Judging by the estimated rim diameter, both vessels are quite large. Related vessel forms are best represented at Kastanas where the shape of **T102-5** and **53** is consistent with both bowls (*Schalen*) and basins (*Schüsseln*) (Hochstetter 1984:78–101, esp. 85, fig. 20; 89, fig. 22 [bowls, notably Type 4a1, and basins]; 101–113, esp. 106, fig. 27; also pl. 92, no. 6; pl. 223, no. 7; pl. 228, no. 1). Incised decoration, in the form of groups of opposed diagonals, is found on the rim top of both; similar vessels are common at Kastanas and Axiochori/Vardarophtsa.[71]

Of the four fragments, only **53** and **54** have been analyzed chemically (appendix E). Although there is a close match with the geology at the south end of the bay of Torone, the rarity of this type of pottery in the Terrace V cemetery is marked, and the fabric is very different visually to both that of the normal local and that from the kiln. Some of the trace elements are comparable with those examples of Provincial Mycenaean from Assiros, for which a connection has been suggested with either the coastal area at the head of the Sithonia peninsula or the Gallikos and Vasilika plains (Jones 1986:110ff).

2. OTHER (MACEDONIAN/CHALKIDIC) (**PLS. 393–396**)

The four vessels discussed here are best dealt with separately, but although different from one another, they share a number of common features that are worth noting. All four are thick-walled, resulting in vessels considerably heavier than the majority of local handmade products and further contrasting with the distinctive central Macedonian ware described above. The surfaces of all four are burnished smooth, and often preserve a slight sheen. With the exception of **T21-3**, bases are more noticeably flat in contrast to local vessel forms where bases are usually only slightly flattened. It remains difficult to determine, however, on the basis of visual criteria whether the four derive from a common source. The fabric and feel of **T54-1** are particularly close to **T97-1**; **T112-1** is not unlike, but rather less coarse, whereas **T21-3** seems to stand apart. Chemically all four form a noncalcareous group, which differs from **53** and **54**. Their chemical compositions, more fully discussed in appendix E, suggest a source at no great distance from Torone.

Two-handled bowl (**T21-3**)

Shape and fabric of the two-handled bowl **T21-3** (**pl. 396**) are described in chapter 3; incised decoration in the form of zigzags is confined to the top of the one completely preserved handle, and the existence of the second handle is attested by scars. The shape is well represented in contexts of the Early Iron Age in many parts of Macedonia (Heurtley 1939:232, pl. XXI, no. 469; 236, fig. 110c, h; Casson 1923–25:15, fig. 6b–c; Hochstetter 1984: 78–101, esp. 89, fig. 22 [cf. Type 5c1]; 94, fig. 24 [Type 9b]; 96, fig. 25; see also pl. 163, no. 3; pl. 201, no. 1; pl. 209, nos. 3–4; pl. 220, no. 5; pl. 221, nos. 1–2; pl. 223, no. 4; cf. pl. 45, no. 1; pl. 224, nos. 1–2), principally at sites in central Macedonia, but is also found further west at Vergina (Andronikos 1969:207–299, esp. figs. 46–47; Radt 1974: pl. 36, nos. 1–4).

Jar (**T54-1**)

The fabric of jar **T54-1** (**pl. 393**) is coarse, containing many small to large, variously colored inclusions but only a sprinkling of fine silvery mica (cf. **T97-1**). The base is flat, the body globular, and the vertical neck flares out slightly to a plain rim rounded on top. Although the entire base and lower body of the vessel are preserved, only about three-quarters of the upper body and approximately one-half of the neck and rim were recovered. The possible existence of one handle is suggested only by a single nonjoining fragment preserving small portion of a vertical handle, which may, however, not belong (there is insufficient room on the vessel for two handles). There are slight horizontal ridges on the neck indicating that it was built up of coils and a series of three preserved moldings on the upper body in the form of very slight and rather elongated "knobs" or "humps," barely visible. This is a feature commonly met on the *Bückelkeramik* of Troy Settlement VIIb2, but I know of no exact Trojan parallel for **T54-1** (for a discussion and down-dating of *Bückelkeramik* see Wardle 1980:262–263; for tactile marks on Neolithic pottery serving as aids for blind users see Vitelli 1977:23). Vessels closely related to **T54-1** are particularly well represented among the various handmade amphora types at Kastanas (Hochstetter 1984:43, fig. 9 Types 1b and 3e1 [primarily Late Bronze Age]; 45, fig. 10, Types 1c, 2b, 3a, c [Early Iron Age]; cf. a Late Neolithic one-handled jug of related form: Mylonas 1929: fig. 31, jug shape 1; fig. 71; cf. Childe 1929:119, fig. 70).

Two-handled jar with vertical shoulder handles (**T97-1**)

Fabric and feel of the two-handled jar with vertical shoulder handles, **T97-1** (**pl. 394**), are related to **T54-1**; the vessel has a flat base, globular body, and a neck (only the lower portion of which is preserved) offset from the body by a ridge. Two rather heavy handles are set vertically on the shoulder. The location of **T97-1**, in relation to Tombs 6, 7, and 96, may suggest a date in the earlier part of the period of use of the cemetery.

Although the shape is related to the local two-handled jar, most commonly with horizontal belly handles, a type that is found throughout Macedonia during the Late Bronze and Early Iron Ages (cf. Hochstetter 1984:38–48; also 128, fig. 34, Type 5 and examples of Type 6; cf. Andronikos 1969:204–207, Shape Γ, and also the rather more open form of Shape Z; 213–215, esp. fig. 54; see

further Heurtley 1939:222, pl. XVI, no. 440; Romiopoulou 1971b:355, fig. 3, nos. 10, 26; Wardle 1980:257, fig. 16, no. 43), the shoulder-handled variety is comparatively rare. A number of related vessel forms may be cited from Kastanas and Assiros (Wardle 1980:245, fig. 9, no. 6; cf. 258, fig. 17, no. 49; Hochstetter 1984: pl. 10, no. 1; cf. 129, fig. 34, primarily Types 6b, c, d; pl. 132, nos. 1–2; for an Early Bronze Age antecedent see Heurtley 1939:186, pl. 14, no. 271), but exact parallels are few. Aspects of the shape of **T97-1**, primarily the proportions of the body, the handles, and the ridge at junction of shoulder and neck, may also be compared to those of a distinctive four-handled form of the Late Bronze Age (Heurtley 1939:214, pl. 17, no. 408; Wardle 1980:246, fig. 10, no. 15, and the Early Iron Age version, 258, fig. 17, no. 46; Hochstetter 1984:43, fig. 9 [Type 3e2], pl. 36, nos. 2–3; pl. 45, no. 8; pl. 50, nos. 1–2). A very similar shoulder-handled amphora (two handles) is known in Troy Settlement VIIb (Blegen et al. 1958: fig. 218, C84, and esp. fig. 265, nos. 32.23, 37.1007, 37.1021, 33.126), with related examples in Chios (Hood 1981:193, fig. 101, type 46, type 47A–B; 403, fig. 182, no. 1236) and Epiros (see mainly Vokotopoulou 1973:35, pl. 7a).

Pyxis (**T112-1**)

As already noted, the fabric of the pyxis **T112-1** (**pl. 395**) is not unlike that of **T54-1** and **T97-1**, but rather less coarse. Chronologically, the associated pottery recovered from Tomb 112, although difficult to date precisely, would suggest a date sometime in the earlier part of the period of use of the cemetery rather than the later. The shape of the vessel is consistent with the well-known handmade pyxides found in Attika (perhaps the closest parallel to **T112-1** is Kraiker and Kübler 1939:37, pl. 25, inv. 491). Sourvinou-Inwood (1975; see now Reber 1991) provides the fullest discussion with a list of terracotta examples known to her, and she goes on to discuss their connection with similar vessels of bronze (for the bronze version, see further Bouzek 1974a:24–37; Kilian-Dirlmeier 1979: 229–241, pls. 82–89; pl. 110, nos. 1–3; pl. 106A [for distribution]). Her list of clay pyxides includes Attic Submycenaean and Late Protogeometric, Argive Geometric (both hand- and wheelmade), one example from Thessaly, and the one only from Macedonia, from Tsaousitsa (Sourvinou-Inwood 1975:166–167; for Tsaousitsa, see Casson 1923–25:10, fig. 3f; a related pyxis from Cyprus should be added to the list: Hood 1973:47–50, pl. 8, no. 2).

Sourvinou-Inwood's study of the material led her to the view that Macedonia, or rather what she called a "loose Macedonian *koine*," was the place of origin of the distinctive Attic Submycenaean handmade ware, and she concluded that during the later stages of the Submycenaean period, Attika came in some sort of contact with the north Greek cultural sphere (Sourvinou-Inwood 1975:171–172). In an earlier paper, Bouzek (1966:65; see also 1969a:25, fig. 5; 109, fig. 42; 112–115; 1969b:43, 54; 1974b; 1985:198–199) preferred to see a Middle Balkan origin for the Attic pyxis, but the parallels he cites tend to be later than Submycenaean (Hallstatt B-C; see Sourvinou-Inwood 1975:167–168; for the chronology of the northern material see Wardle 1980:262, and especially Sandars 1971:9, 24–25). Other scholars prefer to tread more carefully (e.g., Smithson 1961:171, 174–177; Desborough 1972: 142–144), but Sourvinou-Inwood's thesis is an interesting one as the connection between Attika and Macedonia at a time contemporary with the Submycenaean style of pottery is now supported by the evidence of the wheelmade and painted pottery of Torone. With regard to the handmade pyxis, Sourvinou-Inwood's primary difficulty with her Attic-Macedonian connection was the fact that apart from the one pyxis from Tsaousitsa noted above—dating to the eighth century B.C.—she could cite no other *clay* example from Macedonia. Since that time a number of related shapes have been published from Macedonia, principally from Kastanas and Assiros,[72] and although the quantity of these vessels is admittedly not great, there is enough evidence to indicate, especially when bearing in mind the bronze examples, that the basic vessel form was established in the Macedonian repertoire already in the Late Bronze Age (the incised terracotta spindlewhorl, bead, or button **91**, and possibly the terracotta **T54-2**, appear to be related; see chapter 7).

Chemical analysis indicates that **T112-1** is either local Toronean or else an import from somewhere in the region. The typological resemblance of **T112-1** to Attic Handmade Burnished Ware does not appear to extend to its composition: as

Jones notes in appendix E, although no examples of this Attic ware have been analyzed, the general character of its composition has not as yet been encountered in the various classes of Attic pottery which have been characterized chemically.

CHRONOLOGICAL DEVELOPMENT OF THE LOCAL STYLE OF POTTERY AND ITS EXTERNAL INFLUENCES

In the typology presented here I have continually used the rather nebulous time designations "the earlier part of the period of use of the cemetery" and the "later" or "latest stages of the period," the reasons for which are set out in the introduction to this chapter. The evidence, as we have it, is insufficient to permit a more rigid subdivision of the period into neatly defined phases that have any real meaning. Nevertheless, in the case of specific shapes one can detect a certain amount of development that has a chronological value and that, by and large, follows stylistic trends prevalent in the pottery producing centers of central and southern Greece. This stylistic development applies to the local wheelmade and painted pottery, since the chronology and any apparent chronological development in the local handmade ware are largely reliant on the evidence of the painted pottery. This having been said, the relationship between the local wheelmade and handmade wares, discussed more fully above, is something that should always be borne in mind. The chronology is greatly assisted by the imported vessels that help to anchor the local wares in relative time, as well as pointing to those places with which Torone enjoyed some form of contact during the period. Although of importance, the evidence of the imported pottery should be taken *cum grano salis* as it may well provide a false sense of security; to what extent the imported pots encountered in the cemetery represent a true reflection of the imports and external connections of Torone at any given time in the period we may never know. Pots do not equal people (Knapp 1993; Papadopoulos 1997b), and in the following section my aim is to reconstruct not social or economic history, but *ceramic* history: to tie up the various threads of the ceramic evidence, as preserved, in order to gain some idea of the salient characteristics of the local style of pottery and its chronological development. As has been maintained throughout this chapter, so too here, the period of use of the cemetery may be divided, for the sake of convenience only, into two broad phases, allowing for a good deal of chronological ebb and flow between the two.

The earlier part of the period of use of the cemetery (contemporary with Attic and Lefkandian Submycenaean, Early and Middle Protogeometric)

Although the recent excavations at the prehistoric settlement on Promontory 1 at Torone have yielded well-stratified deposits of the Early and Middle Bronze Ages, as well as good deposits of Early Mycenaean date (including the earliest Mycenaean pottery thus far imported to Macedonia or Thessaly: see Cambitoglou and Papadopoulos 1993), our knowledge of the later stages of the Late Bronze Age is limited largely to material redeposited in later contexts (Cambitoglou and Papadopoulos 1988; 1990; 1991; 1994). Nevertheless, whatever the course of events in the period preceding that of the cemetery, the earliest dated tombs on Terrace V may be securely assigned as contemporary with Attic Submycenaean and are characterized by a style of pottery very close to Submycenaean, wherever it is found, and particularly Athenian Submycenaean. There is at least one Attic import (**T101-8**) dating to this period, whereas none of the other imports are demonstrably this early. Dated to this period are Tombs 9, 96, 101, and 109; some tombs are probably contemporary, and others, such as Tombs 6, 7, and 8 are clearly earlier. Although not great, this number of tombs is still quite significant. The Attic-inspired—or clearly Submycenaean pottery that is very close to the shape and decoration of Attic—includes the amphoriskos **T96-1** and, from Tomb 101 alone, five one-handled cups, a skyphos, a small open vessel, and an amphora shoulder fragment. Other Submycenaean-style wheelmade and painted vessels in local clay include three amphoriskoi (**T101-1**, **T109-1**, and the poorly preserved **T9-1**), a skyphos (**T101-7**), as well as two small skyphos fragments (**T109-3**, **T109-4**), a rim fragment of a large open vessel equipped with a spout (**T109-2**) in addition to the handmade wares

found in these tombs. Clearly the evidence is quantitatively too limited to allow for any conclusions of a far-reaching nature; conspicuous are the many Submycenaean vessel forms not represented, such as the stirrup jar, the lekythos, the hydria, and the various types of jug (for these see Desborough 1972:30–49; Mountjoy 1986:194–200).

Whichever way this material is interpreted, the evidence of the pottery points to a strong link between Torone and Athens. This link is further supported, at least superficially, by the evidence of burial custom (see chapter 4). Even in the most liberal definitions of Submycenaean pottery, it is clear that its distribution outside Attika, parts only of the Peloponnese, and Lefkandi, is limited indeed (see especially Styrenius 1967:125–148, where some of the material previously listed as Submycenaean is disputed; cf. Bouzek 1969a:91, fig. 33; it is important to note that at Lefkandi, where there is a thriving local Submycenaean phase with a clear Mycenaean pedigree, no imported vase has yet been identified in a Submycenaean context (Popham, Sackett, and Themelis 1979–80:347; 410, n. 467; cf. 283–286).

On the basis of this evidence, it seems reasonable to conclude that much of the inspiration for the local wheelmade pottery was the result of direct central or southern Greek influence, or else that a local Submycenaean style of pottery evolved out of the local Mycenaean wheelmade pottery tradition following a trajectory very similar to that of Athens, Lefkandi, and the Argolid. But however closely the few local pots of this period, in terms of both shape and decoration, follow central and southern Greek models, there is already an unmistakable sign of a local flavor, most notably the decoration of the skyphos **T101-7** with the "ugly sausage" motif. This local flavor is nowhere more obvious than in the handmade wares, and although our knowledge of the period immediately preceding that of the Terrace V cemetery is limited, it is clear the handmade pottery of Torone owes almost everything to a local indigenous Bronze Age tradition. Most of the handmade shapes distinguished in the typology are represented in tombs with Final Mycenaean/Submycenaean painted pottery or come from tombs (e.g., Tombs 6 and 7) that are stratigraphically related and earlier than Submycenaean tombs. The only handmade shape that has no clear Macedonian ancestry is the tripod cauldron, and here, too, one can detect a strong influence from the south.

The transition to a true Protogeometric style, as first defined by Desborough (1948) follows closely the trends current in Athens, Lefkandi, and other central and southern Greek centers, and there is no reason to suppose that the transition in Torone occurred at a time significantly later than in Athens. On the contrary, details of the local pottery are so close to Attic that it is clear the local potters must have been well acquainted with Attic fashion. This is especially evident in the case of both the neck-handled and belly-handled amphorai. Individual amphorai such as **T51-1**, **T52-1**, **T60-1**, **T95-1**, **T104-1**, **T115-1**, **T118-2**, and **T124-1** all find parallels among the many from the Athenian Kerameikos, and their use or reuse as ash-urns only highlights the point. The similarity between the Attic and Toronean amphorai is not one of a general family likeness, but one where even details like the molding of neck and rim and the form of the base are very close. Hence both types of Attic Early Protogeometric belly-handled amphora—Desborough's (1952:20–37) Classes I and II—are well attested at Torone (see, among others, **T104-1**, **T51-1**). Furthermore, both types of early belly-handled amphorai as well as the neck-handled amphorai, stand on a flat disk base, a characteristic feature of Athenian Early Protogeometric, which, in the course of Protogeometric, develops into a low ring base (Desborough 1972:33, 148). It may seem pedantic to base too much of the argument on such details, but it is exactly in them that the link between Torone and Athens is amplified. Few southern and central Greek centers, including Lefkandi, have produced any number of amphorai that so closely follow the Attic model, particularly belly-handled amphorai, and in this the case of Thessaly may be taken to point. Whatever the nature of the connection between Thessalian and Attic Protogeometric, the belly-handled amphora is virtually unknown in the Thessalian repertoire, while the popular neck-handled amphora is, from the outset, equipped with a low ring base. Moreover, the many recent excavations at sites in central Macedonia, in the area around Thessaloniki and the Thermaic Gulf, have produced very little evidence of belly-handled am-

phorai contemporary to those of Torone, with the exception of a few pieces from Kastanas and Toumba.

Other shapes current in the local wheelmade repertoire include the krater, which in this earlier Protogeometric phase is characterized by a low ring (or flat disk) base and a rim diameter that is proportionately greater to height than on later examples of the shape. The lekanis, which has already developed a tall conical to flaring foot, is an unusual shape as it finds no real parallel in Attic Protogeometric, and elsewhere in Greece only related, not identical shapes can be cited. I have suggested above that the shape has its origins in the Mycenaean shallow bowl (Furumark 1972a: Shape 295), that it is well represented in Athens during the later stages of Late Helladic III, and that at least one example is known dating to the period of transition from Submycenaean to Early Protogeometric from the cemetery on Erechtheion Street. Worth noting here is the fragmentary **T101-9**, which may represent the earliest version of this shape in Early Iron Age Torone. The strands of this particular argument seem tenuous, but it is worth remembering that other shapes, like the krater, were not popular in Athens as tomb furniture and, consequently, their development is far from being clearly understood. The other popular shape during this period is the skyphos, and here it seems the local potters were content to continue the trend already established in the earlier tombs of a low foot, and to maintain the "ugly sausage" motif as the chief decorative element. So while mechanically drawn circles and semicircles were being applied to amphorai and kraters, their application on skyphoi remains, to date, unattested. In this, there is an important disconnect in terms of ceramic style with sites in central and southern Greece, including Athens and Lefkandi.

As far as the handmade pottery is concerned, the two-handled jar, the jug with cutaway neck, the kantharos, the cup/kyathos, the bowl with square-cut handles, the pithos, the pitharion, and the tripod cauldron are all well established and well represented in early tomb groups, and it is exactly here that an *eclectic* nature of the local ceramic tradition is brought to the fore. When considering the range of wheelmade shapes, the number of individual vessel forms is limited indeed, and it is evident that the wheelmade and handmade wares were complementary to one another. There is, for instance, no local wheelmade pouring vessel, with the exception of the solitary jug **46**, and, conversely, there is no local handmade large open vessel suitable for mixing. The distinction between handmade and wheelmade at Torone is not one of a coarse utilitarian or domestic ware as opposed to a fine wheelmade table, ceremonial, or elite ware, but one where essentially the two different types of local pottery could be used to similar ends. This is verified by the fact that both were employed as receptacles for the cremated remains of the dead and saw service in other aspects of the funerary ritual.

Only the pithos, pitharion, and tripod cauldron were made of a considerably coarser variety of clay, and both the pithos (cf. **T89-1**) and the pitharion were put to use as ash-urns. It is possible the fragments of pithoi used in tombs represent broken pieces of vessels that saw service as storage vessels, and some of the tripod cauldrons display signs of burning consistent with cooking, although this cooking may well have been part of the funerary ritual. The coarser handmade vessels, however, were not the only ones to display signs of use prior to their deposition in a tomb; precisely the same is true for many wheelmade and painted pots, particularly skyphoi and kraters, many of which preserve clear signs of wear as a result of continuous cleaning and use. Moreover, a number of wheelmade as well as some handmade vessels were clearly deposited in tombs in a broken state. Consequently, although the respective *chaîne opératoire* of the handmade and wheelmade pottery traditions may have been significantly different, there was no blatant distinction in the consumption of handmade, as opposed to wheelmade, vessels in funerary ritual. Rather, the two different types of pottery played a complementary role to one another.

Thus far the influences, however enduring or superficial, of Attic Submycenaean and Early Protogeometric seem clear enough, but what of links and possible influences from other regions? Among the non-Attic wheelmade imported vessels few can be dated with any certainty to the earlier stages of Protogeometric. Some of the Euboian imports are perhaps early, but with most their fragmentary state makes it difficult to establish any chronological precision. The three amphora

fragments **48**, **49**, and **84** may be early, but this could not be established with certainty; of the remainder, only the Thessalo-Euboian amphoriskos **T47-1** perhaps falls into the later stages of this earlier period of use of the cemetery. The earliest verified Euboian import remains the skyphos **T127-1**, which is best assigned to Middle Protogeometric. Nevertheless, although direct imports of this early period from the *koine* comprising Euboia, Thessaly, the northern Cyclades, and Skyros are not as numerous as they are to be later on, a situation that may be purely accidental and the consequence of the factors inherent in the survival and retrieval of material as tomb furniture, one can detect a certain amount of influence from that sphere during the course of Early and Middle Protogeometric. This is perhaps best seen in the local vertical-handled amphoriskos, although here a chronological difficulty is met. The basic shape is common at Torone but defies easy classification. Few examples can be dated and among these the majority appear to be Late Protogeometric, although **T44-1** and the tiny sherd **T105-7** may be earlier. In any case, the significance of the shape lies in the fact that although it is very popular at Lefkandi and its related *koine* (Popham, Sackett, and Themelis 1979–80:308–311; the vertical-handled amphoriskos is already established at Lefkandi during Submycenaean), the shape is virtually unknown in Attic Protogeometric, and its appearance at Torone seems to argue for some form of contact with the Euboian cultural sphere during the course of the period. In addition, a certain Thessalian flavor can be detected in two local vessels, the wheelmade kantharos **T13-1** and the wheelmade jug with cutaway neck **46**, both of which represent to date the only example of each respective shape at Torone, and neither of which, unfortunately, can be dated precisely. In Thessaly the wheelmade version of both shapes, previously handmade, constitutes one of the notable ceramic hallmarks of the region (Snodgrass 1971:61–62). At Torone both shapes are well known in handmade and it is therefore difficult to be certain whether the wheelmade varieties are the result of direct Thessalian influence or whether they represent a parallel local development. One would like to know more about their date, but whatever the debt to Thessaly may be, two aspects are worth noting. First, the shape and decoration of both Toronean versions differ from those of the Thessalian repertoire in points of detail, and second, the appearance of the handmade versions of the jug and the kantharos in Thessaly ultimately trace their origin back to Macedonia.

Further evidence of external contact is to be seen perhaps in the few examples of black- and red-slip ware. The majority of these may be dated quite early, and individual vessels, such as the krater **T104-2**, may be dated close to the period of transition between Submycenaean and Early Protogeometric on account of the ash-urn of the tomb **T104-1**. Related wares are known from the Thessalo-Euboian sphere and also Aiolis, notably Lesbos and northwest Asia Minor, but exact parallels for the distinctive shapes at Torone are lacking. It may be that the few examples of this ware represent local products in a fabric not consistent with the normal local, but the general paucity of such wares elsewhere in Macedonia indicates a certain degree of outside influence.

It is also worth noting individual wheelmade vessels like **T45-1**, here classified as an "amphora/pyxis," where a strong Cretan flavor may be observed. The connection, in this case, may be more apparent than real and unfortunately it is difficult to date **T45-1** with any precision since it was the only vessel encountered in its tomb. There is, however, a general family likeness, in very broad terms, between the style of Cretan Protogeometric and that of Torone (this is especially so in the case of wheelmade amphorai and kraters). Many years ago, Desborough might have concluded that any similarity between Crete and coastal Chalkidike was the product of common roots in Attic Protogeometric (for the influence of Attic Protogeometric in Crete see Desborough 1952:235–236, 247–250, 270–271; 1972:236–239; Boardman 1961:154). Certainly, it is difficult to point to any direct archaeological evidence linking Crete and Macedonia in the course of the period, although a possible Cretan import has been noted at Samos (see Snodgrass 1971:103, n. 58). Sourvinou-Inwood (1975:171) points to a link, direct or indirect, between Crete and Macedonia on the basis of a deep bowl of "Macedonian type" found at Petrokephali on Crete in a Protogeometric deposit (see further Levi 1957–58:359–361; Rocchetti 1967–68:181–209).

Throughout the course of the entire period of use of the cemetery, the fact that Torone maintained some form of contact with other parts of Macedonia is self-evident, not only on account of the presence of imported Macedonian wares but also on the evidence of parallel development in the handmade tradition, especially with sites in central Macedonia. This link may prove to be of some importance for the diffusion or spread of southern pottery styles to inland Macedonian sites through the intermediary of coastal sites such as Torone (compare the different proportions of handmade to wheelmade wares current at inland Macedonian sites with those of Torone, discussed above; for the potential importance of coastal Chalkidike as an intermediary see Jones 1986:494: Cambitoglou and Papadopoulos 1993).

Some time toward the later stages of this earlier phase, perhaps roughly contemporary with Lefkandian Middle Protogeometric, a number of local shapes undergo slight modifications. The earlier low-footed krater is replaced first by a transitional type with a slightly taller foot and a comparatively deeper body, and then by a type with a tall foot. Similarly, the low-footed skyphos is replaced by a tall-footed variety, with either conical or flaring foot. In terms of decoration, a few of the tall-footed skyphoi retain the old "ugly sausages," but others break away. This development, from a low ring base to a tall conical or flaring foot, appears to have been the result of influence, direct or indirect, of ceramic styles prevalent in central and southern Greece, with the imported **T127-1**, which is Euboian, providing a suitable model. Similar developments at Lefkandi were considered by Desborough (in Popham, Sackett, and Themelis 1979–80:298–299) to be the result of Attic influence. It is probably during this time that the vertical-handled amphoriskos becomes well established, although its first appearance may have been earlier. The vertical-handled amphoriskos, together with the "ugly sausages" on skyphoi also point to certain stylistic similarities with the Early Iron Age pottery of Ithaka, parts of Aitolia and Achaia, and Phokis and Lokris. This is especially highlighted in the case of the imported **64**, which belongs to the latest stages of Protogeometric or slightly later. The more recent publication of the Late Mycenaean and Early Protogeometric pottery from Kalapodi (Jacob-Felsch 1996) has shown some points of similarity—particularly for skyphoi, decorated pithoi, and, to a lesser degree, neck-handled amphorai and kraters—but also some noticeable points of difference between the material at Kalapodi and that at Torone. Moreover, the recent publication of the Early Iron Age pottery from Troy (R. Catling 1998a; Lenz et al. 1998) rather than shoring up a connection between various north Aegean sites with particular regard to the neck-handled amphorai, has pointed to clear differences. The fact that Early Iron Age Troy has produced a plethora of neck-handled amphorai but so few other shapes might serve as a warning against latching on to the idea of a north Aegean *koine* too quickly.

Such are the main characteristics of this earlier phase. Whatever qualities or shortcomings the local pottery possesses it is evident that the period, taken as a whole, is one of innovation and experimentation in terms of ceramic history. Not only can influences and contacts be detected with neighboring and more distant regions, but we find the local potters willing to accept new things, such as the use of the pivoted multiple brush in the painted decoration of wheelmade vessel forms (Papadopoulos, Vedder, and Schreiber 1998), as well as to follow the general manner of decoration prevalent in central and southern Greece, which at the time was alien to contemporary Macedonia. As a coastal site located near the southern tip of a peninsula jutting well south in the Aegean, Torone fell victim, so to speak, to the C*orrupting Sea* (Horden and Purcell 2000). Nevertheless, Torone maintained a strong and vigorous position so far as the local handmade tradition was concerned. It is worth noting here that a few of the potters' marks, incised prior to firing on a number of handmade vessels, can be dated to this earlier phase, as can the mechanically incised circle on **T113-10** (see chapter 6).

The later part of the period of use of the cemetery (contemporary with Attic Late Protogeometric and Early Geometric and Lefkandian Late Protogeometric–Subprotogeometric)

It is worth stressing again that this is an arbitrary subdivision, distinguished as a matter of

convenience, and does not represent a distinct, well-defined stylistic phase in itself. Indeed, most of the vessel forms develop with no radical break, although with the majority there are modifications in details of both shape and decoration. From the outset there is one aspect of some significance, namely that the light-ground system of decoration once established in the earlier period remains standard throughout the period of use of the cemetery as the preferred manner of decoration. The dark-ground system, the hallmark of Late Protogeometric in most contemporary pottery producing centers, was never really adopted. So although the earlier period is characterized by innovation and perhaps a willingness to adopt certain ideas from other styles, it would seem that during the course of Protogeometric the local potters settled down to an attitude where they were far less willing to accept innovations or to follow trends current elsewhere, and we do not find any of the radical or profound changes with the onset of Late Protogeometric as, for instance, at Lefkandi (Popham, Sackett, and Themelis 1979–80:286–287). This in itself may seem rather surprising—and it is important not to confuse here what happens with pottery with the broader social and economic sphere—for Torone did not suddenly become an isolated backwater. Quite the opposite, as imported wheelmade vessels of this later phase are comparatively numerous and it is clear the site maintained some sort of links with other centers. It appears, rather, that the local potters now looked inward and did little more than modify the innovations already introduced during Early Protogeometric. Chronologically, the implications of this unwillingness to accept and adapt ideas from other centers results in a local style that becomes somewhat standardized, and it is this aspect that makes it so difficult to discern any subsequent chronological developments on the basis of style alone.

The centers with which Torone now enjoys some form of contact, on the basis of the direct evidence of imported pottery, are mainly confined to the *koine* comprising Euboia, Thessaly, the northern Cyclades, and Skyros. The earlier Attic imports are now rare, although this observation may prove to be an accident of preservation. A good deal of the imported material is fragmentary and thus difficult to date with any degree of precision. Nevertheless, there is a marked increase in the quantity of imported vessels in this later period. Noteworthy, for example, is the Euboian amphoriskos with handles from shoulder to lip, **T22-2**, of Late Protogeometric date, and the slightly later Euboian Subprotogeometric pendent semicircle skyphos **T77-3**. Other imports of this period include the Cycladic one-handled jug **T72-1**, belonging to the very latest stages of Late Protogeometric or slightly later, and possibly the Thessalo-Euboian vertical-handled amphoriskos **T47-1**, mentioned above. There are, in addition, the small fragmentary closed vessel of Late Protogeometric or Early Geometric/Subprotogeometric date, **64**, and a small shoulder fragment of an amphora, **27**, of unknown provenance. What is immediately striking about these imports is that many are decorated in the dark-ground system, and most are of shapes not represented in the local wheelmade repertoire. They stand apart as blatant foreigners.

The main value of these imports lies in the chronological information they provide. The majority of the listed imports are Late Protogeometric, and the few, for instance **T77-3** and perhaps **64**, which are slightly later, are all best accommodated within the years of the first half of the ninth century B.C. There is no imported vessel from a *tomb context* that is demonstrably significantly later than ca. 850 B.C., and there is nothing inherent in the style of the local tomb pottery to suggest a later date.

Turning to the local wheelmade pottery, we find most of the same shapes as before but, as already noted, there are slight modifications. The neck-handled amphora with decoration in the light-ground system continues to be produced, but there is now a tendency to hollow out the underside of the base, creating a minor false ring foot as on **T74-1** and **T77-1**, the latter dated by the pendent semicircle skyphos **T77-3**. This same detail may also be observed on the belly-handled amphora (cf., for instance, **T75-1**), but more significantly the belly-handled variety is now gradually replaced by the distinctive amphora with belly and shoulder handles. This is a shape that seems to have been developed locally and most examples may be dated to this later period. Generally speaking, the amphora with belly and shoulder handles

is normally larger than its belly-handled and neck-handled counterparts; the proportions of the body are also somewhat different. Moreover, there is a tendency to decorate this type with two or more registers of patterned decoration: rows of cross-hatched triangles, zigzags, or tremulous lines and metope pattern now overshadow the earlier mechanically drawn circles and semicircles. Even when mechanically drawn circles are met, as on **T84-1**, they are arranged in a manner different from before. These decorative elements combine to define a style prevalent in this later period, a style essentially characterized by a tendency toward more linear decoration and preference for a heaping on of motifs or decorative elements.

As for other vessel forms, the vertical-handled amphoriskos now comes to the fore as a popular shape, and in it, perhaps more so than with any other shape, one can detect a certain amount of influence from the Thessalo-Euboian sphere. Like the many vertical-handled amphoriskoi at Lefkandi, there is little consistency in details of shape and decoration among the Toronean examples, but unlike their Euboian counterparts, those of Torone are essentially decorated in light-ground. The increased popularity of the vertical-handled amphoriskos is accompanied by a noticeable decrease in the number of skyphoi deposited in tombs and, indeed, few examples of this shape can be dated securely to this later period. The gradual replacement of the low-footed skyphos (Type 1) by skyphoi with tall conical or flaring feet (Types 2 and 3) has already been discussed as a development that occurs sometime contemporary with later Attic developed Protogeometric and Lefkandian Middle Protogeometric. At the very end of the period of use of the cemetery a further development takes place—the introduction, fleeting as it is, of the pendent semicircle skyphos. The one imported example (**T77-3**) is matched by only one that is locally produced (**T82-2**); the chronological implications of these vessels have already been discussed and need not be repeated here. They are among the latest securely dated vessels in the Early Iron Age cemetery at Torone.

The tall-footed lekanis (Type 1) continues to be produced into this later phase, but toward the end of the period it is replaced by a variety (Type 2) with a low ring base and a broad outcurved rim. The krater, too, undergoes modification, and a fairly clear development can be traced from the early low-footed variety, through the transitional type, to the later Type 2, which is characterized by a tall foot (either conical or flaring) and a fairly broad horizontal rim. This later type of krater instantly recalls the well-known series of Thessalian kraters. But the connection with Thessaly, although apparent, is not altogether clear-cut; first, the local kraters differ from the Thessalian in aspects of decoration, and second, the feet of the Toronean are not as tall as most of the Thessalian. The Thessalian variety with "high stem and fitted with four band-handles" (see Heurtley and Skeat 1930–31:30; Desborough 1952:142) is not attested at Torone, nor is the low-footed type known in Thessaly. Furthermore, the idea of replacing a low base with a tall foot is one that occurs in many parts of the Greek world, and is not specifically Thessalian or Euboian (cf. Desborough 1952:92–98; Popham, Sackett, and Themelis 1979–80:341; note also the tall-footed krater from Dirmil in the Halikarnassos peninsula: Bass 1963:358–359, pl. 83, fig. 15; cf. Akurgal 1962: pl. 96, fig. 1). Also worth noting is the tall foot on the early black-slip krater **T104-2** (cf. **T47-2**), which may also have served as an immediate model. Concerning black- and red-slip ware specifically, it is interesting to note that the one example of red-slip and three of the four examples of black-slip may be assigned to the earlier part of the period of use of the cemetery; the context of the fourth example of black-slip was uninformative as to date. This is a situation that contrasts to that at Lefkandi and its related region, where black- and red-slip ware makes its first appearance during Middle Protogeometric and continues through Late Protogeometric into Subprotogeometric I (Popham, Sackett, and Themelis 1979–80:346–347).

As for the handmade wares, the basic repertoire established in the earlier part of the period continues into the later, and the traditional character of this pottery results in individual shapes remaining remarkably standard throughout, with little apparent chronological development. A few shapes, however, as well as variant forms of others, tend to have a more limited time range. The bowl with square-cut handles and the tripod cauldron are both shapes that appear to be more common in

the earlier part of the period and, although they continue into the later, they become increasingly rare; examples of these shapes were not encountered among the very latest tomb groups. Similarly, the kantharos with vertical handles surmounted by disk knobs (Type 2) and its counterpart, the cup/kyathos with one handle of similar form, are shapes that belong to the earlier tombs. Dating to the later stages of the period of the use of the cemetery, on the other hand, is the solitary example of the jug with plain round mouth, and the one example of a multiple vase. Generally speaking, however, the majority of shapes change little; the two-handled jar, the jug with cutaway neck, the kantharos with vertical high-swung handles (Type 1), the cup/kyathos (Type 1), the pithos, and the pitharion remain much as before. Slight modifications or differences may be noted with individual pieces: later examples of the jug with cutaway neck, for instance, have a tendency to be smaller and thinner walled, their bodies either more biconical or squatter than the earlier examples, but even these features are by no means consistent. It is worth noting that potters' marks continue to be found on a few handmade vessels of this later period (cf. Papadopoulos 1994).

One final development, belonging to the very latest stages of the period, is witnessed by **T17-1**, which is unique among tomb pots in that it represents the only instance of a wheelmade version of a shape belonging to the handmade tradition, and in a fabric normally used for handmade vessels. The only other example of this is the kiln pot **KP-13** of postcemetery date. Elsewhere in Macedonia wheelmade versions of standard earlier handmade shapes are a harbinger of the later stages of the Early Iron Age.

Our knowledge of ceramic developments in the period immediately following that of the use of the cemetery is limited to a few scraps of pottery from later deposits on Terrace V, a few sherds from other parts of the site (published in Cambitoglou, Papadopoulos, and Tudor Jones 2001:293–329), and the fourteen vessels recovered from the kiln assigned to the years of the second half of the eighth century B.C. (Papadopoulos 1989a), as well as the material from the more recent excavations on Promontory 1. Although the quantity of this material is not great, enough survives to establish not only continuity in the local tradition but a truly developed local Geometric style.

In the preceding pages I have focused, like many students of Greek painted pottery, on a sort of one-way influence from central and southern Greece—notably Athens in the earlier period and Euboia in the later period—to the north. This is, in part, an artifact of Atheno-centrism (canonized by Desborough 1952; 1972), which in recent years has been overrun by Euboio-centrism (e.g., Lemos 1992; Popham 1994; Snodgrass 1994a; Bats and d'Agostino 1998). As I have argued elsewhere (Papadopoulos 1996a; 1997b) and in chapter 8, this is a view largely determined and defined by the indestructibility of pottery and an insistence on a simplistic view that focuses on one aspect of the material record to the neglect of other information, by maintaining that *ceramics = history*. My aim in this section was to point to certain stylistic trends and similarities between pottery styles in the various parts of the Greek world, realizing, only too well, that pottery alone can be a misleading and inadequate indicator of social change. In the final section of this volume (chapter 8), I turn briefly to the Toronean and Macedonian imports at sites in central and southern Greece and from there I attempt to place Early Iron Age Torone in the context of its own time.

NOTES

1. The black- and red-slip wares are here distinguished from local products on account of shape, visible differences in fabric, and their relative paucity, even though they may well prove to be locally produced.
2. In a related vein, the date of the cemeteries at Marmara in central Greece, published as Submycenaean by Dakoronia (1987), have been questioned by Maran (1988), who has shown features of Middle Helladic date.
3. There is no lack of Late Bronze and Early Iron Age material from Macedonia, especially from settlement sites (see chapter 1), and this is well set out by Heurtley 1939, added to and supplemented now by the evidence from Kastanas (Hänsel 1979:167–202), Assiros (Wardle 1980: 229–267), and elsewhere (Andreou, Fotiadis, and Kotsakis 1996). But in all this, the material is essentially from inland sites in central Mace-

donia whose character, in the Early Iron Age at least, was much different from that of coastal Chalkidike. The fundamental site survey of the Chalkidic peninsulae for the Bronze Age remains that of D. H. French (1967; cf. French 1964:30–48; 1966). Although many sites in coastal Chalkidike have been recently excavated, much of this material is either unpublished or has appeared only in preliminary reports (see chapter 1).

4. For the shapes and names of Mycenaean pottery see Furumark (1972a) and Mountjoy (1986). For Bronze Age representations of vases in Linear A and B texts, on frescoes, gems, etc., see esp. Vandenabeele (1974; 1981). For the names of shapes in later periods see esp. Richter and Milne (1935); R. M. Cook (1972:218–219); and Sparkes and Talcott (1970:3–9), where it is noted that vase names were not used with any great precision in antiquity.
5. Andreiomenou (1966:251–252, no. 3, pl. XLVb) refers to the shape as "skyphoid krater," following Smithson (1961:153). Verdelis (1958:26–27, pl. 8, no. 51) preferred the term "krateriskos" for the same shape (distinguishing it from the low-footed pendent semicircle skyphos); Brock (1957: Tomb X, no. 435), among others, also referred to the same shape as "krateriskos." Desborough (1952:77–92) used both "bowl" and "skyphos," but in Popham, Sackett and Themelis 1979–80:297, 396, n. 112 he clarified the situation by stating that "the shape is called a bowl before Late Protogeometric, a skyphos thereafter." The excavators of the Kerameikos sometimes used the German *Becher* and sometimes "krateriskos" (Kraiker and Kübler 1939: 70–72, 125–127).
6. The kantharos and cup/kyathos must have been primarily drinking vessels, although both could be used for eating; the latter could also be used as a ladle. The thickening of the rim on the interior of bowls with square-cut handles may indicate that this vessel form was used mainly for eating. The kantharos may also be labeled bowl.
7. But *not* the fabric of Attic Developed or Late Protogeometric. For illustrations of Attic Submycenaean and Early Protogeometric where the fabric is not unlike that of better levigated local examples see Desborough 1952: pl. 2 (inv. 421, 522); pl. 5 (549), and generally Kraiker and Kübler 1939: pls. 5–26, pl. 54 (530, 549); pl. 55 (589); also Iakovides 1969–70: color pls. I–IV.
8. As Brann (1962:29) has observed, there is a general "softening" of Attic fabric from Late Geometric through the mid seventh century B.C., while in the third quarter of the seventh century much thinner, harder pottery is produced; by the end of the century the normal firmness of Attic black-figure is found (see further Papadopoulos 2003).
9. In certain Japanese wares such as raku, the defect of porosity is to a certain extent neutralized by soaking finished pots in strong tea, a procedure that, when repeated several times, tends to effectively "close the pores" (Leach 1976:151). During the Hellenistic and Roman periods the frequent lining of wine storage jars, and occasionally small amphorai and jugs, with mastic and other resinous substances may have been at least in part due to the need for reducing porosity and not only for the flavoring or preservation of the wine (H. Robinson 1959:8, n. 2).
10. Notably those of Knossos (Brock 1957: pl. 4, no. 43; pl. 8, no. 120; pl. 9, no. 160; pl. 14, no. 212; the necks of others are left reserved as pl. 10, no. 181; pl. 16, no. 224; pl. 19, no. 279, or decorated with thin bands as pl. 16, no. 226). Cf. the painted neck on the amphora from Boiotia (Desborough 1952: pl. 17, no. 1), and that from Kato Phana (Chios) (Lamb 1934–35: pl. 36c). The neck on the amphora from Smyrna (Akurgal 1962: pl. 96 [= Desborough 1972:182, pl. 37B]) is reserved, as are necks on the amphorai in Popham, Sackett, and Themelis 1979–80:334, fig. 19B, pl. 156, no. 41.2 (see also Popham, Touloupa, and Sackett 1982: pl. 24, no. 4; Catling and Lemos 1991: pls. 63–64, although the neck of pl. 63, no. 462 is painted solid and that of pl. 64, no. 466 bears a large prominent X.
11. The development from globular to more ovoid is a feature continually stressed by Desborough (1952:14; 1972:33, 148, 151) and is one that can be observed in all Attic amphora types except the amphora with shoulder handles (see Desborough 1972:148). It is worth noting that the increase in the size of amphorai was continued into the post–cemetery period with the kiln amphorai.
12. For a list with references see Desborough 1952:15; since then a few more have appeared, notably Smyrna (Akurgal 1962: pl. 96; see also Blegen et al. 1973:241, fig. 298, no. 15; Doumas and Marangou 1978:183, pl. 34; Popham, Sackett, and Themelis 1979–80:335–338; Andreiomenou 1980:292–294, pls. 127–129; Popham,

Touloupa, and Sackett 1982:241, no. 4; Jacob-Felsch 1996: pl. 44, no. 391; pl. 42, no. 348 [Kalapodi]); for Asine see below (see further Desborough 1964:264–270). The general picture, however, as presented by Desborough in 1952 has not been drastically altered, and the more recent synthesis by Lemos (2002) has added very little to Desborough's overview.

13. The list is as follows: Phase 1, five examples; Phase 2, one possible fragment; Phase 3, none; Phase 4, sherds only of undetermined type (Wells 1983a, 1983b:36–37, 82, 90, 102, and figs. 12, 112–114). The material is fully discussed by Wells, although the fragmentary state of most is such that it is difficult to isolate elements that may or may not point to links with Athens. For the large number of Athenian imports at Asine see Catling 1998b. Cf. the amphora (or hydria) sherds in Walter 1968:91–92, pl. 2, nos. 14–16.
14. The various arguments for and against the role played by Athens in the rise of Protogeometric in Thessaly are well summarized in Snodgrass 1971:61–62, where it is concluded that although Thessalian potters must be credited with some notable independent achievements, the genesis of the style owed its inspiration to Athens.
15. Cf. **T88-1**, also **68**, **94**, and **KP-10**. Although upright semicircles are commonly found on neck-handled amphorai, pendent semicircles are rare, as they are in Attic; a rare instance of a closed vessel decorated with pendent semicircles in Attic is the lekythos fragment (Kraiker and Kübler 1939: pl. 46; cf. the stirrup jar: Brock 1957:19, pl. 12, tomb XI, no. 141).
16. To the list for the Argolid, previously Müller and Oelmann 1912: pl. XIV, no. 7, and Nauplion museum inv. 3052 (Desborough 1952:31), add Desborough 1954: pl. 43c (= Snodgrass 1971: 56, fig. 22) from Mycenae, which is similar to **T51-1**. Asine has produced many fragmentary examples, as follows: Phase 1, at least nine; Phase 2, none certain; Phase 3, at least two; Phase 4, sherds only of uncertain type: Wells 1983a:35–36, 82, 90, 102; 1983b: figs. 105–112; of these, the nine examples from Phase 1 are clearly earlier than Late Protogeometric, but their fragmentary state, in most cases, makes it difficult to compare them to products of other centers. For Argos see Daux 1959:762–763, fig. 19.
17. T. J. Papadopoulos 1978/79:69–70, nn. 41–48; see also 1995:204, fig. 8. For Sicily see further Taylour 1958:75, nn. 7–9; the Thessalian example was originally published as a "hydria" (Verdelis 1953:122, fig. 2; cf. Desborough 1964: 100). The Cretan material (cf. Schachermeyr 1979: pl. 23a) is further discussed in T. J. Papadopoulos 1981:407–415.
18. Elemental analysis (appendix E) has shown that although the fabric of **T96-1** resembles Attic, the match is imperfect. The discrepancy is in calcium; Mycenaean clays at Athens are calcium rich, but by the Geometric period and later the calcium content is generally lower. It should be stressed, however, that there are no reference data for Attic Submycenaean, so a firm chemical judgment is difficult. According to R. E. Jones, the fabric of **T96-1** could be local, or Attic, but not Euboian. For differences in the clay of Attic pottery during the Mycenaean, Protogeometric, Geometric, and Protoattic periods see Coldstream 1968; Papadopoulos 2003; Fillieres, Harbottle, and Sayre 1983:62–63. The latter study, which analyzed samples of Protogeometric, Subgeometric, and Classical-Hellenistic material from the Athenian Agora using neutron activation, established that the compositional differences among these periods suggest that either separate clay sources were used during each period or that there were some other significant changes in the traditions of fabrication. For the clays of Athens and Aigina see further S. P. Morris 1984.
19. Desborough 1972:35; these I presume to be Deshayes 1966: pl. 53, no. 1 (DV.10), and Müller and Oelmann 1912:128, pl. 16, no. 8, and cf. 133, pl. 16, no. 4; for Argive belly-handled amphoriskoi see further Styrenius 1967:127–136, where a third example is listed (= A. Persson 1931a: fig. 47), although it is considered by Styrenius (p. 133) as "still Mycenaean." Since then, Wells reports two examples of the shape from Phase 1 at Asine (Wells 1983a:39; 1983b: 162–163, nos. 22–23), both of which are represented by small fragments only; she further notes a later example from Tiryns (= Verdelis 1963:27, pl. 10, no. 5), which is considered contemporary with Asine Phase 4; these three examples underline the paucity of the type in the Argolid.
20. Popham, Sackett, and Themelis 1979–80:310–311, nn. 199–207. For Chalkis see further Andreiomenou 1986:89–120, esp. 90, figs. 2–6; 94, figs. 14–18; 96, fig. 23a–b; 102, fig. 14; cf. also Popham, Pollard, and Hatcher 1983: pl. 33e (two amphoriskoi found in Knossos but thought to be Euboian [KAM 12.8, KMF 285.124]).

21. For discussion see Popham, Sackett, and Themelis 1979–80:311, nn. 208–209. In addition to Desborough's list see the three examples from the Agrinion region (Vokotopoulou 1969a: pl. 47 [second row α–γ]); also an example from Palaiomanina in Aitoloakarnania (Mastrokostas 1961/62:182–185, pl. 212a, no. 10; Lerat 1937: pl. V, no. 9 and cf. no. 10 [= Maass 1996:158, nos. 19–20 (Delphi); see also 163, no. 34, described as a *kleine Amphora*]). For the Argolid see Wells 1983a:39.
22. See, among others, Levi 1969–70:472, fig. 12a (center), fig. 12c (right); 473, fig. 13a (top row, right), fig. 13b (right), all from Iasos; Coldstream 1977:47, fig. 11b (Ialysos), with references to other material. For the vertical-handled amphoriskoi of Kos see L. Morricone 1978:95, fig. 103; 96, figs. 104–106; 168, fig. 300; 170, fig. 305; 174–175, figs. 313–315; 198, fig. 379; 208, fig. 405; 245, fig. 506; 294, fig. 628; 312, fig. 666; 317, figs. 681–682; 327, fig. 702; 364, fig. 787. For Achaia and Aitolia see Dekoulakou 1982: 220, figs. 1–4; 222, figs. 6, 8, 10; 223, fig. 11, nos. 1024, 1028, 1029; 225, fig. 13.
23. Cf. esp. the Granary Class: Wace 1921–23: figs. 9a, b, e, f (= Desborough 1964: pl. 12); 1932: 184–187; Furumark 1972a: Shapes 284, 285–286; Iakovides 1986:233–260, esp. pls. 17, 19, 20–25, 27, 30, 36; Mountjoy 1986:190–192, fig. 254; see also Popham and Milburn 1971:335, fig. 1, nos. 1, 3; 339, fig. 4, nos. 1–3; 345, fig. 7, no. 1; Wardle 1973:313, fig. 9; 315, fig. 10; 316, fig. 11; Kardara 1977: pl. 45a–b; Rutter 1977: figs. 1–3, 5, 10, 16–17; Demakopoulou 1982: pl. 57, no. 130.
24. E.g., Heurtley 1939:215, fig. 86(i) c, k, p; 216, fig. 86(ii) a–i; 222, no. 441 (Perivolaki/Saratsé); 224, no. 451 (Gona); 224, no. 454 (Sédes); 226, fig. 96q, r (Agios Mamas); also Heurtley and Hutchinson 1925–26; Cuttle 1926–27; cf., generally, Heurtley 1923–25:30–37; Podzuweit 1979b:206, fig. 19, no. 7; 211, fig. 20, no. 2; 213, fig. 21, nos. 1, 3–5; 216, fig. 22, nos. 1, 3, 7–8; 219, fig. 23, nos. 2–4, 7–9; 221, fig. 24, nos. 2, 4, 8–9; Jung 2002.
25. Both the single (or continuous) and the confronted sausages are found in Ithaka (Heurtley and Robertson 1948:63, 104, pls. 19, 21). The lower parts of the Toronean sausages often extend over the broad band at the point of maximum diameter.
26. The inception of Ithakesian Protogeometric as purely local is stressed by Desborough (1972: 243–247). For possible north Greek influence in western Greece see Benton 1931–32:244. As for the "sausages," it may be that they represent a means of painting the handle zone more or less solid, rather than an intentional decorative motif, although contrast Coldstream 1968:227; see also Sipsie-Eschbach 1991:53–54. Careless painting is often seen on skyphoi in the closing stages of the Bronze Age, and on some examples, particularly those where the brushmarks are prominent or the paint more dilute, the scheme comes close to that of the continuous sausages (see esp. Maass 1996:154, no. 9 [Delphi]). Alternatively, they may represent an Early Iron Age version of an earlier, Mycenaean, decorative scheme or motif. It has been noted by many who have seen the Toronean "confronted sausages" in the flesh that they represent eyes, a feature that is perhaps most pronounced on **T103-1**, where a tear-shaped extension of paint (whether intentional or accidental) is preserved on one side.
27. It could be argued that the impractical form of the foot of these two skyphoi (**T90-1**, **T117-1**) indicates a certain amount of experimentation (under Attic or Euboian influence but retaining the local method of decoration) and that some difficulty was encountered by the local potters in the shaping of tall conical feet. This may further suggest that **T90-1** and **T117-1** are perhaps slightly earlier than **T94-1**, with its sturdier base.
28. Cf. esp. Desborough 1952:81–82, pl. 16, no. 45 (= Sauciuc 1914: fig. 58.1, no. 45; Cambitoglou et al. 1981:101–102, fig. 59, no. 339 [Andros]), pl. 25, no. 3 (Tenos), pl. 28, no. 5 (Tiryns). Several have been published from the Toumba building at Lefkandi, variously referred to as skyphoi (e.g., Catling and Lemos 1991: pls. 5[h], 48, no. 120) and as "crater-bowls" (e.g., Catling and Lemos 1991: pls. 5[i], 52, no. 293). There are a number of examples from Kos, especially from Serraglio, Tomb 63 (Desborough 1972:174, pl. 34B [bottom row]; L. Morricone 1978:268–269, figs. 560–563; cf., from other tombs, 90, fig. 92; 185, fig. 346; 383, fig. 842). This type of foot is very common in Crete: see, among others, Rocchetti 1974–75:200, figs. 41b, 42b; 204, fig. 49a, c, e; 209, fig. 56a-b; 239, fig. 95; 272, fig. 147 (various examples); 278, fig. 158. The form of the foot is also common in Cyprus: Pieridou 1973: pl. 3, nos. 10–12; pl. 4, nos. 1–11 (*braxypodes kylikes*); cf. Desborough 1957:214, fig. 4a.

29. The difference in shape and decoration between Catling and Lemos 1991: pl. 49, no. 157 (skyphos) and pl. 52, no 293 ("crater-bowl') is so minor as to seem pedantic. The fact that examples of the same shape have been classified as belonging to two different forms has obscured, rather than clarified, the study of this skyphos type (see further Papadopoulos 1998a).
30. If the relative chronology proposed by Andronikos (1969:279) is accepted, then the tall-footed skyphos N15 and the pendent semicircle skyphos Δ15 are contemporary; the tall-footed Ξ2 is later than the pendent semicircle skyphos ΑΓ24, while the pendent semicircle skyphos T1 is later than Ξ2. Such a chronology would indicate either little apparent development or that the two types of skyphoi were contemporary. For the date of the Vergina material see Snodgrass 1971:132–133, 160–163; Desborough 1972: 216–220.
31. A related shape in Popham, Sackett, and Themelis 1979–80:303, Type A, is referred to as "pedestalled bowl" and Type B as "shallow bowl with horizontal strap handles." Cf. the monochrome and decorated "strap-handled bowls" in Catling and Lemos 1991:31–32, pls. 5(g), 10, nos. 181–183, 187–198, pl. 47, nos. 181–186, pl. 49, various examples.
32. There is also a related vessel with handles set vertically on the rim (Lamb 1930:1–2, pl. I, no. I.13), of unknown provenance, but which Desborough believed to be probably Attic (see Popham, Sackett, and Themelis 1979–80:303, n. 154). It is also worth noting that Mycenaean shallow bowls found in Attika commonly have a flat rim, often decorated, and with a reserved disk at center of floor not unlike the Toronean lekanides (see Broneer 1939:370–371, fig. 51; cf. fig. 50); note also the five examples of the shape at Perati (Iakovides 1969–70, vol. 2:225–226).
33. The shape of **T116-1** is similar to Mycenaean kraters from LH IIIC Middle on: see Mountjoy 1986:176, fig. 226; 191, fig. 253 (Furumark 1972a: Shape 282); closer parallels include, among others, Wace 1921–23: fig. 12b (Mycenae); Broneer 1933:369, fig. 42 (Athens); Frödin and Persson 1938: fig. 207, no. 5; Popham and Milburn 1971:341, fig. 5, no. 5 (Lefkandi); Caskey 1962:281, pls. 100d, 102a (Keos, for which see further Ervin Caskey 1980:128, 130, fig. 5); Maass 1996:162–163, no. 33. For Cypriot comparanda see, among others, Anson 1980: esp. 3, fig. 1; 5, fig. 2; 6, fig. 3; 7, fig. 4 (cf. also the birds, 5 [Group C], 6 [Groups E–F]; cf. Karageorghis 1963: pls. 10–15; 1974a:31, no. 200, pls. 13, 122; 1975, pl. 52, T.11/1). The celebrated Warrior Vase itself provides a parallel for the shape of **T116-1** especially. Moreover, both **T102-1** and **T116-1** have a good, though poorly preserved, whitish slip that resembles LH IIIC white ware (Ervin Caskey 1980:128–130, fig. 5; Schachermeyr 1980: pls. 41–42). For Late Helladic kraters in Macedonia see Wardle 1980: 251, fig. 14, no. 28; Hänsel 1979a:190, fig. 15, no. 8; Jung 2002:339–340, pl. 11, no. 123: 363-365, pl. 20, nos. 220–223 (also no. 225 on pl. 21); 380–385, pls. 25–28, nos. 281–296: 412–414, pls. 42–44, nos. 401–406; 426-427, pl. 52, nos. 448–450 (some spouted).
34. Desborough 1952:92; three krater fragments from Miletos have often been referred to as Submycenaean (Hommel 1959/60:52–53, pl. 51, nos. 1–3), but they may equally be referred to as Final Mycenaean or even Early Protogeometric. The unpublished krater fragments from the earliest Iron Age well deposits from the Athenian Agora should provide a better idea of the development of the krater during this critical period.
35. Desborough (in Popham, Sackett, and Themelis 1979–80:339–340) gives a good survey; cf. esp. the Thessalian kraters (with tall feet): Heurtley and Skeat 1930–31:30–33; Desborough 1952: 96, 127–129; Verdelis 1958:22–26, pls. 7–8. Horizontal rims, along with a few knobbed rims, are common in Catling and Lemos 1991: pls. 54, 57–58; I do not include here examples like Catling and Lemos 1991: pl. 58, no. 369, which should be classified as large skyphoi. Similar horizontal rims and ridges are also found on some, but not all, Cretan kraters of the distinctive bell shape, as Brock 1957: pl. 16, no. 221; pl. 22, no. 317; see further Levi 1957–58:360, fig. 218; Rocchetti 1967–68:186: fig. 9; Warren 1984–85:127, fig. 13; Coldstream and Catling 1996: 368–372. See also Blinkenberg 1931:239, pl. 33, no. 831; cf. also the fragmentary krater rims from Lakonia: Coulson 1985:55, fig. 9.
36. Heurtley and Skeat 1930–31:30–33; Desborough 1952:92–98; Verdelis 1958:22–26; Akurgal 1962: pl. 96, fig. 1; Doumas and Marangou 1978:193, no. 44; Popham, Sackett, and Themelis 1979–80:339–341; Catling and Lemos 1991:25–31; Sipsie-Eschbach 1991:60–61, 108–109, 127–128 (not including the "skyphoid kraters" and a few pieces, such as pl. 42, no. 1, which is probably a pyxis). For examples in the Cyclades and east

Greece, some of which are Geometric, see Zapheiropoulou 1983:128, fig. 18; Papachristodoulou 1983:13, fig. 3 (center); cf. two examples on p. 14, fig. 4 (back row, center).

37. Serrated ridges are more commonly found in the Thessalo-Euboian area than they are in Athens: see Heurtley and Skeat 1930–31: pl. XI, nos. 147–149; cf. pl. IX, no. 135, with painted bars on the ridge; Desborough 1952:96; Catling and Lemos 1991: pl. 19, nos. 328–330, pl. 22, nos. 367–368, pl. 23, no. 372, pl. 24, no. 379, pl. 26, nos. 406–410, 422, 425, pl. 57, nos. 406–411. Note also the serrated ridge near the base of the amphora S5.1 (Popham, Sackett, and Themelis 1979–80: pls. 93, 267) and that on the pyxis from Skyros (Doumas and Marangou 1978:185, no. 36). Cf. **T76-1**, and references cited there (p. 452).
38. The type can be traced back to Middle Minoan times: cf. Boyd Hawes et al. 1908:30, pl. II, no. 43 (which is not identical). Worth noting is that later Cretan lids, well represented in Brock 1957:162–165, are divided into no fewer than eight types. Cf. also the lid without handle: Demopoulou-Rethemiotaki and Rethemiotakis 1978:67, fig. 19 (no. IV 10/21 809) and pl. 16 (lower left-hand corner).
39. Even the Submycenaean lid (Kraiker and Kübler 1939: pl. 21, inv. 420) seems a remote prototype for **T88-2** given that it has no handle (quite apart from differences of decoration), and also because the shape itself is exceedingly rare in Athens.
40. Hochstetter 1984:12, fig. 1. The levels contemporary with the Early Iron Age cemetery at Torone are basically Kastanas levels 13 through 8 (i.e., K periods V, VI, and the early part of VII). In level 13, 88 percent of the total is handmade, the proportion falling to its lowest in level 11 (slightly more than 50 percent), while in level 9 handmade pottery accounts for 75 percent of the total and in level 8 back to 88 percent.
41. For handmade wares in Thessaly see further Tsountas 1899:101–102; 1908 (esp. for the earlier material); Wace and Droop 1906–07; Wace and Thompson 1912:206–216; Heurtley and Skeat 1930–31; Hansen 1933:117–122, Desborough 1952:135–153; Verdelis 1958:62–63; Theochari 1960; 1962; 1966; Kilian 1975b; see further Theocharis 1961–62. Contrast, however, the situation at Ktouri and Palaiokastro: Béquignon 1932. For the earlier Bronze Age material in Thessaly the most comprehensive study is that of Hanschmann and Milojcić 1976.
42. A survey of handmade wares from regions north and south of Macedonia, as well as connections with Troy, is presented in Hochstetter 1984:325–375 (with full references). The chapters by Dumitrescu, Bolomey, and Mogoșanu (1982), Garašanin (1982a; 1982b; 1982c; 1982d), and Prendi (1982) in the *Cambridge Ancient History*, vol. 3.1, and by Hammond (1982) for the Early Iron Age are particularly useful for their syntheses, references, maps, and representative assemblages. Childe 1929 remains useful; see also J. Alexander 1962; Snodgrass 1962; Gimbutas 1965:113–159. For the handmade wares of central and southern Greece see generally Bouzek 1985:183–201 and, among others, Kraiker and Kübler 1939:74, pls. 25, 75; Kübler 1943: pls. 28–31; Weinberg 1943:7–8, pl. 2, nos. 13–19; 15, pls. 8–9, nos. 50–3; 29, pl. 13, nos. 81–82; 30–31, pl. 14, nos. 86–97; Courbin 1954:178, fig. 37; Verdelis 1963: Beil. 12, no. 6; 21, no. 2; Desborough 1954, 1955; 1956; 1965; 1973; Charitonides 1955:125, pl. 39, no. 1; Smithson 1961: 176, pl. 31; Courbin 1966:29ff, 70ff, 235ff, 467f; Cambitoglou et al. 1971:52–57; 1981:35–44; Hägg 1971; Dekoulakou 1973; G. Despoinis 1979; Popham, Sackett, and Themelis 1979–80:342–343; Wells 1983a:69–79, 85–88, 99–100, 113–116; Coulson 1985:63. Interestingly, the so-called Handmade Burnished Ware encountered at several southern Greek sites during the Late Bronze Age appears to be unrelated to the mainstream of Macedonian handmade wares: see Hochstetter 1984:339–343; also Rutter 1975; 1979; Deger-Jalkotzy 1977; 1983b; French and Rutter 1977; Catling and Catling 1981; Kilian 1981; cf. Wardle 1973; Walberg 1976; Kilian 1978; Hüttel 1980. The most recent overview is Reber 1991. See also Small 1990; 1997; Rutter 1990; Bankoff, Meyer, and Stefanovich 1996; Genz 1997.
43. For illustrated examples, mostly Cypriot Bronze Age, see Åström and Wright 1962:251–252, nos. 30, 32; pl. 3, nos. 2, 4; pl. 4, nos. 1–2; pl. 8, nos. 3, 8; Åström et al. 1980:11, figs. 4, 6–8; 15, figs. 19–21; 16, fig. 28; Johnson 1982:51, fig. 1, no. H3; 53, fig. 2, nos. N3, N6, K1 (cf. N2; 57, fig. 4, nos. N20, N18; 65, fig. 7, no. N22). For the same technique in the Aegean Early Bronze Age see Warren 1972:184, fig. 68, P427, P436; 185, fig. 69, P444, P443, P459; Milojcić 1961: pl. 48, no. 24.
44. Cf. Hochstetter 1984:38–48 (amphora), a shape represented in all levels; also the *Töpfe mit Hori-*

zontalhenkeln (Type 5):128, fig. 34, and some of the vertical-handled varieties (Type 6, esp. Type 6d). The proportions of the Torone jars are also related to some of the *eimerförmige Töpfe* (without handles) on 121, fig. 31. At Vergina two shapes may be compared: Andronikos 1969: 204–207, Shape Γ (amphorai/iskoi) and also the rather more open form of Shape Z, 213–215, esp. fig. 54 (two-handled open vessels). Cf. also Heurtley 1939:222, pl. 16, no. 440 (Late Bronze Age Perivolaki); Romiopoulou 1971b:355, fig. 3, nos. 10, 26; Wardle 1980:257, fig. 16, no. 43 (with incised decoration).

45. A list of related shapes from southern centers is given by Andronikos 1969:206, n. 1, with examples from Athens, Argos, Mycenae, Asine, Tiryns, and the Corinthia; the earliest of these (Submycenaean) comes from the Athenian Kerameikos: Smithson 1961:176, pl. 31, inv. 2167; cf. Weinberg 1943:7–8, 15; Desborough 1965: pl. 32; 1972:205, pl. 48 (middle row, right). Earlier forms from Chios may also be cited for comparison: Hood 1981: 193, fig. 101, Type 47A (neck- or shoulder-handled), and Type 47C (belly-handled).
46. Heurtley 1925:35, n. 4; 1939:105–106; Casson 1919–21:22–28 (pottery of Type B); 1923–25:18–21; Rey 1932; Robinson 1933a: pl. 19, P4, P10 (= Heurtley 1939:239, nos. 501, 503). At Assiros there were no wheelmade vessels apart from the Mycenaean survivals in the earlier Early Iron Age Phase 2, whereas wheelmade sherds are more common in the subsequent Early Iron Age Phase 1: see Wardle 1980:260. Perhaps the most enlightening illustration is that offered diagrammatically in Hochstetter 1984:12, fig. 1, where in levels 4–2 (700–400 B.C.) 60–85 percent of the total was wheelmade, whereas in the preceding Level 5 wheelmade accounted for only 20 percent of the total; in earlier levels the figure is much lower. See further the wheelmade jug with cutaway neck from Classical Tomb IX at Kozani: Kallipolitis 1977: pl. 7 (center).
47. Early Bronze Age ancestors of the shape include Heurtley 1939:176, no. 211 (= Heurtley and Radford 1927–28: fig. 37, no. 6) from Molyvopyrgo in Chalkidike. The same site also yielded Middle Bronze Age counterparts: Heurtley 1939:210, nos. 394–395; 212, nos. 400–401. At Kastanas the jug with cutaway neck is attested at least as early as Level 16 (K period IV, 1400–1190 B.C.) and is especially common in the Early Iron Age levels: Hochstetter 1984:48–58, esp. 53, fig. 12. In Macedonia the form of the jug is also found in tiny bronze miniatures, often serving as pendents: see Bouzek 1974a, and esp. Kilian-Dirlmeier 1979: pls. 78–81, 103B.
48. A close parallel for the arrangement of the mastoi is one of the jugs from Skyros: Dawkins 1904–05:79, fig. 3b. For mastoi on Macedonian jugs see, for instance, Wardle 1980:257, fig. 16, no. 41; Hochstetter 1984: pl. 147, no. 7. Although mastoi are common on jars and hydriai at Vergina, I know of no jug with mastoi from that site. Mastoi on jugs of similar basic form, but earlier, are common at Yortan: Forsdyke 1925:2, fig. 1 (A6); 4, figs. 4–5 (A20, A22); cf. 6, fig. 6 (A35); pl. I (cf. Blegen et al. 1958: figs. 280–281). Pinched-up knobs at the base of the handle are also found on some Late Protogeometric–Late Geometric wheelmade closed vessels from southern centers: see, among others, Snodgrass 1971:85, fig. 42 (Medeon); Coldstream 1968: pl. 27e (Mycenae), pl. 64j (Samos).
49. The articulated and flattened handle of **T67-3** is common at both Vergina and Tsaousitsa: see Casson 1919–21:20, fig. 4; 1923–25:18, fig. 7 (esp. bottom row); Andronikos 1969: pl. 30, A10; pl. 41, K20; pls. 42–43, N5, N12, N13; pl. 49, P3; pl. 54, Υ10; pl. 56, Φ13, Φ19. For the handle and general shape of **T13-2** see Andronikos 1969: pl. 34, Δ19; pl. 40, K2, K6; pl. 53, T25, T31; pl. 64, AΓ 31; pl. 65, AΓ42; pl. 70, AE25. See further Bernard 1964, fig. 10, no. 162; 127, fig. 38 (Thasos). Cf. also two jugs from Omolion (Thessaly): Theocharis 1961/1962:175–178, pl. 196a.
50. Particularly close are a number of vessels referred to as "one-handled pots" by Andronikos 1969:215–218, esp. 217, fig. 58, pl. 34, no. Δ21; 216, fig. 56, no. P4; pl. 32, no. Γ1; cf. also those which he refers to as jugs proper: 218–219, fig. 59. Related to the former are many examples from Patele: Heurtley 1926–27:183, fig. 30, nos. 4, 5, 7; 1939: pl. XXIIIe, g, h, t, u. For related shapes from other parts of Macedonia see Forsdyke 1925:17, fig. 25, nos. A81–A82; Heurtley 1939:237, nos. 488–489 (Perivolaki/Saratsé see further Heurtley and Radford 1928–30: figs. 25b–c); Robinson 1933a: pl. 19, nos. P4, P10, P11; Hänsel 1979a:193, fig. 16, nos. 9–10; Wardle 1980:260, fig. 19, no. 53.
51. Bernabò-Brea 1976: pl. 203c (Early Bronze Age); for Leukas and Kephalovryson see Hammond (1974:139, fig. 3) and Marinatos (1964:88–89, pl.

90γ–δ) for discussion on possible uses of double vases. Those from Kephalovryson are very close to an example from the Mavro Spelio cemetery at Knossos: Forsdyke 1926–27:282, fig. 35 (Tomb XIX.3) of LM III date (cf. also Hammond 1967: fig. 17, nos. 11–13). For the vessel from Rhodes see Åström et al. 1980:64, fig. 46, pl. 25, no. 4. For Voidokoilia see Korres 1977: pl. 156a. Compare also the "triple ceremonial lamp" in the form of composite sauceboats from Naxos: Papathanasopoulos 1961–62: color pl. A, pl. 49a (EM.6108, Tomb 10).

52. Heurtley (1939:105, pl. 23d) lists two vessels from Patele, which he refers to as "binocular jars." For Axiokastron see Hammond 1972: fig. 16k. At Kastanas the type is attested only by small fragments, perhaps because it is a form specifically used in burials: see Hochstetter 1984:175, pl. 4, no. 1; pl. 30, no. 3; pl. 44, no. 1; pl. 163, no. 2. One of the vessels listed above from southern Albania (Hammond 1971: pl. 35, no. 10) is particularly close to **T69-2**, as are two examples from Vitsa Zagoriou (Epiros) Tomb 48 (Vokotopoulou 1973:35, pl. 7a), while their location in situ is shown on pl. 6.
53. Parallels are many and some of the Middle Helladic varieties are particularly close to the Early Iron Age shape at Torone. Cf., among others, Tsountas 1908:134, figs. 34–35; 136, fig. 38; 140, fig. 42; 141, fig. 45; 143, figs. 48–49; 145, fig. 53; 147, fig. 55; 148, fig. 58; 259–260, figs. 161–163; Wace and Thompson 1912:62, fig. 32a; 156, fig. 103d; 183, fig. 129a; Wace and Blegen 1916–18:180–181; Blegen 1921:15, figs. 18–19; 1937:8, fig. 51, no. 743; 11, fig. 62, no. 758; 13, fig. 75, no. 1200; Forsdyke 1925:25, fig. 33, no. A115 (Thessaly); 51, figs. 53–54, nos. A281–A282; 52, fig. 55, no. A283; cf. 13, pl. 2, no. A70 (Troy); Goldman 1931:139, fig. 187; 163, fig. 227; Mylonas 1932:69–70, figs. 43–44; 1972–73:291–292, pl. 52b, and the examples on pls. 233–234; 1975, vol. 2:223; vol. 3: pl. 404a; Courbin 1954:176, fig. 33 (Argos); Blegen, Palmer, and Young 1964: pl. 5, nos. 8-2, 9-2; pl. 4, no. 5-3; S. Immerwahr 1971:60–61, pl. 19, esp. nos. 286–289 (cf. 87, pl. 34, no. 345). For the Mycenaean version of the shape see Furumark 1972a: Form 70, Shape 240.
54. Hochstetter (1984:58–66) distinguishes seven types under the heading *Kantharostöpfe* (cf. 19, fig. 3 for details of rim and handle types), none of which is exactly identical to the type at Torone. At Vergina, the vessels designated "*kantharoschema*" pots (Andronikos 1969:211–213, esp. fig. 51) are closer to the Torone type but differ in that they have a considerably taller rim; also worth noting are Andronikos's "*diota me diskomorphon apolexin lavon*" (1969:202–204), where the rim is shorter but where the handles resemble those of Torone Type 2 (see below); cf. also a number of kantharoi with channeled decoration: Andronikos 1969:186, fig. 35. A similarly tall rim is found on an unpublished kantharos from Dion (Dion museum P631 4711) and is also a characteristic feature of the handmade kantharoi of Marmariani, most of which are painted: see Heurtley and Skeat 1930–31:15, fig. 5; 17, fig. 6; 18, fig. 7; and the few unpainted examples also have a tall rim: see pl. I, nos. 14, 16 (cf. Blinkenberg and Friis Johansen 1928: pl. 66, no. 5). The vessel published by Romiopoulou (1971b:354–355, fig. 3, no. 8) from Aiane is related to those of Marmariani (cf. the wheelmade kantharos with short rim and ring base: Casson 1923–25: pl. Id; also Schachermeyr 1980: pl. 65d [Naxos]).
55. For Late Bronze Age parallels see Hochstetter 1984: pl. 39, no. 10; pl. 268, no. 5; Heurtley 1939: pl. 17, nos. 407, 437; cf. Wace and Thompson 1912:156, fig. 103g (Zerelia). For Early Iron Age examples see Hochstetter 1984:58–66, notably Types 2, 3, 5 (*Kantharostöpfe*), some of which (e.g., pl. 188, no. 8; pl. 196, no. 5) are later than the Toronean: Heurtley 1939: pl. 23i, k, n; Chondrogianni-Metoki 1997:42, fig. 5 (left). This smaller variety of kantharos is more consistent with Andronikos's (1969:211–213) *kantharoschema*. Cf. also Weinberg 1943: pl. 13, no. 81, which is Late Geometric.
56. This type of handle is referred to as "trigger-handle" by Heurtley 1939:104. I do not use the term "vertical wishbone handle" in order to avoid confusion with the type referred to as "wishbone" by Heurtley, Wardle, and others (a handle type that itself has several varieties): see Heurtley 1939:81, 180, fig. 52(ii); 183, fig. 56e; 224, no. 452; 225, nos. 456–457; and cf. his "wish-bone handle with terminal disk," 229, fig. 102; Wardle 1980:244; Hochstetter 1984: pl. 264, nos. 1, 4, 6, 13, 15–16 (all wishbone handles).
57. For related Late Neolithic types see Heurtley 1939:152, no. 114; cf. 151, no. 103; for the Early Bronze Age see esp. Heurtley 1939:168, no. 171; 172, no. 221; 192, no. 319; cf. also 183, nos. 254–255; 187, no. 279; 188, no. 284; 190, nos.

305–306. For the Late Bronze Age, see Heurtley 1939:217, pl. 21, nos. 411–412; Wardle 1980:246, fig. 10, no. 13; Hochstetter 1984:66–78, and esp. 74, fig. 18, Type 5. A similar form is also found in Middle Helladic central and southern Greece: see Blegen 1921:19, fig. 26; Goldman 1931:163, fig. 226.

58. Heurtley 1939:222, no. 439; 224, no. 452; 225, nos. 456–457; Andronikos 1969:207–209, fig. 48, mostly with more rounded handles; Wardle 1980:245, fig. 9, no. 1; 248, fig. 12, no. 26; cf. 257, fig. 16, no. 38; Hochstetter 1984:78–101, esp. 94, fig. 24, Type 11, and 96, fig. 25 for handle types; also Heurtley and Radford 1927–28:140, fig. 20, A56, J4; for an example with four handles set on the rim see Heurtley 1926–27:183, fig. 30, no. 9. Earlier ancestors of the shape may be found in vessels like Heurtley 1939:180, fig. 52(ii)e; cf. 178, no. 218 (Early Bronze Age); and of Middle Bronze Age date: Heurtley 1939:209, nos. 385–388; cf. 205, no. 374; see further Casson 1926b: pl. XI, fig. 2, no. 2.
59. Wells 1983a:69–70, 85, 99, 113–114; and 69, n. 339 for contemporary material from the Argolid; Wells 1983b:213–214, figs. 156–159; 233, fig. 176; 253, fig. 191, nos. 705–708; 275, fig. 207, nos. 911–913; also Hägg and Hägg 1978:85–86, figs. 75–76, nos. 127–130; Brouskari 1980:21, pl. 5e, no. 7; Popham, Sackett, and Themelis 1979–80:36, pl. 17, nos. 248–249; Catling and Lemos 1991:62–63.
60. Especially Andronikos 1969:222, pl. 134 (top row, left); Petsas 1961/62a:260, figs. 47, 51, pl. 149γ (= Radt 1974: pl. 37, nos. 15, 17). Some of Andronikos's two-handled open vessels (e.g., Andronikos 1969:214, fig. 54) are not unlike in general shape, but are smaller and of rather more open form. Some of the amphorai and jars from Kastanas may be compared: see Hochstetter 1984:38–48, pl. 45, no. 7; pl. 73, no. 1; pl. 82, nos. 3–4; pl. 122, no. 1; and the fragments on pl. 120; for jars see 113–142. Compare also the "cooking pot" (Heurtley 1939:234, pl. 22, no. 472) and the jar (Wardle 1980:259, fig. 18, no. 50). Note also the coarseware vertical-handled vessel from Athens (Brouskari 1980:27, pl. 5b, no. 27, EPK 559), the general form of which is very similar.
61. As restored **T70-3** has a height of 0.130 m and est. diameter (rim) of 0.140 m; **T47-4**, **T99-3**, and **T123-2** are marginally larger—PH: 0.165 m, 0.168 m, and 0.160 m, respectively; the original height of the cauldron (not including legs) of all three would probably have been in the vicinity of 0.200 m. **T123-2** has an est. diameter (rim) of 0.180 m, **T47-4** 0.300 m.
62. The tripod enjoys a long history in Crete from Early Minoan through Subminoan: see Popham and Sackett 1984: pl. 86f, g, h; pl. 162, nos. 9–11; 174, n. 125; Betancourt 1985: figs. 29E, 31, 68, 86, 116 for further references. Also Warren 1972:178–179, figs. 62–63; Wilson 1985:341–343; 351–352, fig. 32, no. P422, for early examples; Levi 1967–68:132, fig. 84. For later examples see Hood and de Jong 1958–59:188, fig. 6, pl. 46a, no. 12; Seiradaki 1960:7–9, fig. 4, pls. 2a–e, 4d; Rocchetti 1967–68:205, fig. 46, no. 73; 206, fig. 48, no. 75; 1988–89:234, fig. 156. For related examples from Aegean islands see Coldstream and Huxley 1972: esp. 134, nos. 56–60, fig. 43, pl. 35; cf. Atkinson et al. 1904:175, pl. 35, no. 17; 157; Renfrew 1985:196; 194, fig. 5.22, nos. 376–378; also Melas 1985:136–137.
63. Furumark 1972a, Shape 320; Lacy 1967:185, Shape 7; 184, fig. 72b. For good illustrations of coarseware tripods see Goldman 1931:189, fig. 263, no. 6; Wace 1954: pl. 37c; Deshayes 1966: 32–34, pl. 47, nos. 6–7; L. Morricone 1972–73:215, fig. 132c, inv. 1231; Schilardi 1978: pl. 138b; Onasoglou 1995: pl. 22a; Mountjoy 1995b:223–226, figs. 18–20, nos. 190–205. For earlier examples see Wace and Thompson 1912: 108, fig. 58b (Tsangli); Mylonas 1932: fig. 62; Lamb 1936: pl. 9, nos. 301, 26, 210, 440; pl. 35, nos. 27–28, 167, 21; pl. 36, no. 258; Bernabò-Brea 1964: pls. 70–73, 132a–b, d–e, 142, 154–157; 1976: pl. 219; Benson 1973: pl. 39, K964; Benton and Waterhouse 1973:9, fig. 5, nos. 98–100; 13, fig. 7, nos. 156–161; 18, fig. 11, L24–L25; pl. 3c; Hood 1981:189–190; and cf. those from Troy: Blegen et al. 1950:75–76; Blegen, Caskey, and Rawson 1951:33–34, 248–249; 1953:72; Blegen et al. 1958: fig. 217 (D38); cf. Osten 1937b: fig. 204, no. e1079. For painted Mycenaean tripods see Furumark 1972a, Shape 319; see further Forsdyke 1925: pl. 10, A811; Charitonides 1961–62: pl. 16e, no. 87; pl. 25d, no. 86; Karageorghis 1963: pl. 47, no. 7; 1974a: pl. 28, no. 141; pl. 57, nos. 43–44; L. Morricone 1972–73:240, fig. 178, inv. 1210; M. Morricone 1979–80:307–313, figs. 168–178; Åström et al. 1980: pl. 22, no. 5; Maier and von Wartburg 1986:184, fig. 68.
64. For tripods of Mycenaean date in Athens and Attika see Broneer 1933:371–372, fig. 45; 1939: 398–400, Shape 27, fig. 81a–b; Hansen 1937: 562–564, fig. 17f–k; Stubbings 1947:54, fig. 23B;

S. Immerwahr 1971:140, pl. 61, no. 441; Benzi 1975:225, pl. 7, no. 174; Mountjoy 1981:22, fig. 6, pl. 5b, no. 25; cf. the wheelmade and painted *tripodika alabastroeide* in Iakovides 1969–79, vol. 2:209–212.

65. Rhomaios and Papaspyridi 1930: pl. 6, nos. 13–14; Benton 1934–35:101–102; Kraiker and Kübler 1939: pl. 63, inv. 554; pl. 64, inv. 555; Payne 1940: pl. 14, no. 6; Kübler 1954: pl. 156, inv. 782; Vokotopoulou 1969a:84–85, no. 36; pl. 30a–b; Hägg and Hägg 1978:86–87, figs. 75, 77, nos. 146–151; and cf. related shapes in Popham, Sackett, and Themelis 1979–80: pl. 284, no. 9; Popham, Touloupa, and Sackett 1982a: pl. 15, no. 13; McDonald, Coulson, and Rosser 1983: 95; 137, fig. 3-21, nos. P408, P860, P833; 178, fig. 3-62, no. P1313; Wells 1983a:77, 88, 100, 115 (for Mycenaean tripods at Lefkandi see Popham and Milburn 1971:337, fig. 2, nos. 2–3; 347, fig. 8, no. 3; pl. 52, no. 1); for coarseware tripods from Early Iron Age Kos see L. Morricone 1978:291, fig. 621; 293, fig. 625; 306, fig. 652; for painted examples, 206–207, figs. 403–404. See also Desborough 1952: pl. 30c (Kos); Brock 1957:49, 51, 167, Tomb X, nos. 483, 515 (not illustrated); Rocchetti 1967–68:206, fig. 48; 1974–75:186–187, figs. 23, 25; 220, fig. 72; 278, fig. 157; Yon 1971: pl. 19, no. 55; Pieridou 1973:107, Shape 23, pl. 7, nos. 10–12.
66. The applied decoration brings to mind the much referred to vessel from Korakou (which has, however, a more sharply inturned rim) that goes under the label "Peloponnesian 'Barbarian' Ware," most recently illustrated by Bouzek 1985:182, fig. 91, no. 17. The general form and the applied strip of clay in the form of a rounded Λ find a number of related parallels, especially among the *Töpfe* (Type 7a), in Hochstetter 1984: 131; 129, fig. 34; pl. 111, no. 3; pl. 133, no. 1; pl. 145, nos. 4–5; pl. 164, no. 3; pl. 250, no. 6; pl. 253, no. 3, although none of these has the small flange on interior.
67. Buchholz 1973. For further comments on Aiolic bucchero, and especially for its distribution outside the area, see Hanfmann 1945:580, n. 41; 1948:152–153, n. 84; Dunbabin 1957:65–66; Desborough 1964:255; Boardman 1967:135; 1980:33, 48, 88, 124, 214, 217, 249. For "Ionian *bucchero*" of the Archaic period—which appears to have been manufactured in east Greece (in Aiolis and further south, where it is termed "Ionian" or "Rhodian"), Etruria, and the coastal region of the northwest Mediterranean from Marseilles to Ampurias, see Cook and Dupont 1998:136–137; Prinz 1908:57–63; Villard 1960:51–53; Vallet and Villard 1964:90–91; Boardman and Hayes 1973:28; Gras 1978:104–106; Martelli-Cristofani 1978:173–175. For East Greek Gray Ware see esp. Bayne 1963; Gebauer 1990:65–101; 1991:73–100; Py et al. 1993:445–452. For gray ware on Thasos (*bucchero gris*) see Bernard 1964:109–114; for related wares in the eastern Mediterranean see French 1969:69–70, 90, fig. 24; Buchholz 1973:182–184. See also Boehlau and Schefold 1942:21–22; Bouzek 1985:198. For Late Roman Gray Wares (Gaulish and Macedonian T.S. Grise) see Hayes 1972:402–405.
68. Descoeudres and Kearsley 1983:44, 47; Kearsley 1989:126–132; 1995:67–69; see further Dugas and Rhomaios 1934: pl. XXVI; Desborough 1952:180–194; Hanfmann 1956:173–175; Boardman 1957:2–10; Desborough 1963; 1979; Coldstream 1968:148–157; Riis 1970:126–175, figs. 47–48, 51, 53–54; Ridgway and Dickinson 1973:191–192; Ploug 1973:11–14; Gjerstad et al. 1977:24, pl. I.4–14; pl. II.1; 61–62, pl. I.3–5; Gjerstad 1979: pl. VII.7 (no. 106); Popham, Sackett, and Themelis 1979–80:297–302; Coldstream 1981:17–18, pl. 16, nos. 2–3 (dated ca. 900–850 B.C.).
69. For Euboian parallels see Popham, Sackett, and Themelis 1979–80:308–311 (among amphoriskoi note esp. the decoration of S16.4); 313–326 (for the lekythos, oinochoe, and one-handled jug, particularly the lekythoi, see 314, fig. 14); cf. Popham, Sackett, and Touloupa 1982a: pl. 22, no. 3, pl. 23, nos. 2, 4. For comparative forms in Attic cf. Kraiker and Kübler 1939: pls. 12–15; Kübler 1943: pls. 13–19; Desborough 1952:45–77, pls. 7–9; Smithson 1961: pl. 24, no. 34; pls. 25–26; Styrenius 1962: pl. III, nos. 3619–3620. A particularly close early parallel comes from Heidelberg Tomb A: Kraiker and Kübler 1939: pl. 36 (middle).
70. Particularly close is an oinochoe from Derveni (Achaia): Coldstream 1968: pl. 48j; Vermeule 1960:16, no. 51, pl. 5, fig. 38; and a lekythos/jug from Medeon (Phokis): Vatin 1969: fig. 59 (= Schachermeyr 1980: pl. 56a). A similar vessel from Aetos (Ithaka) may also be cited: Coldstream 1968: pl. 47f (cf. pl. 47g); and Heurtley and Lorimer 1932–33:49, fig. 26, no. 75. See further Snodgrass 1971:85, figs. 42–44; Desborough 1972:248, pl. 57. Cf. also the decoration on a number of closed vessels, principally

amphoriskoi, from Agrinion: Vokotopoulou 1969a:92–93, pls. 46–47, 49 (notably the jug, pl. 47a [top row]). Cf. also the Attic lekythos from Crete: Doumas and Marangou 1978:191, no. 42.

71. Incised decoration is more common on the rims of basins: Hochstetter 1984:108, fig. 28, motif 3 (opposed diagonals), and see further pl. 260, nos. 2–3, 5–6, 9, 11; pl. 164, nos. 6–7; pl. 188, no. 9; pl. 200, no. 8; pl. 223, nos. 2, 8; pl. 231, no. 9; pl. 241, no. 6. For Axiochori/Vardarophtsa, see Heurtley 1939:232, fig. 105a–g, i (esp. c for opposed diagonals).
72. There is an almost complete example in Hochstetter 1984: pl. 217, no. 8 described as *Töpfchen* from Level 5 (eighth century B.C.) and a number of related vessels, such as the *Deckelgefässe*, pl. 233, nos. 1–2, which are slightly later. Earlier examples of the form are mainly to be found among the smaller *Töpfe:* cf. pl. 5, no. 1 (sixteenth century B.C.) and *Schüsseln*, such as pl. 83, no. 7; pl. 116, no. 1; pl. 239, no. 5 (Late Bronze and Early Iron Age); note also the lids, 168–173, fig. 45, esp. Type 2b. Cf. Hänsel 1979a:198, fig. 18, no. 2. Related vessel forms from Assiros include Wardle 1980:245, fig. 9, no. 2; 248, fig. 12, no. 22 (both Bronze Age); see also Sakellariou 1965:421, pl. 471ζ.

Appendix E
A petrographic and chemical analysis of the Early Iron Age pottery at Torone

I. K. Whitbread and R. E. Jones

INTRODUCTION
by John K. Papadopoulos

In 1989 a joint project of petrographic and chemical analysis was initiated with Ian Whitbread, then of the Massachusetts Institute of Technology, and Richard Jones, then Director of the Fitch Laboratory of the British School at Athens. The project was originally conceived following the study of the pottery from the Early Iron Age cemetery (presented in full in chapter 5) and from the Early Iron Age kiln (Papadopoulos 1989a; Whitbread, Jones, and Papadopoulos 1997). As a result of this study, the pottery of the period was divided into five broad categories on the basis of visual criteria: (1) local wheelmade painted pottery, (2) local handmade burnished pottery, (3) imported wheelmade painted pottery, (4) imported handmade pottery, and (5) black- and red-slip pottery.

1. Local wheelmade painted pottery

This represents the largest of all the categories and an important, hitherto unknown, regional style, stylistically linked with the Submycenaean, Protogeometric, and Subprotogeometric pottery of central and southern Greece. Despite these links, the wheelmade pottery differs from other known regional styles on the basis of fabric, shape, and decoration.

2. Local handmade burnished pottery

Almost as common as the wheelmade and painted pottery, the handmade pottery of Early Iron Age Torone is found together with the wheelmade in the Late Geometric potter's kiln on Terrace V (Papadopoulos 1989a). This category may be divided into two on the basis of both fabric (two varieties of clay) and shape. The two varieties of clay used both look and feel similar, but the noticeably coarser variety is used for only three shapes: the pithos, pitharion, and tripod cauldron.

3. Imported wheelmade painted pottery

A number of wheelmade painted vessels from the cemetery were thought to be imports. On the basis of fabric, shape, and decoration some of these were assigned as Attic, Euboian, Cycladic, and Thessalian with varying degrees of conviction. In a number of cases, the fragmentary state of the material precluded any firm assignment and several pieces were classed as imports of uncertain provenance. These suspected imports cover most of the period of use of the cemetery.

4. Imported handmade pottery

A small and rather inconsistent category, the total not exceeding ten vessels, which in details of shape, fabric, and manner of burnishing differ from those considered local. Their suspected source, on the basis of comparanda, was thought to be central Macedonia, in some cases conceivably a site in Chalkidike other than Torone.

5. Black- and red-slip pottery

This, the smallest of the discerned categories, consists of four examples of black-slip and one only of red-slip. In both cases the fabric appeared to be the same, differing only in the fired color, the result of reduction and oxidization firing, respectively. The group bears a general similarity to the black- and red-slip vessels found at Lefkandi and elsewhere in the Aegean, but the shapes are different. It was

uncertain, on the basis of visual examination, whether the group was locally produced or imported.

Given the quantity of material from the cemetery and kiln, coupled with its variety and the fact that little Early Iron Age pottery from Macedonia had previously been scientifically examined (see summary in Jones 1986:103–113), a program of combined petrographic and chemical analysis was carried out, following discussions with Whitbread and Jones. The primary aim of the analysis as initially conceived, and particularly in light of the five categories listed above, was essentially threefold. The first aim was to attempt to characterize the local wheelmade and handmade pottery in a more objective manner than visual examination alone could provide, and to characterize the local pottery against the backdrop of the geology of southern Sithonia. A second aim was to establish any useful details of manufacturing techniques that could be gleaned in addition to those more traditionally determined by both visual examination and ethnographic analogy. Here the evident differences between the local wheelmade and handmade pottery, both of which were found in the Late Geometric potter's kiln, were considered important, particularly with regard to any possible intentional additives to the clay, porosity, and heat resistance. Given the quantity of suspected imports, both wheelmade and handmade, the third aim of the analysis was to separate the imports and to attempt to determine their provenance.

On account of the character of the pottery considered local (both categories 1 and 2), Whitbread, who had spent part of the 1989 season at Torone, believed a petrographic study would yield useful results. His earlier interest in the area focused on transport amphorai, particularly those of the Parmeniskos and Mendean classes (Whitbread 1995). While in Torone Whitbread also located, and collected samples from, two clay sources in the immediate vicinity of the site. Consequently, the petrographic analysis was from the beginning considered the primary method of investigation. To this end in 1989 Whitbread and Papadopoulos collected for petrographic analysis a total of 111 samples from vessels of all five categories listed above, from the kiln pottery and from the clay floor of the kiln. Many of the suspected imports of category 3, however, along with some of the vessels of category 1, were of a considerably finer fabric that did not lend itself to petrographic study. A smaller group of about fifty samples was therefore collected to allow Jones to examine them chemically by means of atomic absorption. This smaller group included samples from all five categories as well as from the kiln pottery. Its primary focus, however, was on the finer imports of category 3. The chemical analysis was originally conceived of as ancillary to the petrographic study, better suited to distinguishing the provenance of suspected imports, and for supplementing, by using a different technique, the information supplied by petrography. As a result, the sampling strategy was different from the petrographic, and, with hindsight, it might have been useful to have had more overlap between pieces analyzed by both techniques, especially more samples of the local pottery for chemical analysis.

The results of the petrographic and chemical analyses are presented in detail below, and some of the conclusions reached in this section have been incorporated into the discussions presented in previous sections. From an archaeological perspective, the results of these analyses have yielded important information, particularly with regard to the characterization of the local pottery, and a better, though far from definitive, understanding of the local potters' craft. At the same time, it has produced some surprises and has raised many new questions. As the poem *Kiln* in the pseudo-Herodotean Life of Homer (Milne in Noble 1988) reminds us, pottery production can be a fickle craft, and the lived experience of potters practicing their trade is not always in keeping with the precision of laboratory techniques we use in order to understand them.

It should come as no surprise that many of the results are not cast as definitive solutions but as possibilities, some more nebulous than others. Perhaps the greatest surprise, in keeping with the information extracted from visual examination (Papadopoulos 1989a), was the varied character of the pottery from the Early Iron Age kiln (Whitbread, Jones, and Papadopoulos 1997). Against the aims of the project as originally conceived, the kiln pottery was viewed as providing an important control group of vessels made and fired at the same time. The petrographic and chemical variances of

the kiln pottery, differences that go well beyond those of the local wheelmade and handmade wares, provide both a potent warning and a useful lesson. Despite the assumed precision of the analyses in the minds of many archaeologists (myself included), many basic questions, especially with regard to manufacturing techniques, remain either unanswered or at best are presented as hints for avenues of future investigation. Even the establishment of provenance of the more likely of the suspected imports has produced some gray areas. In my own mind if not in my collaborators', several pots, albeit a small number, have been vacillating and remain as problematic, perhaps even more so than when I first confronted them. Such gray areas have received further discussion in preceding sections; we thought it useful to present, in cases where the material so warranted, the original presumed identifications made on the basis of visual criteria, with the results of scientific analysis.

PETROGRAPHIC ANALYSIS

This study, following the aims outlined above, begins with a brief overview of the geology of the Sithonia peninsula. The petrographic fabric classes are then outlined, with detailed descriptions at the end of the section. Finally, the rock and clay samples are described.

Samples from a wide range of pottery, clays, and rocks were prepared as thin sections for analysis under the polarizing microscope in the Fitch Laboratory. Although this method favors relatively coarse pottery, finewares were also sectioned in case diagnostic features could be found that correlate with chemical data. Given the geological diversity of the southern part of the Sithonia peninsula (Whitbread 1995:213ff), it was hoped clear differences would be detected in the mineralogy of the fabrics. With this in mind, a small program of rock and clay sampling was undertaken to determine the nature of potential raw materials in the vicinity of the ancient site for comparison against the pottery fabrics.

Geology of the region

The geology of the Sithonia peninsula (summarized in Whitbread (1995:213ff), is largely composed of schistose, biotite, and two-mica granodiorite (Kockel, Mollat, and Walther 1977: 39; Kockel et al. 1978; fig. 217), accompanied by granite, quartzmonzodiorite, and tonalite (Sapountzis et al. 1976). According to Soldatos et al. (1976), the mineral assemblage is plagioclase (oligoclase to andesine) with normal oscillatory zoning and myrmekitic intergrowths, orthoclase (some perthitic), microcline, quartz, biotite, muscovite (mainly in the north), hornblende, epidote and accessory zircon, sphene, apatite, magnetite, chlorite, and allanite.

Kockel et al. (1978) record outcrops of Paleozoic (or older) amphibolites (hornblende, plagioclase, epidote, sphene, quartz) in the southeast parts of the peninsula. In the southwest there are greenschists (epidote-chlorite schists, hornblende-epidote-quartz schists, and actinolite-epidote-chlorite schists) and metadiorite (Kockel, Mollat, and Walther 1977:36). The Bay of Torone is situated at the contact between the granodiorite and the greenschists and amphibolites, in the southwest part of the peninsula. In the northwest part are found Triassic to Middle Jurassic graphitic phyllites and reddish brown, ferruginous, quartzitic sandstones into which the granodiorite has been intruded. A tectonic contact exists between the Upper Jurassic limestones and ophiolitic rocks and the greenschists in the southwest part of the peninsula. The limestones and ophiolites form the hill (Vigla) overlooking the site of the ancient city of Torone and act as a barrier between the Bay of Kouphos and the Gulf of Torone.

Small deposits of Upper Miocene to Lower Pleistocene(?) sediments occur in the northern parts of the peninsula. In particular, these include lacustrine limestones, marls, conglomerates in red clay, and red to brick-red clays with micas and sands (Kockel et al. 1978).

Petrographic analysis of the ceramic fabrics

Given the diverse nature of the regional geology of the Sithonia peninsula, the primary classification of the ceramic fabrics is based on petrographic composition. This approach was initially used to define the ceramic fabric classes and successfully isolated the coarse granodiorite fabrics, the metamorphic fabrics, and amphibole fabrics. As will be seen below, however, other fabrics cannot be classed satisfactorily by composition alone.

GRANODIORITE FABRICS WITH COARSE-GRAINED INCLUSIONS: THIRTEEN SAMPLES, PLUS THREE RELATED FABRICS

This class is composed of the local handmade coarse variety, as identified by Papadopoulos, including: **T1-1, T7-1, T12-1, T31-1, T38-1, T46-2, T47-4, T70-1, T105-2, T108-2, T118-3, T123-2, 23**

Related fabrics

- Kiln brick
- Kiln: wheelmade amphora with belly and shoulder handles (**KP-5**)
- Imported handmade Macedonian/local vessel (**T112-1**)

This fabric class is characterized by numerous poorly sorted coarse inclusions of granodiorite and its constituent minerals (**fig. 218**, sample **T46-2**; **pl. 527**, sample **T123-2**). It is a homogeneous class, although three related fabrics (the kiln brick, **T112-1**, and **KP-5**) have been found that have similar mineralogical compositions, clearly derived from the granodiorite but different in grain-size frequency distribution and proportions of inclusion compositions. The kiln brick (**pl. 528**) has a more micaceous (biotite) clay matrix than most fabrics in this class, indicating a different clay source. **T112-1** is finer grained, with a mode in the medium to coarse sand range, which may reflect a slightly different clay source or a difference in clay preparation. The presence of quartz-muscovite schist, a distinct bimodal grain-size distribution, and a relatively fine-grained clay matrix in **KP-5** (**pl. 529**) suggest this sample may have been tempered with a sand derived from both granodiorite and schist sources. Moreover, the clay itself appears to be different from that of other members of this class, suggesting a different source was used.

The fabrics of this class are believed to be local in origin, which is supported by the presence of the kiln brick and kiln related pottery in the class.

METAMORPHIC FABRICS: SIX SAMPLES

This class is composed of the following pottery as identified by Papadopoulos:

- Kiln: three handmade pithoi (**KP-1**, **KP-2**, **KP-3**)
- Kiln: wheelmade jar or small pithos (**KP-13**)
- Black-slip (**T104-2**)
- Imported handmade Macedonian (**T97-1**)

The primary inclusions in these fabrics are metamorphic rock fragments that are largely feldspathic in character (see **fig. 219**, sample **KP-1**; **pl. 530**, sample **KP-1**). In places their texture is reminiscent of volcanic rocks, and **T97-1** contains a fragment that appears to be volcanic in texture. The attribution to a metamorphic source lies in the limited amount of volcanic material near to Torone, and in the occurrence of similar textures amongst the local amphibolite schists. The inclusions do differ from what one would expect of volcanic rocks, and the rock samples of amphibolite schist, in that they contain no mafic minerals. Rarely, fabrics also contain inclusions of granodiorite similar to those in the previous fabric class. A couple of fabrics contain an odd inclusion of weathered volcanic lava. Like the fragment mentioned above, these are likely to have originated from the volcanics of the ophiolitic rocks to the southwest of Torone Bay, based on their general similarity to a volcanic rock sample from this unit described below.

As most of these fabrics belong to vessels associated with the kiln, the class appears to have been locally produced. Chemical analysis, however, for the black-slip krater **T104-2** suggests that the fabric matches that of a similar group of vessels from Lefkandi (see below).

AMPHIBOLE FABRICS: TWO SAMPLES

Samples from vessels identified by Papadopoulos as imported handmade Macedonian vessels **(53, 54)**

Although they are fine-grained fabrics, both samples contain appreciable quantities of well-sorted and slightly oxidised amphibole (**pl. 531**, sample **53**). These are the only ceramic fabrics in this sample set that appear to reflect the amphibole-bearing greenschist rocks of the southern end of Torone Bay, that is, the geology in the immediate vicinity of the archaeological site of Torone. Samples of earth from a cutting in the center of the alluvium of Torone Bay and from the beach sand near the site, both contain considerable quantities of amphibole (Whitbread 1995:216).

On this evidence the fabrics could be local, but their fine-grained character offers little additional evidence, such as grains of granodiorite, for confirmation.

Although the fabric classes listed above can be distinguished through the composition of their inclusions, the remaining fabrics are more problematic. They generally contain a mixture of inclusions, many related to the granodiorite and schists. Various ways of classifying these fabrics using composition-based criteria were tried, although none achieved a clear or consistent separation. Grouping the fabrics by their texture does appear to offer a useful alternative approach in comparison with the original hand-specimen classification. Being based on broad differences in grain-size distribution, several of these classes have in addition been subdivided to reflect apparent differences in composition or in sorting.

FINE SAND FABRICS: TWENTY-TWO SAMPLES

According to Papadopoulos's classification, these fabrics comprise mostly local handmade finer variety, although some (e.g., **T107-1**) are local wheelmade: **T10-1**, **T18-1**, **T22-1**, **T26-3**, **T41-3**, **T43-1**, **T63-1**, **T66-1**, **T67-2**, **T73-2**, **T74-2**, **T75-3**, **T101-12**, **T107-1**, **T109-5**, **T113-13**, **T130-1**, **21**, **74**

- Kiln: wheelmade krater (**KP-4**)
- Kiln: wheelmade large closed vessel, probably an amphora (**KP-12**)

Fabric variant

- Sandstone fabric: one
- Macedonian imported handmade: **T54-1**

These fabrics are separated out by the presence of (often closely packed) fine sand–sized grains in the matrix (**fig. 220**, sample **T43-1**; **pl. 532**, sample **T43-1**). For the most part, the fine sand–sized grains are quartz. Although this appeared at first to be a somewhat vague way of classifying the fabrics, subsequent comparison with Papadopoulos's hand-specimen classification showed that virtually all the samples placed in this fabric class belong to his local handmade finer category. Later mixing and resorting of the samples based on the quantity of fine grains in the matrix replicated the initial results. Thus, the class reflects what is in effect a difference in matrix (or clay) properties. This distinction could have been recognized by potters in terms of the apparent "sandiness" of the clay when it was worked between fingers; thus the clay body could have been prepared using material(s) selected preferentially for use either by certain potters or for specific types of vessels or forming methods. One fabric variant has been recorded: sample **T43-1** (**pl. 532**) has a texture similar to the above-mentioned fabrics, but also contains fragments of fine-grained sandstone.

VERY FINE SAND FABRICS: THIRTY-FOUR SAMPLES

In large part these samples fall into the local wheelmade class as defined by Papadopoulos, although one, **T127-1**, must be a Euboian import: **T28-1**, **T81-2**, **T90-1**, **T94-1**, **T95-1**, **T116-1**, **T124-3**, **T127-1**, **28**, **32**, **78, KP-6**

Fabric variants

- Well-sorted, medium sand-grained fabrics, seven local wheelmade: **T20-1**, **T41-1**, **T56-1**, **T74-1**, **T82-1**, **8**, **24**
- Large tcfs (textural concentration features, usually clay pellets) fabric, one local handmade finer variety: **T82-4**
- Calcareous fabrics, three local wheelmade: **T30-1, T58-1**, **T62-1**,
- Yellow firing fabrics, four local wheelmade: **T24-1, T84-1, T101-6,** (unusual) **T120-1**
- Grey firing fabrics: seven
- Black-slip ware (**T50-1**)
- Black-slip (cf. Lefkandi) (**T24-3**)
- Kiln, wheelmade closed vessel, probably small amphora (**KP-8**)
- Kiln, wheelmade large closed vessel, probably amphora (**KP-9**)
- Local wheelmade painted (**T101-3**, **T101-4**)
- Imported, probably Attic (**T101-8**)

In contrast to the fine sand fabric class, the matrixes of these fabrics possess relatively little

fine sand and more very fine sand (**pl. 533**, sample **T124-3**). In effect, the matrix appears to be considerably less coarse in these fabrics. After their initial separation from the fine sand fabrics, comparison with Papadopoulos's classification showed that the majority of samples in this class belong to wheelmade vessels, although there was one Attic (**T101-8**) and one Euboian import (**T127-1**).

A number of subclasses fall within this class on the basis of their matrix grain size. The well-sorted, medium sand–grained fabrics are characterized by a bimodal grain-size distribution, with a well-sorted coarse fraction and a very fine-grained matrix (**fig. 221**, sample **T56-1**; **pl. 534**, sample **24**). Owing to the latter property, they have been classified along with the very fine sand fabrics. They contain a mineral assemblage that is consistent with a local origin, but the mineralogy of these fabrics could be matched in many other areas of Greece, particularly northern Greece. We therefore must rely on the archaeological evidence to suggest whether they are local or imported.

The large tcfs fabric is distinctive owing to the occurrence of large reddish-brown clay pellets (**pl. 535**, sample **T82-4**; for textural concentration features see Whitbread 1986; 1995:386). These indicate that a different clay source is represented by this fabric, but whether it is local or imported cannot be determined given the lack of distinctive mineral inclusions. This fabric is also an oddity in that Papadopoulos classed it as a local handmade finer variety vessel; if further sampling reveals more examples of this fabric it may be reclassified with the handmade vessels.

The calcareous fabrics (**pl. 536**, sample **T62-1**) contain relatively large amounts of calcareous material, including rare shell fragments. It is likely that other fabrics in this class are from a similar source, but that better firing resulted in the calcareous material becoming dissociated. This subclass may therefore be technological in nature reflecting a lesser degree of firing than was the norm.

The yellow firing fabrics again reflect calcareous clays, but in general these have been better fired. Some of the redder fabrics of the main group of samples may be found to turn yellowish in color if they are more fired.

The gray fabrics have either been poorly fired, such that carbon has remained deposited in the fabrics, or they have been reduced so that the iron oxides in the clay have turned to black (ferric) rather than reddish brown (ferrous) oxides. The presence of kiln vessels in this subclass indicates some of these fabrics are local; however, one cannot rule out the possibility that imported fabrics are represented (see the results of the elemental analysis below).

EXTREMELY FINE-GRAINED FABRICS: FOURTEEN SAMPLES

According to Papadopoulos's identifications, this fabric class comprises

- Imported wheelmade painted Cycladic (cf. Thessaly) (**T72-1**)
- Imported wheelmade painted Euboian/Cycladic (**T77-3**)
- Imported wheelmade painted probably Euboian (cf. Attic) (**49**)
- Imported wheelmade painted unknown provenance (**64**)
- Local or imported wheelmade painted Attic/local (**T101-9**, **T101-10**)
- Imported wheelmade painted Euboian or Attic or Thessalian (**48**)
- Imported wheelmade painted Euboian or Attic (**T113-9**)
- Imported wheelmade painted Attic/Euboian/Argive? (**T93-1**)
- Imported wheelmade painted Thessalian or Euboian (cf. Skyros?) (**T47-1**)
- Local wheelmade (**T23-1**, **T45-1**, **T104-1**, **T105-1**)

These fabrics are too fine grained to be classified at all by composition (**pl. 537**, sample **T77-3**). It is possible that, with a larger sample, some may grade upward in grain size into the fine sand and very fine sand fabric classes. Although a brief description of their petrographic properties is provided below, for information on their origins and relationships to other ceramics the reader is referred to data from the chemical analysis. All these samples fall into Papadopoulos's wheelmade vessel classes, most of them carry painted decoration, and many are considered to be imports.

Raw materials prospection

A range of potential raw materials from the Torone region, both rocks and clays, have been studied. The selection of samples was based in part on an earlier examination of fabrics from the area (Whitbread 1995:210ff). Rocks were sampled to help determine the range of lithic inclusions that might be expected in the local ceramics and to identify better their mineral components as some minerals (e.g., biotite, amphibole) are oxidized in the fired ceramics. It was hoped the wide range of rock types shown in the geological map (see fig. **217**) would be reflected in the pottery, thereby strengthening the discriminative power of the petrographic analysis. We further hoped this diversity would enable us to isolate different clay sources. Such variation might then be correlated to differences in vessel shape, function or maybe workshop.

Rocks

Briefly, the rocks sampled in the region of Torone (**fig. 222**) have the following properties:

R1 Granodiorite: Coarse grained and composed of quartz, orthoclase, and plagioclase feldspars (frequently cloudy with alteration products, myrmekitic intergrowths are common), microcline feldspar, hornblende, epidote, sphene, and biotite.

R2 Schist: Amphibolite schists with actinolite-tremolite amphibole, quartz, feldspar, epidote, and in some cases white mica. Often the schists have poorly developed foliation in thin section. In general the schists appear more or less phyllitic in hand specimen owing to their fine-grained nature (ca. 0.20 mm for amphibole and less for quartz and black opaques).

R3 Altered volcanic: The sample contains fine-grained laths of feldspar (with simple twins) ca. 0.10–0.20 mm in length, embedded in a yellowish green, fine-grained groundmass with few black opaques. Commonly, the vesicles are infilled with calcite, and very rarely plagioclase phenocrysts are partially replaced by calcite. The rock is from the area mapped as part of the ophiolitic assemblage that occurs to the south of the Lekythos.

R4 Limestone: Micritic limestone from the Vigla (the mountain overlooking the Lekythos from the southeast, with the kiln located on its lower slopes) with common to very few sparry calcite patches and veins.

R5 Sandstone: Fine-grained sandstone with frequent very well-sorted quartz (and feldspar?) as subangular, equant grains, and frequent fine sand-sized white mica, again very well sorted. There are rare to very rare epidote grains (very fine sand) and reddish brown opaques (very fine to medium sand). The mica has well-developed preferred orientation. As these deposits appear to be derived from the granodiorite to the northeast, it is likely some of the material identified as quartz is feldspar, but accurate identification at this grain size is not possible without additional analytical techniques.

Clays

Each sample was dispersed in a 1 liter beaker of deionized water and allowed to settle after a period of thorough stirring. The excess water was removed by evaporation and siphoning. When the clay had dried to a workable degree, vertical segments were cut from the beaker ensuring that the full range of coarse and fine material was removed to make briquettes (in some cases additional samples were removed that represent only the finer size fraction). The clay from each segment was then wedged and formed into a briquette, which, after drying, was fired in an electric kiln under oxidizing conditions. Only a selection of clays and soils sampled in the area of Torone (see **fig. 222**) fired well enough to be thin sectioned.

C1

This sample comes from the north slope of Vigla (the mountain at the southern end of Torone bay, with the cemetery on its lower slope).

Fired at 700°C, in thin section it is yellowish brown to dark reddish brown (crossed polars [xp], x45) near the briquette surface. The clay in this briquette is relatively fine grained, ca. 0.60–0.03 mm (mode ca. 0.05 mm), with a rare coarse grain up to 3.50 mm. This coarse grain is of limestone, similar in character to that from Vigla (R4). The smaller grains are predominantly quartz, with very few polycrystalline quartz, white mica schist, and rare feldspar, calcite, chert, and amphibolite schist.

The mineralogy of the clay inclusions generally fits well the underlying geology of the area;

however, it is fine grained (apart from the limestone) so that mineralogical similarities are not as clear as they are for some of the coarser-grained clays discussed below. The clay could match some of the finer-grained fabrics amongst the Torone pottery, particularly the wheel-thrown wares. Nevertheless, such ceramic fabrics could just as easily have been prepared through levigation of coarser clays. Although this sample was picked up not far from the location of the kiln, it comes from the relatively sparse clay pockets on the Vigla slope and therefore does not represent a substantial clay resource.

C4

The clay, from the lagoon to the north of Torone Bay, is dark gray and very sticky (fat) in its natural state.

Fired at 700°C, in thin section (**pl. 538**) it is dark yellow to reddish brown (xp, x45) and relatively fine grained. It has a poorly sorted unimodal grain-size distribution, although this may be the result of clay briquette preparation. The inclusions (up to ca. 1.25 mm) are of granodioritic (R1) character, with rock fragments and grains of feldspar (commonly twinned, some have myrmekitic intergrowths, and some are cloudy with alteration), quartz, amphibole, epidote, and biotite mica. The inclusions are subangular to rounded in character.

Clay C4 appears to be dominated by granodioritic material, despite the adjacent outcrop of amphibolite schist. Thus, the material being deposited in the part of the lagoon where the sample was taken appears to have originated from the granodiorite in the northeast. C4 also bears a close resemblance to the granodioritic fabric of C12 (see below) from a similar lagoon in the Bay of Sykia (**fig. 222**). It appears to present a good match for the granodioritic fabrics amongst the pottery from Torone.

C6

This sample is from the area of amphibolite schists at the base of the northeast slope of Vigla (**fig. 222**).

Fired at 900°C, the fabric (**pl. 539**) is dark reddish brown to dark yellowish brown (xp, x45). It is poorly sorted, probably a result of poor wedging during briquette manufacture. In keeping with the geology of its source, the fabric contains large quantities of amphibolite schist, measuring up to 6 mm (mode ca. 0.10 mm). The amphibolite schist is similar in appearance to rock sample R2, but the oxidized amphibole displays stronger body color and pleochroism (from pale yellowish brown to dark yellowish brown) in plane polarized light. The body color masks the interference colors making them appear to be stronger and redder than the unfired amphibole. In addition, the amphibolite schist contains feldspar, quartz, and epidote. These minerals also occur individually in the groundmass. Other rocks present include a grain, 1.80 mm, of polycrystalline quartz with crenulated grain boundaries and poorly sorted grain-size distribution with intergranular reddish-brown opaque material, and a similarly sized grain composed of quartz-biotite schist.

The sample reflects the geology of the southern area of Torone Bay. Despite the mineralogical similarity to the local schists (R2), this clay does not easily match any of the pottery from the cemetery. There is some similarity with inclusions in pottery of the metamorphic fabric class that were found associated with the kiln. Although the latter do not contain amphibole, the texture (and to some degree the composition) does appear to match. It is possible, therefore, that the metamorphic rock fragments in the kiln pottery come from a geological unit related to the amphibolite schists. Mineralogically, a better match can be proposed for the two ceramic samples making up the amphibole fabric class. The grain size of sample C6 is too coarse, but if levigated a fabric very similar to those of the amphibole fabric class samples would be a likely outcome.

C7

The clay is from lagoonal sediments toward the back (northeast) of Kouphos Bay (**fig. 222**).

Fired at 700°C, the sample is dark yellowish brown (xp, x45). It is very well sorted and fine grained, maximum ca. 0.25 mm (mode ca. 0.05 mm). It contains frequent grains of quartz and biotite mica with few white mica and oxidized amphibole. It is possible some of the "quartz" is in fact feldspar, as identification at this grain size is difficult. Similarly, some of the "biotite" could be oxidized amphibole.

The clay appears to reflect the surrounding amphibolite schist geology, rather than the granodiorite. It does not appear to match the pottery from the cemetery at Torone, other than the two fabrics forming the amphibole fabric class.

C12

This sample is from the lagoon at the northeast end of the Bay of Sykia (**fig. 222**). Like C4, it is dark gray and sticky in its natural, prefired state.

Fired at 700°C, in thin section the clay is yellowish brown (xp, x45). It contains frequent inclusions of granodiorite: feldspars (twinned feldspars, orthoclase, and myrmekitic intergrowths) quartz, amphibole, and biotite mica, with rare epidote. Grain size reaches a maximum of 2.40 mm and is generally poorly sorted and unimodal (a result of clay preparation in briquette forming).

Textural concentration features (or clay pellets) in this sample occur in the range 0.25–1.00 mm. They are yellowish brown (xp and pp, x45) in color, with neutral optical density and are well rounded. Internally they are optically active with a stipple-specked b-fabric and contain very few to rare grains of biotite mica. The internal structure is slightly turbid and tends to be discordant with the external micromass.

This fabric is very similar to C4, although it is generally coarser and more tightly packed with inclusions and biotite, and amphibole are more abundant. Its situation in an area totally dominated by granodiorite accounts for its mineralogical makeup. It is indeed very close in character to the coarse handmade granodioritic fabrics of the Torone pottery, although the tcfs do not provide an exact match (see below). On present evidence, we cannot prove this was the clay source used for Torone ceramics, or even that the clay source was necessarily a lagoon. This sample, along with C4, does show that clays of good quality (if relatively sticky) matching the mineralogical nature of some of the ancient fabrics can be located in the region. It also suggests lagoons may have been a viable clay source in the past.

DETAILED FABRIC DESCRIPTIONS

For a discussion of the terminology used see Whitbread (1986; 1995:379ff).

Granodiorite fabrics with coarse-grained inclusions

Samples: **T1-1**, **T7-1**, **T12-1**, **T31-1**, **T38-1**, **T46-2**, **T47-4**, **T70-1**, **T105-2**, **T108-2**, **T118-3**, **T123-2**, **23**

Fabric variations: kiln brick, **T112-1**, **KP-5**

MICROSTRUCTURE (**pl. 527**)

There are ca. 5 percent voids, dominant planar voids (predominant mesoplanar, common macroplanar), and frequent vughs (predominant meso- to microvughs, common macrovughs). The fabrics have a single-spaced to close-spaced porphyric coarse/fine (c/f) grain–related distribution, the latter in the case of the coarser grains. Preferred orientation is well defined in the subparallel planar voids and vughs, and in parts of the micromass (material <10 μ).

GROUNDMASS

The groundmass of the fabric is homogeneous within the class, although fabric variants are generally finer grained. The micromass is predominantly optically active with a wide range of b-fabrics. There are predominant parallel striated b-fabrics, common unistrial in patches ca. 1.00–0.50 mm, few cross-striated and stipple-speckled and very few granodstriated. Micromass color ranges from pale yellow to reddish brown (xp, x40) and pale yellow brown (pp, x40).

INCLUSIONS

Coarse:fine:void (c:f:v) ratio,
with the coarse:fine boundary at 10 μ

$c:f:v_{10}$	ca. 20:75:5–30:65:5

There are common to rare granules, dominant to frequent coarse to very coarse sand, frequent to common medium sand to silt. The grain-size distribution appears, to the eye, to be unimodal and poorly sorted (**fig. 218**, sample **T46-2**), although it is possibly skewed in the coarse fraction. Coarser inclusions, greater than medium sand, are rounded to subangular, while finer inclusions are subrounded to angular (predominantly subangular).

COMPOSITION

Dominant: **Granodiorite** rock fragments—mostly in the coarser fraction, 2.25–0.50 mm, they

consist of quartz, orthoclase feldspar, plagioclase feldspar, microcline feldspar, biotite, and epidote. The orthoclase is lightly weathered. The plagioclase has albite twinning and predominantly displays cloudy alteration to white mica. The grains are rounded to subangular.

Common: **Feldspars—**orthoclase, plagioclase, and microcline occur in the coarse sand to very fine sand fractions (and possibly below, although it is hard to identify them with accuracy at this size). The fragments are subrounded to subangular and possess properties similar to those described for the granodiorite rock fragments.

Few: **Polycrystalline quartz—**medium sand to very fine sand, the intergranular boundaries are concave-convex, rarely is any foliation displayed.

Few: **Monocrystalline quartz—**predominantly in the fine sand to silt range, this could include a proportion of feldspar, apparently well sorted compared to other mineral fragments. The grains are predominantly angular to subangular.

Very few: **Biotite—**very coarse sand to very fine sand and silt in size. It is moderately pleochroic from dark to light brown.

Very few–rare: **Epidote—**medium sand to very fine sand in size, it is predominantly subangular and pale green in color without pleochroism.

Very rare: **Tourmaline—**green and strongly pleochroic from dark to light, it predominantly occurs in the fine sand to silt size range in angular to subangular fragments.

TEXTURAL CONCENTRATION FEATURES

Dark reddish brown (xp, x30) and dark yellowish brown (pp, x30) they have high optical density, are rounded and of high apparent sphericity. In size they are ca. 1.00–0.20 mm (mode ca. 0.20 mm), and contain frequent to rare quartz fine sand to silt in an optically active micromass that has a strial b-fabric. It is discordant with the surrounding micromass, which is granostriated. They are few to very rare, but occur most prominently in **T123-2**.

Fabric variations

1. Kiln brick: Contains few biotite mica in the finer fraction, ca. 0.20–0.03 mm that is, noticeably more fine biotite than occurs in other samples of this fabric class (**pl. 528**). There is a slightly greater proportion of matrix, and the fabric is less tightly packed too.
2. **T112-1**: This fabric differs only in the finer sizes of the coarser grains, which reach a maximum of ca. 0.80 mm.
3, **KP-5**: In this fabric (**pl. 529**) the matrix is relatively fine grained, and the grain-size distribution is distinctly bimodal with medium to coarse sand in the coarse fraction, and very fine sand to silt in the fine fraction. The grains are predominantly subangular to subrounded. In addition, there are few grains of quartz-mica schist, and very rare fossil shell. There are very rare crystallitic coatings in the voids and around some inclusions, indicating secondary calcite deposition.

Metamorphic fabrics

Samples: **T104-2**, **KP-1**, **KP-2**, **KP-3**, **KP-14**, **KP-13**

MICROSTRUCTURE (**pl. 530**)

There are ca. 3–5 percent voids, predominantly vughs. The c/f related distribution is single-spaced porphyric, but is close spaced amongst the coarser grains. Preferred orientation is poorly defined in the subparallel vughs, and in parts of the micromass b-fabrics.

GROUNDMASS

The groundmass of the fabrics is heterogeneous within the class. A few samples contain grains of granodiorite, particularly **KP-14**, although all have schist, usually as the predominant inclusion. The micromass is frequently optically active with stipple-speckled, and rarely parallel, striated b-fabrics. Micromass color ranges from pale yellow, to reddish brown to dark greyish brown (xp, x40) and pale yellow brown to dark brown (pp, x40).

INCLUSIONS

Coarse:fine:void ratio, with the coarse:fine boundary at 10 μ

$c{:}f{:}v_{10}$ ca. 10:85:5–20:75:5–ca. 10:87:3–20:77:3

There are dominant to very few very coarse sand, predominant to common medium to fine sand, and

few to rare very fine sand to silt. The grain-size distribution appears, to the eye, to be unimodal and poorly sorted (**fig. 219**, sample **KP-1**), though it may be skewed in the coarser fraction. Inclusions are subangular to angular (predominantly subangular).

COMPOSITION

Predominant–few: **Metamorphic** rock fragments —these are only few in **KP-14**. They are subangular grains in the size range ca. 1.25–0.10 mm (mode ca. 0.25 mm). They are predominantly composed of feldspar (relatively fresh, frequently with albite twinning and rarely with simple twins), quartz, white mica and opaque material. Commonly the feldspars occur as large subhedral to euhedral grains. The rock is described here as metamorphic as it is similar in texture to the amphibolite schists from the southern end of Torone Bay. Some examples display a texture reminiscent of volcanic material given the relatively well formed feldspars (they lack the mafic minerals that would usually be expected), nevertheless they are considered to variants of the metamorphic fragments.

Common: **Feldspars—**orthoclase, plagioclase, and microcline occur in the coarse sand to very fine sand fractions (and possibly below, though it is hard to identify them with accuracy at this size). The fragments are subrounded to subangular and possess similar properties to those described for the granodiorite rock fragments.

Few: **Polycrystalline quartz—**medium sand to very fine sand, the intergranular boundaries are concave-convex, rarely is any foliation displayed.

Few: **Monocrystalline quartz—**predominantly in the fine sand to silt range, possibly including a proportion of feldspar, it is well sorted compared to other mineral fragments. The grains are predominantly angular to subangular.

Very few: **Biotite—**very coarse sand to very fine sand and silt in size. It is moderately pleochroic from dark to light brown.

Very few–rare: **Epidote—**medium sand to very fine sand in size, it is predominantly subangular, pale green and nonpleochroic.

Very rare: **Altered volcanic rock—**subangular, grains occur in the range ca. 0.50–0.20 mm. They comprise thin laths of feldspar, with no sign of preferred orientation, embedded in a fine-grained, dark brownish groundmass.

Amphibole fabrics

Samples: **53, 54**

MICROSTRUCTURE (**pl. 531**)

There are ca. 3 percent voids, predominantly mesovughs. They have a single-spaced to close-spaced porphyric related distribution. Preferred orientation is poorly defined by subparallel amphibole and mica grains.

GROUNDMASS

The groundmass is homogeneous. The micromass is optically active with a stipple-speckled b-fabric. In color it is pale yellowish to reddish brown (xp, x40) and pale yellow brown to pale greyish brown (pp, x40).

INCLUSIONS

$c:f:v_{10}$	ca. 20:77:3

There are very few to very rare, very coarse to medium sand, common very fine sand, and predominant very fine sand to silt. The grain-size distribution, to the eye, is unimodal and very well sorted, except for the occasional large sand grain. The inclusions are predominantly subangular to angular.

COMPOSITION

Frequent: **Quartz—**predominantly monocrystalline, up to 0.30 mm (mode ca. 0.10 mm), it is subangular to angular. In some cases this may be feldspar.

Common: **Amphibole-quartz-feldspar schist—**fragments of amphibole with quartz and feldspar, maximum 1.20 mm (mode ca. 0.20 mm). Internal grain size is about 0.10–0.20 mm. The amphibole is oxidized pale green to dark greenish brown and moderately pleochroic. The feldspar is relatively fresh. Grains are subangular to angular, and very rarely rounded.

Few: **Amphibole—**clearly related to the amphibole schist fragments described above, but occurring

as single grains of very fine sand size. **Biotite—** laths up to 0.25 mm (mode ca. 0.10 mm), slightly oxidized and pleochroic from pale brown to dark brown. **Feldspar—**plagioclase, Carlsbad, and albite twinned and relatively fresh. The grain-size maximum is ca. 0.15 mm.

Very rare: **Feldspar-quartz rock fragment—**1.00 mm in size, the feldspar is fresh.

Rare: **Epidote—**colorless to very pale green and with high relief. Its maximum size is 0.30 mm (mode ca. 0.05 mm). **White mica—**thin laths about 0.10 mm in length.

Fine sand fabrics

Samples: **T10-1**, **T18-1**, **T22-1**, **T26-3**, **T41-3**, **T43-1**, **T54-1**, **T63-1**, **T66-1**, **T67-2**, **T73-2**, **T74-2**, **T75-3**, **T101-12**, **T107-1**, **T109-5**, **T113-13**, **T130-1**, **21**, **74, KP-12**

MICROSTRUCTURE (**pl. 540**)

There are ca. 3 percent voids, predominantly mesovughs. They have a single-spaced to close-spaced porphyric related distribution. Preferred orientation is well to moderately defined by subparallel micas.

GROUNDMASS

The groundmass is more or less homogeneous. The micromass is optically inactive to optically active. In the latter case, it has parallel striated and stipple-speckle b-fabrics. The micromass color is dark gray to reddish yellow (xp, x40) and pale grey to yellow brown (pp, x40).

INCLUSIONS

$c:f:v_{10}$ ca. 20:77:3

There are few to very rare coarse to medium sand, predominant fine to very fine sand, and few to very few silt. The grain-size distribution appears, to the eye, to be unimodal and well to poorly sorted (**fig. 220**, sample **T43-1**) depending on the quantity of the coarser fraction (above fine sand) that occurs. Coarser inclusions are subrounded to subangular, while finer inclusions are subangular to angular.

COMPOSITION

Frequent: **Quartz—**mono- and polycrystalline grains, subangular to angular, 0.50–0.03 mm (mode ca. 0.20 mm).

Few: **Mica—**predominantly thin muscovite laths, 0.20–0.03 mm (mode ca. 0.10 mm).

Very few–rare: **Quartz-mica schist—**predominantly muscovite mica with quartz and few to very rare opaques, more or less equigranular with straight grain boundaries, fresh though few are cloudy, and rarely twinned, grains are subrounded to subangular, 0.90–0.10 mm (mode ca. 1.50 mm). **Feldspar—**predominantly untwinned and relatively fresh with grains 0.40–0.03 mm (mode ca. 0.10 mm).

Very rare: **Epidote**—ca. 0.10 mm, subangular.

Fabric variations

T54-1—This fabric is similar to the fine sand fabrics described above; however, it contains a couple of large (ca. 2.50–1.00 mm), subrounded inclusions of very well sorted fine-grained sandstone composed of subangular quartz and mica (**pl. 532**). The sandstone is somewhat similar to that described for rock sample R5. Thus, it is possible the vessel is locally produced, but the petrographic data at present are inadequate to prove this.

Very fine sand fabrics

Samples: **T28-1, T81-2, T90-1, T94-1, T95-1, T116-1, T124-3, T127-1, 28, 32, 78, KP-6**

MICROSTRUCTURE (**pl. 533**)

There are ca. 5 percent voids, predominant meso- to microvughs, with very rare mesochannels and mesoplanar voids. The c/f related distribution is single-spaced to close-spaced porphyric. Preferred orientation is well defined in the subparallel micas and in parts of the micromass.

GROUNDMASS

The fabrics are more or less homogeneous within the class. The micromass is predominantly optically inactive. In the rare optically slightly active example, the b-fabric is predominantly parallel striated. **T116-1** has a very fine-grained crystallitic b-fabric, suggesting that the clay is calcareous in nature. Micromass color is predominantly dark reddish brown (xp, x40) and pale yellow brown (pp, x40). In **T116-1** the micromass is pale brownish yellow (xp, x40).

INCLUSIONS

c:f:v_{10} ca. 5:90:5–15:80:5

There are few to very rare, very coarse to medium sand, few fine sand and predominant very fine sand to silt. The grain-size distribution appears, to the eye, to be predominantly unimodal and well sorted, though it is occasionally skewed in the coarse fraction. Inclusions greater than fine sand are rounded to subangular, and finer inclusions are subangular to angular.

COARSE FRACTION (>0.125 MM)

Predominant–frequent: **Quartz—**mono- and polycrystalline grains, subangular to angular, they are 0.70–0.125 mm (mode ca. 0.30 mm).

Dominant–very rare: **Quartz-feldspar rock fragments—**these grains occur in **T116-1** and are well rounded to rounded, 1.40–0.80 mm (mode ca. 1.20 mm). The feldspar is fresh and rarely twinned. Grain boundaries are crenulated.

Few: **Feldspar—**fresh, untwinned, subangular to angular grains, 0.80–0.30 mm (mode ca. 0.70 mm).

Rare–very rare: **Mica—**muscovite, ca. 0.40 mm in thin laths. **Limestone—**crystalline and equigranular, 0.60 mm diameter (grains ca. 0.10 mm), and well rounded.

FINE FRACTION (<0.125 MM)

Predominant: **Quartz—**mono- and polycrystalline grains, subangular to angular, range 0.125–0.03 mm (mode ca. 0.60 mm).

Few–very rare: **Mica—**predominantly dark brown, slightly pleochroic to nonpleochroic biotite, and few to very rare muscovite, 0.125–0.30 mm (mode ca. 0.60 mm).

Very rare: **Epidote—**colorless to very pale yellow green, subangular grains, 0.12–0.08 mm (mode ca. 0.10 mm).

Fabric variations

Well-sorted, medium sand-grained fabrics

Samples: **T20-1, T56-1, 24, T82-1, 8, T41-1, T74-1**

MICROSTRUCTURE (**pl. 534**)

There are ca. 5 percent voids, predominantly mesovughs. The c/f related distribution is single-spaced to double-spaced porphyric, depending in part on grain size. Preferred orientation is poorly defined in the subparallel orientation of elongate grains and vughs.

GROUNDMASS

The groundmass is relatively homogeneous, but the coarser fraction is not as well defined in some fabrics. The micromass is predominantly optically inactive. In color it is predominantly dark reddish brown (xp, x40) and pale yellow brown (pp, x40).

INCLUSIONS

c:f:v_{10} ca. 5:90:5 to 15:80:5

There are common to very rare granules, dominant to frequent medium to fine sand, frequent to common very fine sand to silt. The grain-size distribution appears, to the eye, to be bimodal and well sorted (**fig. 221**, sample **T56-1**), particularly in the coarser fraction. Inclusions greater than very fine sand are subrounded to subangular, and finer inclusions are subangular to angular.

COMPOSITION

Coarse fraction (>0.0625 mm)

Frequent: **Quartz—**mono- and polycrystalline, subrounded to subangular, 0.60–0.07 mm (mode ca. 0.30 mm).

Common: **Feldspar—**predominantly fresh though few are cloudy, and rarely twinned, grains are subrounded to subangular, 0.90–0.10 mm (mode ca. 1.50 mm). Grains very rarely display graphic intergrowth or microperthite.

Few–very rare: **Mica—**predominantly muscovite, as long thin laths 0.60–0.10 mm (mode ca. 0.20 mm).

Very few: **Quartz-feldspar ± epidote rock fragments—**fresh, rarely twinned feldspar with quartz and rare mica in well-rounded (coarse examples) to subangular grains, 2.50–0.10 mm (mode ca. 0.50 mm). Grain boundaries are crenulated and few display traces of foliation.

Fine fraction (<0.0625 mm)

Predominant: **Quartz—**monocrystalline, subangular to angular, 0.0625–0.03 mm.

Few–very rare: **Mica—**predominantly muscovite.

Large tcfs fabric (**pl. 535**): **T82-4**

The fabric is similar to the very fine sand fabrics, except that the micromass is optically active with a

unistrial b-fabric. The fabric contains common dark reddish brown (xp and pp, x40) tcfs measuring 2.20–0.10 mm (mode ca. 0.20 mm). The coarser grain-size fraction contains quartz-white mica schist, 1.00–0.10 mm (mode ca. 0.20 mm), the terminal grades of which compose the finer fraction of white mica and quartz.

Calcareous fabrics (**pl. 536**): **T62-1**, **T58-1**, **T30-1**

These fabrics are similar to the very fine sand fabrics described above, but **T58-1** contains few grains of well-rounded to subangular micritic limestone, 1.5–0.2 mm. **T62-1** and **T30-1** contain rare fragments of calcareous shell, 1.40–0.40 mm, in addition to micritic limestone.

Yellow firing fabrics: **T24-1**, **T120-1**, **T84-1**, **T101-6**

These fabrics are similar to the very fine sand fabrics described above. They are distinguished by their optically inactive micromass, which is dark yellowish green (xp, x45) and pale gray (pp, x45) in color. The inclusions are frequent monocrystalline and frequent polycrystalline quartz (0.50–0.03 mm), few heavily altered calcareous inclusions (ca. 1 mm and well rounded) with hypocoating reaction rims (Whitbread 1995:387). Very rarely there is a trace of fossil shell, ca. 0.30 mm. In the size range of 0.10–0.03 mm there are very few oxidized biotite mica, and very few to rare dark brown (xp, x45) opaques. Part of **T101-6** is dark gray to grayish green under crossed polars with fine-grained black opaque inclusions, making it distinctly similar in this respect to fabrics of the dark gray fabric subclass below.

Dark gray fabrics: **T50-1**, **T24-3**, **KP-8**, **KP-9**, **T101-3**, **T101-4**, **T101-8**

This class of fabrics overlaps the fine sand fabric class and the very fine sand fabric class, but is distinguished by the dark gray appearance of the fabrics in hand specimen and the dark grayish green (xp, x45) color of the optically inactive micromass.

Extremely fine-grained fabrics

Samples: **T23-1**, **T45-1**, **T47-1**, **T72-1**, **T77-3**, **T93-1**, **T101-9**, **T101-10**, **T104-1**, **T105-1**, **T113-9**, **48**, **49**, **64**

MICROSTRUCTURE (**pl. 537**)

There are ca. 3 percent voids: predominantly mesovughs. The c/f related distribution is predominantly a single-spaced porphyric. Preferred orientation varies from well to poor as defined by micas, micromass, and thin section orientation.

GROUNDMASS

With respect to homogeneity, there is variation in color, optical activity, and the range of inclusions; however, all these fabrics appear to be so fine that, without more explicit typological features to compare against, they are best classified together petrographically as being too fine for clear classification.

The micromass is optically inactive to optically slightly active. In the latter case, with evidence of parallel striated and stipple-speckle b-fabrics. Micromass color is dark gray to reddish yellow (xp, x40) and pale gray to yellow brown (pp, x40).

INCLUSIONS

$c:f:v_{10}$ ca. 3:94:3–10:87:3

Rare to very rare medium sand, predominant to few fine to very fine sand, and predominant to few silt. The grain-size distribution appears to be unimodal and well sorted. Inclusions are subangular to angular.

COMPOSITION

Predominant: **Quartz—**mono- and polycrystalline grains, subangular to angular, 0.40–0.03 mm (mode ca. 0.06 mm).

Few–rare: **Mica—**predominantly thin muscovite laths, 0.25–0.03 mm (mode ca. 0.10 mm).

CHEMICAL ANALYSIS

The results of the chemical analysis, one of the first and certainly the largest of its kind to date on ceramic material in northern Greece, are presented here. The single overriding criterion in selecting the technique of analysis, atomic absorption spectrometry (AAS), was the availability of a large, relevant reference databank to allow statements to be made about origin. The Fitch Laboratory's chemical databank at least partly meets that criterion. This section incorporates comment on the comparison of the chemical and petrographic data for the local or regional prod-

ucts (more than forty samples were analyzed by both techniques), and, separately, two sets of chemical data for Torone: the present data and that reported by Tudor Jones (1995) on later pottery from the site obtained by PIXE-PIGME.

Material

See **table E.1,** where material is described according to class or group.

Table E.1 The material analyzed from Torone

The following categories are based on those originally suggested by Papadopoulos on the basis of visual criteria.

Kiln pottery	
82.604	**KP-1**
82.1184	**KP-4**
82.1185	**KP-2**
82.1186	**KP-3**
82.1187	**KP-14**
82.1188	**KP-5**
82.1189	**KP-6**
82.1190	**KP-8**
82.1191	**KP-9**
82.1192	**KP-7**
82.1193	**KP-13**
82.1194	**KP-12**
Local wheelmade	
81.385	**T62-1**
81.625	**28**
81.829	**T45-1**
81.836	**T33-1**
82.80	**T94-1**
82.91	**T90-1**
82.1158	**T74-1**
"Imported" handmade	
81.379	**T97-1**
81.615	**T54-1**
81.1152	**T111-4**
82.98	**T112-1**
82.1105	**54**
82.1106	**53**
Black-slip	
81.365	**T50-1**
81.1144	**T24-3**
82.179	**T104-2**
Imported wheelmade	
75.248	**84**
76.764	**85**
81.624	**T127-1**
81.719	**T22-2**
81.1146	**27**
82.93	**T93-1**
82.1010	**T117-14**
82.1012	**T117-15**
82.1092	**T118-9**
82.1094	**T118-6**
82.1096	**T118-10**
82.1100	**48**
82.1101	**49**
82.1127	**T113-9**
82.1138	**63**
82.1174?	**64**
84.146	**T47-1**
84.251	**T72-1**
84.408	**T77-3**
84.420	**78**
84.436	**T101-8**
Submycenaean: Either local (unusual) or imported	
84.429	**T101-2**
84.430	**T101-3**
84.431	**T101-4**
84.433	**T101-6**
84.434	**T101-9**
84.437	**T101-10**
Wheelmade: Drilled samples	
81.247	**T52-1**
81.364	**T96-1**
82.24	**T99-1**

Method

With a few exceptions, the samples were taken by removing a small fragment from the sherd or vase, removing the weathered exterior surface, and grinding the sample to fine powder, 100–200 mg in weight. Three complete vases (**T52-1**, **T96-1**, **T99-1**) were sampled by drilling into their bases in two positions with a tungsten carbide drill head; for one of these vases, **T99-1**, only 20 mg of powder was collected. Following drying at 110°C for 6 hours, the samples were prepared for chemical analysis by the lithium metaborate fusion method. The percentage concentrations of eleven elements (in their oxide form) were then determined by AAS (using a Pye Unicam SP2900 flame spectrometer), following procedures that have been documented elsewhere (Liddy 1996; Jones and Vagnetti 1991). Calibrations were prepared using ceramic standards. The samples were analyzed in November 1991 in two consecutive batches. For technical reasons the measurement of two elements, titanium and silicon, had to be omitted from the first batch of samples.

The composition data were examined by univariate and, to a lesser extent, multivariate methods, the latter with the MV-NUTSHELL (Wright 1994) and SPSSPC statistical package.

Interpretative framework

The chemical database available for Early Iron Age pottery in the Aegean, although not large, is growing. It applies almost entirely to wheelmade decorated pottery. The writer (Jones 1986:627–628) has assembled the relevant data for two classes of Early Iron Age pottery from a variety of sites, notably Lefkandi—material selected for reference purposes and that of unknown or uncertain origin. Much of those data had been obtained using optical emission spectroscopy (OES), an exception being that obtained at Oxford with M. R. Popham on Euboian imports found at Al Mina, Cyprus, and Knossos (Popham, Hatcher, and Pollard 1980; 1983). Since that time the database has expanded largely with AAS-derived compositions obtained in the Fitch Laboratory, the largest study being that by Liddy and Coldstream on many of the main stylistic groups of Early Iron Age pottery found at the post-Minoan North Cemetery close to Knossos (Coldstream and Catling 1996; Liddy 1996). Preliminary accounts of the results of chemical analysis are given by Liddy (1989). More recently, parallel studies on the Geometric pottery found at sites in east and west Crete have been completed by the writer in the Fitch Laboratory in collaboration with Tsipopoulou and Vlazaki respectively; the results are to be published. The chemical study of Early Iron Age pottery from Mende by Kessisoglou et al. (1996) is of particular relevance to the present one. For the islands the Archaeometry Laboratory at NRCPS Demokritos has accumulated NAA data (Kilikoglou, Grimanis, and Kourou, personal communication). Finally, there are the PIXE-PIGME analyses carried out by Duerden for Tudor Jones in 1985 at the AAEC Lucas Heights Research Laboratories on several classes of fifth-century B.C. pottery found at Torone (Tudor Jones 1987; 1990; 1995).

Table E.2 describes the pottery selected either for reference purposes or as test material, and which is furthermore as chronologically and typologically relevant as possible to the material from Torone. Summary statistics of the chemical data and individual compositions are provided in **table E.3**. It will be noted at once that this database has lacunae; there are, for example, no Athenian Submycenaean, Early Iron Age Argive, and Early Iron Age coastal Thessalian reference groups and few chronologically relevant data for handmade pottery in north Greece. There are also deficiencies in the database as it has accumulated over a twenty-year period and by different analytical techniques. Thus problems of, first, long-term comparability of OES data (see Jones 1986:629) and, second, comparability of OES-AAS data have to be confronted. But as the writer has recently explained (Jones and Vagnetti 1991), the second problem need not be serious: the two data sets are intercomparable, but usually only by simple, univariate means.

The salient features of the database in **table E.3** may be summarized as follows: Attic compositions are generally speaking distinctive and can be differentiated with confidence from those of central Macedonia, Lefkandi (more generally the Lelantine Plain), the Volos region of Thessaly (here called coastal Thessaly), and some of the islands. The geological comparability of these latter three regions is responsible for geochemical similarity in pottery—the AAS composition ranges overlap. Canonical Argolid compositions, for example, of decorated Late Helladic III pottery from Mycenae

Table E.2. Comparative data

Location	Sample	References	Method [a]
Macedonia	1. Twenty samples of Early Iron Age brown burnished pottery from Assiros	Jones 1986: table 3.2	OES
	2. Provincial Mycenaean from Assiros	Jones 1986: table 3.2, fig 3.3, cluster II samples	OES
	3. Mycenaean and Early Iron Age local and "imported" pottery at Mende	Kessisoglou et al. 1996	AAS
Coastal Thessaly	160 samples of mainly LH III decorated and plain pottery from Volos, Pefkakia, and other sites in Thessaly assigned an origin on the basis of composition to the Volos region	Jones 1986: table 3.5; White 1981: group 6	OES
Euboia: Lelantine plain	1. Early Iron Age pottery from Lefkandi cemeteries	Jones 1986: table 8.1	OES
	2. Twenty pendent semicircle skyphoi from Lefkandi	Jones 1986:146 [4]	AAS
	3. Ten Early Iron Age "Euboian" imports at Knossos North Cemetery	Liddy 1989; 1996	AAS
	4. Pendent semicircle skyphoi from Al Mina, Cyprus, and Knossos	Popham, Hatcher, and Pollard 1980; 1983; Jones 1986:691–692	AAS
	5. "Euboian" import on Amorgos	Catling and Jones 1989: zigzag cup in BSA museum	AAS
Athens/Attic	1. Ten decorated Late Geometric kraters from the Athenian Agora	Jones 1986:156	OES
	2. Early Iron Age (Protogeometric) "Attic" imports at Lefkandi cemeteries	Jones 1986: table 8.1:32–34	OES
	3. Twenty Geometric "Attic" imports at Knossos North Cemetery	Liddy; 1989; 1996	AAS
	4. "Attic" imports at Chania, Kastelli	Unpublished	AAS
Argolid	1. Five Early Iron Age "Argive" imports at Knossos North Cemetery	Liddy; 1989; 1996	AAS
	2. Early Iron Age "Argive" imports at Chania, Kastelli	Unpublished	AAS
	3. Late Helladic IIIA–B decorated pottery from Mycenae	Jones 1986: table 3.9	AAS
Cyclades	1. Island Orientalizing groups from Rheneia	Jones 1986:644–645	AAS: Chemical group I: Parian?, IV Naxian?
	2. Naxian Geometric	Unpublished: samples courtesy Dr. N. Kourou	AAS
	3. Naxian amphorai from Paroikia	Empereur and Picon 1986: annexe	XRF

[a] AAS: atomic absorption spectrometry
OES: optical emission spectroscopy
XRF: x-ray fluorescence

Table E.3. Summary statistics of the reference material and individual compositions

	Al	Ca	Mg	Fe	Ti	Na	Mn	Cr	Ni	K	Si
Torone Type 1: Kiln group (82.1185, 82.1186, 82.1187, 82.1189, 82.1192, 82.1194)											
x̄	18.62	2.54	1.75	7.25	--	1.66	0.069	0.025	0.01	2.97	
sd	1.07	1.02	0.62	0.30		0.41	0.023	0.002	0	0.45	
Type 2: Wheelmade (6)											
x̄	15.44	7.0	4.78	7.49	0.91	1.13	0.137	0.046	0.023	2.21	
sd	1.64	2.39	1.31	0.69	0.08	0.46	0.018	0.009	0.008	0.23	
Assiros EIA brown burnished (8)											
x̄	15.6	1.5	1.5	7.1	0.84	1.50	0.079	0.016	0.007		
sd	1.3	0.4	0.5	0.9	0.05	0.39	0.021	0.009	0.003		
Assiros "Local" Mycenaean											
31	11.8	5.6	2.6	7.2	0.65	1.50	0.113	0.029	0.018		
32	15.1	2.8	4.4	7.6	0.77	2.62	0.080	0.014	0.005		
33	16.5	1.1	2.4	8.1	0.95	2.62	0.085	0.016	0.007		
34	17.9	7.8	2.9	7.4	0.91	1.78	0.095	0.026	0.014		
35	17.2	1.2	2.2	6.9	0.81	2.27	0.066	0.013	0.005		
36	13.8	1.4	1.6	7.9	0.86	1.90	0.065	0.023	0.009		
37	10.9	0.5	1.2	6.7	0.56	1.98	0.089	0.005	0.005		
39	21.1	2.5	3.3	8.7	0.88	2.53	0.099	0.021	0.010		
40	16.3	1.8	1.6	6.5	0.76	2.62	0.066	0.005	0.005		
41	14.7	5.1	3.2	7.8	0.75	2.08	0.130	0.029	0.005		
42	14.1	0.5	1.4	7.3	0.79	1.93	0.071	0.012	0.007		
Assiros "Provincial" Mycenaean											
38	14.5	8.4	5.4	9.0	0.87	2.15	0.098	0.071	0.053		
56	20.0	8.2	3.3	9.2	0.92	1.60	0.140	0.035	0.020		
57	14.5	9.9	3.6	6.2	0.77	1.75	0.076	0.055	0.033		
58	18.0	13.0	5.1	7.8	0.80	2.50	0.120	0.069	0.042		
59	12.7	0.5	1.2	6.3	0.76	3.30	0.069	0.014	0.006		
60	17.1	2.5	3.2	8.3	0.85	2.80	0.134	0.050	0.032		
Mende Local Protogeometric (Kessisoglou et al., group I) (11)											
x̄	13.91	9.42	4.09	6.28	0.79	1.80	0.104	0.033	0.025	2.17	
sd	0.46	1.41	1.02	0.71	0.08	0.014	0.009	0.008	0.009	0.32	
Mende Local Submycenaean-Protogeometric (Kessisoglou et al., group II) (11)											
x̄	14.64	8.75	6.21	8.01	0.88	1.34	0.117	0.042	0.040	2.40	
sd	0.59	1.10	0.93	0.63	0.04	0.25	0.021	0.011	0.009	0.34	
Mende Handmade (Kessisoglou et al., group IV) (7)											
x̄	14.27	1.82	2.31	5.54	0.75	1.98	0.089	0.021	0.016	2.40	
sd	0.62	1.03	0.67	0.82	0.10	0.34	0.024	0.005	0.005	0.26	
Coastal Thessaly Late Helladic III (160)											
x̄	17.3	5.1	2.1	6.8	0.71	2.78	0.090	0.035	0.06		
sd	3.1	2.9	0.9	1.4	0.10	1.12	0.039	0.018	0.007		

Table E.3. Summary statistics of the reference material and individual compositions (continued)

	Al	Ca	Mg	Fe	Ti	Na	Mn	Cr	Ni	K	Si
Lefkandi Pendent semicircle skyphoi (20)											
x̄	19.8	5.16	2.45	7.69	0.91	1.34	0.138	0.032	0.017	3.84	
sd	1.1	0.65	0.15	0.27	0.05	0.13	0.007	0.009	0.003	0.25	
Lefkandi (GCP table 8.1:11–13, 34, 42)											
Black-slip											
	21.5	6.3	2.3	9.1	1.08	1.50	0.110	0.031	0.022		
	20.3	5.5	1.9	7.4	0.85	1.40	0.086	0.025	0.022		
	21.0	4.7	1.9	8.2	0.96	1.80	0.087	0.028	0.018		
Pedestaled bowl T24.1											
	12.2	6.4	4.1	8.0	0.79	2.50	0.11	0.059	0.036		
Amphora T14.1											
	17.61	0.0	4.5	9.6	1.10	1.78	0.09	0.104	0.056		
Lelantine plain Late Helladic III (131)											
x̄	17.6	6.2	2.3	8.0	0.77	2.19	0.086	0.030	0.020		
sd	3.1	3.2	1.0	1.0	0.12	0.66	0.023	0.013	0.008		
"Euboian" imports at Knossos											
1	18.90	4.90	2.44	7.29	--	1.59	0.129	0.026	0.009	3.55	58.8
2	19.47	3.08	2.45	7.87	--	1.31	0.132	0.032	0.011	3.55	56.7
3	18.33	4.76	2.40	7.29	--	1.35	0.127	0.029	0.008	3.86	57.3
4	14.55	8.11	4.89	7.87	--	0.73	0.111	0.086	0.034	2.82	55.6
5	21.36	3.50	2.57	9.00	--	1.17	0.143	0.032	0.011	3.05	55.2
6	18.90	4.34	2.45	8.00	--	1.48	0.147	0.029	0.011	3.37	59.9
7	21.17	2.94	2.57	7.44	--	1.55	0.054	0.026	0.008	4.28	56.7
8	18.14	3.71	2.35	7.72	--	1.39	0.134	0.029	0.011	3.74	59.9
9	14.93	8.67	5.14	7.87	--	0.66	0.096	0.086	0.034	2.12	57.8
11	19.85	4.48	2.47	8.15	--	1.33	0.129	0.037	0.011	3.80	58.8
"Euboian" import on Amorgos											
Zigzag cup											
	22.49	5.46	2.67	5.98	0.87	2.67	0.142	0.016	0.013	4.52	
Athens Late Geometric craters (9)											
x̄	20.7	9.8	4.5	8.2	0.88	1.25	0.083	0.082	0.046		
sd	2.4	2.0	0.3	0.7	0.08	0.37	0.017	0.015	0.004		
"Attic" imports at Lefkandi											
104	12.0	3.8	3.3	8.4	0.72	1.50	0.086	0.107	0.050		
105	12.5	5.8	3.6	10.9	0.92	1.04	0.101	0.100	0.072		
106	17.61	0.0	4.5	9.6	1.10	1.70	0.087	0.130	0.080		
107	19.5	8.1	5.01	0.7	1.25	1.10	0.087	0.104	0.056		
108	19.5	10.5	5.61	1.0	1.07	1.05	0.098	0.107	0.068		
109	19.2	13.6	5.71	0.3	1.11	1.11	0.094	0.101	0.050		
110	18.0	9.6	5.31	1.6	1.09	0.88	0.117	0.120	0.069		

Table E.3. Summary statistics of the reference material and individual compositions (continued)

	Al	Ca	Mg	Fe	Ti	Na	Mn	Cr	Ni	K	Si
111	16.7	9.9	5.5	9.2	1.01	1.55	0.091	0.098	0.048		
112	17.5	6.2	3.2	6.6	0.95	1.40	0.051	0.071	0.030		
113	19.9	7.1	3.7	7.3	1.05	1.60	0.061	0.072	0.037		
"Attic" imports at Chania											
11	18.52	5.04	5.47	6.72	0.82	0.66	0.088	0.067	0.034	3.49	
21	19.09	7.41	5.64	7.01	0.87	0.54	0.085	0.076	0.045	3.37	
31	17.39	4.62	5.47	6.44	0.87	0.58	0.081	0.072	0.039	3.25	
42	10.79	3.64	3.81	7.29	0.82	0.71	0.093	0.079	0.045	3.80	
"Attic" imports at Knossos											
C41	16.07	10.77	6.30	8.44	1.07	0.79	0.119	0.102	0.039	1.885	8.8
C42	14.93	9.37	4.97	9.87	0.98	1.00	0.111	0.098	0.035	2.195	9.9
C43	16.44	7.83	5.31	8.72	1.07	0.70	0.112	0.102	0.037	2.596	1.0
C44	15.12	7.00	5.39	8.87	--	0.71	0.139	0.094	0.055	1.81	57.8
C45	14.18	9.51	4.64	8.29	--	0.71	0.093	0.085	0.045	2.02	53.5
C46	16.43	6.30	5.39	8.72	--	0.67	0.111	0.094	0.048	1.34	55.2
C46	18.52	6.72	5.22	8.58	--	0.69	0.120	0.094	0.046	1.30	55.6
C47	16.07	5.67	4.81	8.29	--	0.75	0.105	0.088	0.042	1.80	57.3
C48	16.25	6.51	5.31	8.72	--	0.70	0.105	0.091	0.045	2.05	56.0
C49	16.07	7.27	5.14	8.87	--	0.71	0.142	0.091	0.046	2.39	55.2
C50	16.43	7.98	5.39	8.15	--	0.75	0.089	0.091	0.038	2.83	57.3
C51	15.88	8.81	5.39	8.15	--	0.71	0.096	0.088	0.042	2.83	54.1
C52	16.25	11.89	5.72	8.44	--	0.66	0.115	0.091	0.041	2.46	50.9
C53	16.82	7.69	5.14	8.44	--	0.69	0.108	0.085	0.039	2.69	55.6
C54	19.47	6.30	5.39	9.44	--	0.57	0.107	0.099	0.053	1.66	53.5
C54	16.63	6.58	5.31	9.30	--	0.57	0.111	0.098	0.051	1.69	53.0
C55	16.82	7.90	5.47	8.72	--	0.82	0.106	0.088	0.042	2.65	53.5
C56	16.82	6.30	5.14	8.72	--	0.80	0.108	0.091	0.045	2.69	55.2
C57	23.06	4.97	2.90	9.44	--	1.09	0.152	0.034	0.012	3.62	52.4
C58	14.36	12.03	6.47	7.29	--	0.75	0.127	0.060	0.031	2.65	47.1
C59	15.12	7.55	5.47	7.58	--	0.71	0.092	0.088	0.045	2.65	57.3
C60	16.07	5.39	5.47	8.29	--	0.82	0.103	0.075	0.039	2.47	57.3
Mycenae Late Helladic IIIA–B (18)											
$\bar{x}$	16.7	15.6	3.8	7.7	0.72	--	0.097	0.035	0.022	3.48	
sd	0.8	1.9	0.3	0.4	0.03	--	0.008	0.003	0.004	0.25	
"Argive" at Knossos											
1	15.50	8.81	5.14	8.00	--	1.21	0.115	0.056	0.042	2.59	54.5
2	18.33	8.25	3.32	7.87	--	1.25	0.155	0.034	0.019	1.93	56.7
3	16.07	5.67	7.79	8.72	--	0.50	0.110	0.075	0.059	1.45	50.3
4	18.71	8.53	3.81	7.29	--	1.67	0.061	0.047	0.027	3.74	58.2
5	20.03	6.16	2.90	8.44	--	1.05	0.124	0.029	0.008	4.94	53.9

Table E.3. Summary statistics of the reference material and individual compositions (continued)

	Al	Ca	Mg	Fe	Ti	Na	Mn	Cr	Ni	K	Si
"Argive" at Chania											
1	17.77	8.25	3.65	5.72	0.82	1.06	0.111	0.034	0.012	2.93	
2	17.39	6.30	3.32	5.43	0.77	1.06	0.088	0.031	0.012	3.13	
3	18.90	8.67	1.21	5.86	0.87	0.90	0.129	0.018	0.010	1.58	
4	20.79	10.07	3.48	6.58	0.72	1.05	0.129	0.031	0.015	3.37	
5	15.69	7.69	5.47	6.15	0.82	0.47	0.081	0.083	0.050	2.77	
Cyclades											
Island Orientalizing chemical group I: Parian? (5 samples)											
$\bar{x}$	22.5	8.6	2.2	7.8	0.94	2.03	0.116	0.015	0.010		
sd	1.9	1.3	0.5	1.6	0.05	0.39	0.046	0.008	0.004		
Island Orientalizing chemical group IV: Naxian? (5 samples)											
$\bar{x}$	21.5	6.6	3.5	9.7	0.95	2.33	0.093	0.048	0.033		
sd	2.5	1.8	0.4	0.9	0.06	0.38	0.015	0.009	0.003		
Naxian Geometric (4 samples): Natural ranges											
	18.3–22.7	3.8–5.5	3.2–5.0	6.2–8.7	0.70–0.91	0.89–3.24	0.125–0.194	0.035–0.044	0.016–0.020	3.74–4.2	
Naxian amphorae, Paroikia (9 samples) (Cr in ppm)											
$\bar{x}$	15.7	14.8	3.1	6.5	0.69	0.8	0.090	221		3.1	
sd	0.2	0.8	0.1	0.1	0.02	0.1	0.005	8		0.1	

Key: $\bar{x}$ = mean; sd = standard deviation

stand apart owing to their high Ca contents. Inspection of **table E.3** reveals that the Cr and Ni and to a lesser extent the Mg contents discriminate Attic from the Torone kiln pottery and wheelmade pottery.

The purpose of the multivariate analysis of the data is to provide, at a broad level, a visual impression of the classification of the data and, at a more detailed level, some indication of the way individual samples associate. Thereafter, the compositions, individually and as members of tentative groupings, are scrutinized by the visual-comparative method. With the aid of reference and other data in **table E.3**, some general observations about possible places of manufacture of individual samples or groups, often in the form of negative statements about origin, begin to emerge. It has to be emphasized that positive statements about origin have to be made with caution; first, the Early Iron Age databank is, as already explained, incomplete, and nowhere more so than north Greece, and second, what comparative data are available (see **table E.3**) are variable in kind. Two contrasting situations may help explain this variability. On the one hand, at Lefkandi there is the reference group consisting of twenty specimens of pendent semicircle skyphoi of very uniform fabric; it has correspondingly narrow concentration ranges. In assessing the possible Euboian connection of some of the Torone imports, it is more realistic, however, to use the summary statistics for the group of "Euboian" imports from Knossos that are of somewhat wider typology and need not be from Lefkandi itself. In the case of coastal Thessaly a summary group of decorated Late Bronze Age (Late Helladic III) pottery is all that is available. Its chronological discrepancy with the Torone imports need not be a problem if the experience at Lefkandi is anything to go by; there, chemical analysis has shown that similar clays were used in both the later Bronze Age and the Early Iron Age. On the other hand, there are comparanda in the form of individual examples of a particular typological class, such as "Attic" from Lefkandi or "Argive" from Knossos.

For these reasons, the operating principle in establishing what is a good match between test sample and comparandum has to be straightforward: The reference group into whose 80 percent confidence concentration ranges (Jones 1986:57) the largest number of elements of the test sample fall is considered the best match. It is expected that six or more elements should fall within these ranges.

RESULTS

The compositions are set out in **table E.4**. Visual inspection of the data reveals significant variation in all element contents, notably the minor elements—calcium, magnesium, and the alkalis. Considering the local or regional products, it is readily apparent that the kiln group is not uniform in calcium, magnesium, and manganese (Mn), **KP-9** for instance standing well apart from the remainder, nor does it resemble the "local wheelmade" from the cemetery. The "imported handmade" is also not uniform, two of its members (**53** and **54**) being similar to the "local wheelmade."

A more objective impression of the structure within the full data set (excluding **T99-1**, whose sample weight was low; see above) was examined using (1) principal components analysis (on z-transformed, natural data), and (2) two methods of cluster analysis—Group Average (MV-NUTSHELL) (in the case of SPSSPC, Average Link) and Ward's Method—on nine element contents, that is, excluding titanium and silicon.

In the plot of the first two principal components, which themselves account for (only) 60 percent of the total variation in composition, there are two broad groupings of samples separating along

Table E.4. Chemical compositions expressed as percentage element oxide

Sample	Al	Ca	Mg	Fe	Na	K	Mn	Cr	Ni	Ti
82.604	17.58	1.82	1.49	6.72	1.31	1.75	0.297	0.037	0.013	
82.1164	18.52	5.74	2.49	7.01	2.29	3.86	0.098	0.022	0.013	
82.1185	18.33	1.47	1.21	7.72	1.55	3.01	0.059	0.025	0.010	
82.1186	17.39	1.40	1.03	6.94	2.22	2.89	0.066	0.022	0.010	
82.1187	18.71	2.10	1.33	7.44	1.55	2.89	0.030	0.029	0.010	
82.1182	11.72	8.11	3.15	5.29	1.75	3.49	0.105	0.032	0.015	
82.1189	17.58	3.08	2.16	7.15	1.55	2.35	0.080	0.025	0.010	
82.1190	18.71	4.48	3.81	8.87	2.60	2.35	0.136	0.025	0.013	
82.1191	14.55	9.09	4.31	7.15	0.66	2.23	0.101	0.073	0.031	
82.1192	19.85	3.64	2.40	7.29	1.05	2.95	0.085	0.025	0.010	
812.1193	17.96	0.71	1.23	5.86	1.89	3.13	0.219	0.025	0.010	
82.1994	19.85	3.57	2.34	6.94	2.02	3.74	0.093	0.025	0.010	
81.385	17.77	5.18	1.66	5.58	1.16	3.43	0.081	0.044	0.032	0.77
81.625	14.93	6.30	7.13	8.44	0.66	2.11	0.128	0.064	0.031	0.90
81.829	16.82	4.48	3.48	7.15	1.62	2.59	0.129	0.035	0.013	1.02
81.836	13.80	7.13	3.98	7.15	0.85	2.17	0.142	0.045	0.023	0.87
82.80	17.96	6.16	4.15	7.44	1.73	2.29	0.161	0.038	0.015	0.98
82.91	15.12	10.91	5.31	8.15	0.73	2.17	0.152	0.050	0.023	0.83
82.1158	13.99	6.93	4.06	6.58	1.21	1.90	0.112	0.044	0.032	0.83
81.379	16.44	1.57	0.83	5.29	2.00	3.98	0.088	0.018	0.010	

Table E.4. Chemical compositions expressed as percentage element oxide (continued)

Sample	Al	Ca	Mg	Fe	Na	K	Mn	Cr	Ni	Ti
81.615	11.15	1.40	0.95	4.50	1.05	2.05	0.076	0.022	0.010	
82.98	16.25	2.52	1.04	3.72	3.00	2.89	0.030	0.015	0.010	
82.1105	17.39	5.18	5.31	11.73	2.09	0.64	0.174	0.035	0.013	
82.1106	17.77	5.32	5.47	11.73	2.16	0.60	0.168	0.037	0.013	
82.1152	16.25	1.82	1.69	6.44	0.38	0.60	0.050	0.020	0.010	
81.365	15.12	5.60	2.16	5.79	1.28	3.31	0.086	0.032	0.019	
81.1144	13.23	9.65	2.65	7.15	0.49	3.25	0.080	0.020	0.013	
82.179	15.12	5.39	2.65	5.58	1.75	3.68	0.080	0.020	0.013	
84.429	13.23	11.19	4.64	7.58	1.55	2.35	0.155	0.053	0.023	
84.430	16.25	8.81	5.97	8.29	2.29	3.31	0.155	0.057	0.027	
84.431	14.36	12.73	4.89	8.01	2.46	3.07	0.161	0.057	0.027	
84.433	13.23	12.87	4.64	7.58	1.75	1.33	0.161	0.050	0.027	
84.434	13.23	13.99	4.56	7.44	1.73	1.83	0.161	0.053	0.027	
84.436	20.79	4.06	5.64	11.73	1.21	2.77	0.132	0.094	0.031	
84.437	14.36	13.43	5.80	7.72	2.29	3.74	0.148	0.054	0.027	
75.248	18.71	3.78	2.32	7.15	0.82	3.62	0.139	0.022	0.013	0.77
76.764	15.69	6.72	4.15	7.29	0.86	2.41	0.155	0.026	0.032	0.83
81.624	18.71	5.04	2.69	6.86	1.13	4.10	0.133	0.020	0.013	0.80
81.719	19.85	5.46	2.65	7.29	1.05	3.86	0.148	0.022	0.013	0.83
81.1146	15.69	11.19	6.30	7.87	1.55	2.19	0.155	0.050	0.023	0.80
82.93	17.39	7.00	8.12	6.86	0.59	2.77	0.159	0.063	0.037	0.83
82.1010	20.41	7.69	3.15	7.15	1.42	4.58	0.142	0.022	0.013	0.77
82.1012	20.41	7.13	2.98	7.01	1.25	4.22	0.142	0.022	0.011	0.65
82.1092	13.99	9.23	6.13	7.29	1.15	2.08	0.142	0.045	0.028	0.58
82.1094	20.79	7.00	3.07	7.87	1.01	3.98	0.145	0.023	0.015	0.65
82.1096	14.93	11.19	5.97	8.15	1.01	1.99	0.161	0.050	0.028	0.65
82.1100	20.41	5.04	2.49	7.58	1.04	3.49	0.133	0.026	0.013	0.80
82.1101	19.66	5.88	2.45	7.15	0.96	3.49	0.129	0.026	0.013	0.83
82.1127	20.41	6.30	2.57	7.29	1.15	3.80	0.133	0.026	0.015	0.72
82.1138	18.90	6.16	2.49	7.15	1.35	3.86	0.107	0.026	0.011	0.87
82.1175	20.41	5.04	2.40	7.58	0.94	3.49	0.132	0.028	0.011	0.87
84.146	19.85	4.34	2.54	7.58	0.93	3.62	0.142	0.028	0.013	0.83
84.251	15.88	9.37	4.39	7.29	1.15	2.29	0.142	0.039	0.015	0.80
84.408	19.85	3.78	2.32	7.15	0.82	3.62	0.139	0.022	0.013	0.90
84.420	17.77	5.32	2.74	6.44	1.62	3.49	0.129	0.026	0.011	0.87
81.247	13.99	9.23	4.48	7.29	1.16	2.17	0.161	0.053	0.032	1.07
81.364	10.49	12.59	5.39	7.58	1.08	2.29	0.168	0.054	0.020	0.87
82.24	13.99	8.46	4.08	6.55	1.04	1.71	0.153	0.073	0.066	1.04

PC1, which is dominated by the origin-sensitive elements, Mg, Cr, and Ni (**fig. 223**). **T101-8, 53**, and **54** seem to be outliers scoring positively on PC2 to which Al and Fe contribute most strongly. Of the two dendrograms, that from Ward's method cluster analysis appeared to be the more informative, and certainly in the Fitch Laboratory's experience of classifying ceramic chemical data, the dendrogram from this method usually provides the preferred classification when there is significant variation in composition within the whole data set, as is the case here. Whereas interpretation of the Ward's method dendrogram by Whitbread, Jones, and Papadopoulos (1997) was based on the two-cluster level, using a data set with log-transformed trace elements, **figure 224** obtained from the MVARCH version of Ward's method using natural data reveals three clusters, A, B, and C. Superimposing these clusters onto the PC plot (**fig. 225**) indicates that B is well defined in contrast to A and C, which are distorted by the presence of outliers, notably **T101-8, 53**, and **54** in Cluster A. The reason for the apparent discrepancy between the dendrograms obtained by the two versions of Ward's method cluster analysis can be attributed to the natural/log form of the trace element data and to small differences in the respective algorithms generating the classifications.

Discussion of the results is made here with reference to **figure 225**. The first task is to define the composition ranges of the clearly local material: the kiln pottery and the local wheelmade pottery. That the former is not uniform in composition is a reflection of the variability in its fabric, observed macroscopically by Papadopoulos (1989a:29–30); **KP-2**, **KP-3**, **KP-6**, **KP-7, KP-12**, and **KP-14**, having a rather coarse clay form a group with negative scores on PC1, to which **KP-13** is close but for its high Mn content. **KP-1, KP-5**, **KP-8**, and especially **KP-9** are different, the latter being placed in Cluster A having high Mg, Cr, and Ni. For the most part, the local wheelmade pottery differs significantly in composition from the kiln pottery: **T33-1**, **T74-1**, **T90-1**, and **28**, have, like **KP-9**, positive scores on PC1, whereas **T45-1**, **T62-1**, and **T94-1** have intermediate compositions.

We have an indication, then, at Torone of at least two local composition types, represented on the one hand by a coarse clay comprising most of the kiln samples (**table E.3**: kiln group [Type 1]) and on the other by finer-textured clays consisting of the wheelmade pottery and one kiln specimen (**table E.3**: wheelmade pottery [Type 2]). The coarse clay is noncalcareous; that its composition is not greatly different from the other kiln specimens (**KP-5**, **KP-8** and **KP-1**) may suggest that the kiln pottery was made of a single clay from a local source but treated in different ways by the potter. The wheelmade pottery (and **KP-9** from the kiln) is calcareous, surely made from a physically distinct clay also from the neighborhood of Torone.

Moving to the pottery of uncertain status, we begin with the "imported handmade pottery," which separates into two groups: **T54-1**, **T97-1**, **T111-4**, **T112-1** form a (noncalcareous) group (in Cluster A), which differs markedly from **53** and **54** (two of the outliers in Cluster A), the latter two samples having very similar compositions. The Na contents are notably high in **T97-2** and **T112-1**. The former group is chemically indistinguishable from the coarse kiln pottery (**table E.4**: Type 1), but because of the marked visual contrast in fabric there is no direct reason to treat this group as local. The lack, in particular, of distinguishing features in this group's compositions precludes any sensible statement of origin. It suffices to note the resemblance with the "local handmade" at Mende (Kessisoglou et al. 1996, group IV; here **table E.3**), as well with both the Early Iron Age Brown Burnished Ware and the Local Mycenaean from Assiros (**table E.3**). The typological resemblance of **T112-1** to Attic handmade burnished ware does not appear to extend to its composition; although no examples of this Attic ware have been analyzed, the general character of its composition and in particular its low iron content have not yet been encountered in the various classes of Attic pottery that have been characterized chemically. For **53** and **54**, which are distinguished by high Mg and Fe contents, nothing can be said other than that their Mg contents are comparable with those examples of Provincial Mycenaean from Assiros, distinguished by high Mg, Cr, and Ni contents (**table E.3**, and Assiros cluster II in Jones 1986:110–111) for which the writer (Jones 1986:112) has suggested a connection with either the coastal area at the head of the Sithonia peninsula or the Gallikos and Vasilika plains.

The largest group of material under examination here consists of the decorated wheelmade pottery, whose examples separate, for the most part, along PC1 into those corresponding to the tight, well-defined Cluster B and the broader Cluster A. Only the examples of black-slip ware, which can also be considered here, belong to Cluster C. Beginning with the decorated wheelmade pottery classified in Cluster B (**T22-2**, **T47-1**, **T77-3**, **T117-14**, **T117-15**, **T118-6**, **T113-9**, **T127-1**, **48**, **49**, **63**, **64**, **78, 84**) these form a well-defined group. They match all but two (4 and 9 in **table E.3**) of the "Euboian" imports found at Knossos in all elements, as well as matching the other Lelantine plain reference material, and they are also similar to several other groups: the coastal Thessaly group (apart from a systematically higher Mn content among the Torone samples), the ?Parian group I in **table E.3,** and the Torone kiln group variants. Several sources therefore suggest themselves, of which the Lelantine plain could claim to be one, at least for some of the samples. It is important to stress that a local source could account for others.

In Cluster A are the following members of the decorated wheelmade pottery: **T52-1**, **T72-1**, **T93-1**, **T96-1**, **T101-2**, **T101-3**, **T101-4**, **T101-6**, **T101-8**, **T101-9**, **T101-10**, **T118-9**, **T118-10**, **27**, **78, 85**. Their compositions are not as uniform as those in Cluster B; nevertheless, apart from one, they all have slightly higher Ca, Mg, Cr, and Ni concentrations than the "local" group. **T101-8** is a clear outlier by virtue of its high Fe, Cr, and Ni contents, as well as its Ca content, which together with that of **T93-1** is lower than in the remainder. Apart from **T93-1** and **T101-8**, none of the samples matches satisfactorily the Attic reference group or the "Attic" imports found at Lefkandi and in Crete, the significant discrepancy being in the two origin-sensitive trace elements, Cr and Ni, which are in lower concentration in the Torone imports. They are unlikely to be Attic. On the other hand, **T93-1** and **T101-8**, although they do not form a pair and despite the high iron content of the latter, do lie within the Attic ranges. **85**, with a low Cr content, is neither Attic nor coastal Thessalian, and **T72-1** is unlikely to be Euboian or coastal Thessalian owing to its higher Ca, Mg and Cr contents. Although it is closer to Island Orientalizing group II (**table E.3**), a Cycladic origin cannot be confidently proposed.

The remainder could be from a single source. That source, however, is not the Lelantine plain on Euboia owing to discrepancies mainly in Mg and Cr, which are in lower concentration in the Lefkandi reference material. It is not coastal Thessalian, and neither is it likely to be the Argolid; the Torone samples have higher Mg, Cr, and Ni contents than the Mycenae reference group, which in composition is typical of the Argolid plain. They also differ (mainly in Ca and to a lesser extent Mg, Cr, and Ni) from the "Argive" examples from Knossos and Chania that are themselves not of uniform composition.

T24-3, **T50-1**, **T104-2** of the black-slip group in Cluster C are similar in most elements to the three examples from Lefkandi that were found on analysis to be probable local products (Jones 1986:629), but they also lie within the ranges of the Torone Kiln group (Type 1 and variants). On the other hand, they differ in Ca, Mg, Cr and Ni from the local wheelmade group (Type 2).

DISCUSSION

Chemically, two main clay types have been tentatively identified within the limited number of examples of local material at Torone. One clay type (1) is well represented among the handmade, coarser vessels from the kiln, while the other clay (2), richer in Ca, Mg, Cr, and Ni than the kiln pottery, appears in the wheelmade pottery (see **table E.3**). The kiln products are not uniform; most form one compact group of Type 1, but three should be regarded as technological variants on Type 1, and **KP-9** appears to belong to Type 2. The significance of these chemical groupings in petrographic terms is addressed below.

Before considering the imports, some remarks should be made about the comparability between the present data and the results of a program of analysis (at AAEC Lucas Heights Research Laboratories: Duerden, Clayton, and Bird 1986) by PIXEPIGME of fifth-century B.C. pottery from Torone reported by Tudor Jones (1987; 1995). Of the elements analyzed by PIGME, Na, Mg, and Al are relevant here, as are Si, K, Ca, Ti, Mn, and Fe

determined by PIXE. Twenty-two of those samples of mainly decorated pottery determined by Tudor Jones to be of likely local manufacture (her Group III from WMCA) have been compared with the kiln and local wheelmade groups, a few Attic imports being included. Two main points emerge from the results of this exploratory exercise, summarized in **figure 226**. First, there is a gratifyingly broad measure of comparability between the two data sets in that the concentration ranges fully overlap; second, for most elements the chronologically later pottery is better defined—that is, it has a narrower range of values than the earlier pottery. This observation is presumably a reflection of the combined effects of relative lack of uniformity of texture in the earlier pottery and the probable greater standardization of potters' clays at Torone by the Classical period. As for AAS, Mg is one of the elements in PIXE-PIGME analysis that discriminates, albeit imperfectly, Attic from local.

Progress has been made on the suspected imports. In light of the chemical data, they fall, broadly speaking, into two groups. For those belonging to Cluster A, the case for Attic and Argive imports at Torone is not strong; only two samples, **T93-1** and **T101-8**, lie satisfactorily within the Attic composition ranges. Where are the remainder (**T52-1**, **T96-1, T101-2**, **T101-3**, **T101-4**, **T101-6**, **T101-9**, **T101-10**, **T118-9**, **T118-10**, **27**, **85**) from? They are not canonical Euboian, coastal Thessalian, or Cycladic. Instead, they are not dissimilar to the local wheelmade group, some of the local groups identified at Mende, as well as some of the few examples of provincial Mycenaean from Assiros that may be connected with the region at the head of the Sithonia peninsula (and with the "local" material at Mende). Thus, while these Torone "imports" need not be regarded as local products, it is possible their source lies elsewhere along the coastline of the Chalkidike, or indeed further afield in Macedonia.

As for the "imports" lying within Cluster B, there are several possible sources. Apart from **T72-1**, this group of samples can be matched well with all but two of the typologically designated Euboian imports found at Knossos. But there is also similarity with coastal Thessaly and perhaps Paros in the islands, as well, significantly, as with the "variants" of Type 1 in the Torone kiln group. At present, then, chemical analysis can go no further with this group of "imports": all these four source regions are possible. For each of these "imports" typological and other considerations can now be introduced to establish which option may appear more likely. Two further points need to be made: first, neither T24,1 and certainly not T14,1 from the Lefkandi Toumba cemetery are Toronean in composition, and, second, of the thirteen suspected imports (of Submycenaean to Geometric date) from Mende only two were matched in composition acceptably with the Lelantine plain. Chemically, the status of the black slip is ambiguous, either local or Euboian, although petrographically the former assignment should be preferred for two of the examples (**T24-3**, **T104-2**).

The last group to consider is the "imported handmade," represented by two clay types. One type contains examples (**T54-1**, **T97-1**, **T111-4**, **T112-1**) that, on the one hand, resemble the handmade burnished group at Mende and, on the other hand, relate to Kiln group Type 1; petrographic characteristics of these four specimens, although diverse (**table E.5**), do appear elsewhere in the local material. **53** and **54**, on the other hand, may well be candidates for imports (but from an unknown source), as they are most distinctive chemically and petrographically.

While it is regretted that the modern clays and more "local" pottery was not analyzed chemically, one useful aspect of this study has been to highlight the likelihood that some of the suspected imports were not objects of long-distance trade but rather may have been products of local or regional sources. This view is partly supported by the petrographic data (see below), and more directly by the appearance in the local pottery at Mende of compositions that are not dissimilar to both the local wheelmade pottery and some of the suspected imports at Torone. Furthermore, it is the issue of production and distribution of specific and typologically well-defined Iron Age finewares in Chalkidike and elsewhere in northern Greece that would benefit from a program of chemical analysis at some point using either neutron activation or ICPES analysis; for both techniques, the data bases in the Aegean are now growing. Finally, the results obtained for the kiln in the present study should sound a clear note of caution to those involved in

Table E.5. Comparison of chemical and petrographic results

Clusters	Torone number	Archaeological group	Petrographic group
C	82.1185	**Kiln pot: handmade pithos**	Metamorphic
C	82.1187	**Kiln pot: handmade vessel--chytra?**	Metamorphic
C	82.1186	**Kiln pot: handmade pithos**	Metamorphic
C	82.1189	**Kiln pot: handmade amphora**	Very fine sand
C	82.1192	**Kiln pot: handmade closed vessel**	Very fine sand
C	82.1194	**Kiln pot: handmade closed vessel**	Fine sand
C	82.1184	**Kiln pot: handmade krater**	Fine sand
C	81.379	Imported pottery: handmade	Metamorphic
C	82.98	Imported pottery: handmade	Granodiorite
C	81.365	Black-slip ware	Very fine sand
C	82.179	Black-slip ware	Metamorphic
C	81.1188	**Kiln pot: wheelmade amphora**	Granodiorite
C	81.1144	Black-slip ware	Very fine sand
C	81.385	Local wheelmade pottery	Very fine sand
C	81.615	Imported pottery: handmade	Find sand
C	82.1152	Imported pottery: handmade	
B	75.248	Imported pottery: wheelmade and painted	
B	84.408	Imported pottery: wheelmade and painted	Extremely fine
B	82.1100	Imported pottery: wheelmade and painted	Extremely fine
B	82.1175	Imported pottery: wheelmade and painted	Extremely fine
B	84.146	Imported pottery: wheelmade and painted	Extremely fine
B	82.1101	Imported pottery: wheelmade and painted	Extremely fine
B	81.624	Imported pottery: wheelmade and painted	Very fine sand
B	82.1138	Imported pottery: wheelmade and painted	
B	84.420	Imported pottery: wheelmade and painted	Very fine sand
B	81.719	Imported pottery: wheelmade and painted	
B	82.1127	Imported pottery: wheelmade and painted	Extremely fine
B	82.1094	Imported pottery: wheelmade and painted	
B	82.1010	Imported pottery: wheelmade and painted	
B	82.1012	Imported pottery: wheelmade and painted	
A	81.829	Local wheelmade pottery	Extremely fine
A	82.80	Local wheelmade pottery	Very fine sand
A	84.251	Imported pottery: wheelmade and painted	Extremely fine
A	82.1190	**Kiln pot: wheelmade closed vessel**	Very fine sand
A	82.1193	**Kiln pot: wheelmade jar or small pithos**	Metamorphic
A	82.604	**Kiln pot: handmade pithos**	Metamorphic
A	82.1105	Imported pottery: handmade	Amphibolite schist
A	82.1106	Imported pottery: handmade	Amphibolite schist
A	84.436	Imported pottery: wheelmade and painted	Very fine sand
A	82.93	Imported pottery: wheelmade and painted	Extremely fine
A	81.625	Local wheelmade pottery	Very fine sand
A	82.1191	**Kiln pot: wheelmade closed vessel**	Very fine sand
A	81.836	Local wheelmade pottery	Extremely fine
A	82.1158	Local wheelmade pottery	Very fine sand
A	76.764	Imported pottery: wheelmade and painted	
A	84.429	Imported pottery: wheelmade and painted	Very fine sand
A	81.1146	Imported pottery: wheelmade and painted	
A	82.1092	Imported pottery: wheelmade and painted	
A	81.247	Protogeometric: complete vase	
A	82.1096	Imported pottery: wheelmade and painted	
A	82.91	Local wheelmade pottery	Very fine sand

Continued on next page

Table E.5. Comparison of chemical and petrographic results (continued)

Clusters	Torone number	Archaeological group	Petrographic group
A	82.91	Local wheelmade pottery	Very fine sand
A	84.433	Imported pottery: wheelmade and painted	Very fine sand
A	84.434	Imported pottery: wheelmade and painted	Extremely fine
A	81.364	Protogeometric: complete vase	
A	84.431	Imported pottery: wheelmade and painted	Very fine sand
A	84.430	Imported pottery: wheelmade and painted	Very fine sand
A	84.437	Imported pottery: wheelmade and painted	Extremely fine

chemical provenance studies: it should not be assumed that kiln material forms the ideal pottery from which to create chemical reference groups. In view of the geological diversity of pottery-making materials in the Torone area, and as the petrographic data in particular have indicated, the pottery from the kiln is not representative of the local fabrics. Nevertheless, it surely remains the case that in the majority of instances compact, well-defined composition groups obtained from the analysis of typologically uniform kiln pottery are valid controls for the site concerned (see, for instance, Megaw and Jones 1983; there is a growing literature on the high-precision chemical characterization of kiln groups and the issues raised by the interpretation of the data; for a recent investigation, see Mommsen et al. [1994]).

COMPARISON OF THE PETROGRAPHIC AND ELEMENTAL GROUPINGS

As only about half the samples characterized petrographically were analyzed chemically, caution is required in correlating the two classifications, summarized in **table E.5** and **figure 225**. Also, it has to be borne in mind that the suite of major, minor, and trace elements determined by AAS may reflect only gross mineralogical or textural variation (Jones 1995:732), that is, mineralogical features that characterize or distinguish a particular fabric are either nondiagnostic chemically or present in too low concentration to manifest themselves chemically. This perhaps can be best observed among three examples of the "imported handmade" pottery, argued above to be probably local or regional products: **T54-1, T97-1**, and **T112-1** group quite closely together in Cluster C having negative scores on both PC1 and PC2, and yet they belong to metamorphic, granodiorite, and fine sand groups respectively. Equally, the kiln products do not consistently reflect chemically their distribution between the metamorphic and sedimentary ([very] fine sand) fabrics, although the one specimen, **KP-5** with a granodioritic fabric does stand apart chemically. More satisfying is the manner in which all but one of the local wheelmade pottery, which belongs to the very fine sand group, is classified in Cluster A; also the two remaining members of the imported handmade pottery group, **53** and **54**, containing amphibole schist, are well differentiated from the other members of the group; the same applies chemically, these samples having high Mg and Fe and low K contents (which would all be expected mineralogically) and high Mn. On the other hand, **T101-8**, also an outlier in **figure 223**, is not distinctive petrographically.

The finer-textured local fabrics such as the wheelmade pottery and a few of the kiln products are classed chemically as calcareous, and yet petrographically this is not the case for most of them. This apparent lack of crystalline calcium phases in most of the thin sections is probably the result of their alteration through firing, especially in the case of fine-grained fabrics. In any case, explicitly calcareous fine-grained fabrics have been encountered (e.g., **T30-1, T58-1, T62-1**), and indeed the yellow color of some of the well-fired fabrics independently supports this view. Local use of calcareous clays argues for production in the vicinity of Vigla, which is consistent with the location of the kiln even though the coarser, predominating fabrics from the kiln are noncalcareous.

Petrography is not capable of resolving decisively the ambiguity in assigning origin to many of the supposed fine-grained imported pottery on the basis of chemical composition. Nevertheless, interpretation of the respective characterizations of the "imported handmade" class are consistent in favoring a local or regional source. Such an attribution is also consistent with the petrographic composition of other "imports" in that most of the finer fabrics appear to be granodioritic and schistose in character; they are consistent with the Torone area but could equally match other areas, particularly in Chalkidike.

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6

Symbols not spoken: Potters' marks and graffiti

POTTERS' MARKS

As recently as 1990, Henry Immerwahr wrote: "No extant inscriptions are earlier than the third quarter of the 8th century B.C.; nor am I aware of potters' marks or other signs on Attic Protogeometric and Early Geometric pottery, with the exception of an upright painted cross under one handle of a Protogeometric amphora from the Athenian Agora" (Immerwahr 1990:7; for the mark, see Papadopoulos 1994:440, 442, fig. 2, pl. 109a–b, no. A3). The very paucity of such symbols in Greek lands in contexts of the Early Iron Age warrants their separate treatment here. Indeed, the Early Iron Age potters' marks of Torone, together with some painted potters' marks from Athens and Lefkandi, provided the basis for the first systematic corpus of Early Iron Age potters' marks in the Aegean (Papadopoulos 1994). A useful definition of potters' marks is provided by Halepa Bikaki (1984:2): "We consider as potters' marks . . . those made on the pot before firing, when the pot was still in the hands of the potter, and therefore most probably by the potter himself (hence the term), whatever their meaning and function" (for which see below).

There are eight incised symbols that may be classed as potters' marks at Torone: **T10-1**, **T10-3**, **T38-2**, **T41-3**, **T66-1**, **T75-2**, **T82-3**, and **T118-1** (**fig. 191a-g**). Seven of the marks are found at the base of the lower handle attachment or nearby, and all the marks are found on handmade burnished vessels; there are no instances of potters' marks among the local wheelmade pottery from the Terrace V cemetery. The marks occur on four shapes:

Jugs with cutaway necks	**T38-2**, **T41-3**, **T75-2**, **T82-3**
Kantharoi	**T10-1**, **T10-3**
Cup/kyathos	**T66-1**
Two-handled jar	**T118-1**

Chronologically, the eight marks do not appear to form a consistent group within the period of use of the cemetery. The latest is **T82-3** (from the same tomb as the pendent semicircle skyphos **T82-2**), dating to the very latest stages of the cemetery. **T41-3** is slightly earlier, probably Late Protogeometric to judge by the wheelmade painted pottery found in the same tomb, while **T75-2** is of similar, if not slightly earlier, date. The two kantharoi **T10-1** and **T10-3**, recovered from the same tomb, belong to the earlier stages of the period of use of the cemetery (Submycenaean or Early Protogeometric), and **T118-1** is best assigned to a developed stage of Protogeometric. The contexts of the remainder were less informative as to date; **T38-2** was found with another handmade vessel, a pitharion, not precisely dated, and **T66-1** served as the ash-urn and only pot in Tomb 66.

The marks themselves were incised prior to firing and, in most cases, at a time when the fabric of the vase was quite dry, leather-to-bone hard rather than moist-to-leather hard. The difficulty of determining whether such marks were made before or after firing is fully discussed by Palaima, Betancourt, and Meyer (1984:70–71). It is therefore possible to establish, on the basis of the physical characteristics of the marks, whether they were made before or after firing (see further Edgar in Atkinson et al. 1904:177; Daniel 1941:273–275;

Stubbings 1951:45). The very thin, cleanly incised lines of the marks on **T10-1**, **T10-3**, **T38-2**, **T41-3**, and **T82-3** contrast to the few instances of incised decoration on local handmade vessels, where the incisions, executed while the clay was less dry, are characterized by lines and strokes that are deeper and broader (see especially **T109-5**). The mark on the shoulder of **T118-1** is the most deeply incised of the group, not unlike the marks on the outer face of the handle of a Thessalian or Macedonian jug with cutaway neck at Marmariani (Heurtley and Skeat 1930–31:13–14, no. 6; Papadopoulos 1994:448, fig. 7, no. B3). The Torone marks further contrast to incisions (e.g., **T113-10**) that are executed on the surface of the pot after firing, and that normally have many tiny successive strokes of the cutting implement within the incision itself (Daniel 1941:273, n. 56; cf. the many later graffiti in Lang 1976). The latter are generally less clean on account of the resistance offered to the cutting implement by the hardened surface of the fired pot.[1] It is worth noting that in the mark on **T38-2** the third vertical stroke from the left is a scratch made after firing, perhaps even while the vessel was being removed from its tomb; it contrasts to the three strokes incised prior to firing (cf. a similar scratch on **T41-3**). The dots on **T66-1**, **T75-2**, and **T41-3** are fine and very shallow and were also impressed when the fabric was quite dry.

The eight potters' marks comprise symbols that, descriptively, may be divided into four broad groups:

1. *Three vertical strokes* (**T10-3**, **T38-2**): Three neat vertical strokes are found on one side of the vessel only, at the base of the lower handle attachment on the kantharos **T10-3**. Three similarly located strokes are found on the jug **T38-2**, but here the stroke on the right is slightly more diagonal.

2. *Five vertical strokes in line* (**T118-1**): Five comparatively deep strokes arranged in a vertical line were incised on the shoulder on one side of the two-handled jar **T118-1**. Both the mark and its position are unique among the handmade pots discussed here and, indeed, among the corpus of potters' marks on Early Iron Age handmade vessels (Papadopoulos 1994:467). The only prefiring incised mark on the shoulder of a pot that I know of is that on the wheel-made and painted sherd from the Xeropolis settlement at Lefkandi (Papadopoulos 1994: 448, pl. 114c, no. B2). Although the position of this mark is unique and atypical, it is still classified as a potter's mark as it is isolated, found on only one side of the pot, and is not part of any clearly defined decorative scheme. Vitelli (1977: 19) considers the free-floating, nonrepetitive painted motif on Neolithic pottery another version of the potter's mark, and Donnan (1971: 464) includes among the potters' marks on utility vessels of the Moche style of Peru (ca. A.D. 100–800) those located on the neck of the vessel, but only on one side of the pot.

3. *Dots only* (**T66-1**, **T75-2**): A group of fourteen preserved dots, closely clustered together, on the body at point of maximum diameter, immediately below and very slightly to the left of the lower handle attachment on the cup/kyathos **T66-1**. As the vessel is chipped at this point there may well have been a few more dots originally. Two similarly impressed dots are found on the jug **T75-2** directly below the mastos at the base of the handle. **T75-2** is of further interest as incision is found on the body of the vase in the form of three motifs (not unlike the potter's mark on **T10-1**) grouped above mastoi arranged symmetrically around the body of the vase (**fig. 131b**). Given the position of these motifs directly above mastoi (which are in effect lug or atrophied handles), and given the rarity of incised decoration on Toronean handmade pottery, it is possible these motifs are also potters' marks rather than decoration, although such repetition is unusual and would argue against the interpretation of the symbols as potters' marks. Dots are also found on the more complex mark on **T41-3** (see below).

4. *Arrow- or lambda-shaped marks* (**T10-1**, **T82-3**, **T41-3**): On **T82-3** two diagonal lines cross over at the top to define a simple arrow- or lambda-shaped symbol. A similar mark is also found below one handle on the kantharos **T10-1**, but in this case the space defined by the two converging diagonals is filled with short, slightly hooked strokes (cf. the incised "decoration" on the body of the jug **T75-2**). Somewhat more complex is the mark on the

jug **T41-3**, where two diagonal lines converge and are bisected by a vertical line that extends beyond their apex. Arranged in two parallel horizontal rows of three, two dots to the left of the vertical line and four to the right, are six impressed dots similar to those on **T66-1** and **T75-2**. A further horizontal line, clearly incised *after* firing, traverses the two diagonal lines and the vertical line at approximately their midpoints. This horizontal line is rather problematic. It is most probably a later scratch as that already noted on **T38-2**, but its fortuitous position over the central part of the inscription seems particularly well defined, as is the case with **T38-2**. This raises the possibility that both "scratches" may have been consciously incised by the maker or user after the pots were fired.

As far as I am aware, the only comparable potter's mark in the Greek world, incised on a handmade pot prior to firing and *contemporary* with the Torone marks, is found on the lower exterior face of the handle of a jug with cutaway neck from Marmariani (Heurtley and Skeat 1930–31:13, no. 6; Papadopoulos 1994:448, fig. 7, no. B3). Elsewhere in the Aegean similar marks may well exist, but it is often difficult to establish, particularly from fragmentary assemblages of coarseware pottery, whether the incised symbols are potters' marks or decoration (cf. the fragmentary coarse pottery from Karphi: Seiradaki 1960: pl. 12b). The Marmariani mark consists of eight comparatively deep diagonal strokes. As with the Toronean vases, the Marmariani jug was found in a tomb, in this case a large tholos tomb (for which see Georganas 2000). The vase itself may represent an import from Macedonia—at the least it displays strong Macedonian influences. Although diagonally grooved, twisted, or fluted handles are a feature of north Aegean handmade wares of the Late Bronze and Early Iron Ages (Heurtley 1939:98–89, 104, 216, fig. 87a–f, h; 233, fig. 106; Wardle 1980:256, fig. 16, nos. 44, 51–53; 260, fig. 19; Hochstetter 1984:53, fig. 12; 57, fig. 13; see also Wardle's comments in Popham, Touloupa, and Sackett 1982a), I doubt whether the incised strokes on the Marmariani jug are decorative as they differ from normal grooving or ridging found on handles.

Slightly later than the marks from Torone and Marmariani are those incised prior to firing on a series of handmade coarseware vessels from Corinth of the Geometric period: C-1982-168, C-63-650, and C-40-370 (Papadopoulos 1994:451, nos. B12–B14; several more possible potters' marks are assembled and discussed under B14). The marks are found on two shapes: handmade amphorai and hydriai (see Pfaff 1988:29–33). According to Pfaff this type of amphora has a long history at Corinth, beginning perhaps as early as the Early Geometric period and continuing in the specialized form of the Corinthian Type A and A′ transport amphorai dating from the seventh through the second centuries B.C. The related hydriai appear to be as early as the amphorai, although knowledge of their development is still rather incomplete (Pfaff 1988:32–33; cf. Blegen, Palmer, and Young 1964:41). The earliest of the three Corinthian marks mentioned above (C-63-650) is dated to the Early Geometric or Middle Geometric I period, C-1982-168 to Middle Geometric II, and the latest, C-40-370, is said to be Late Geometric or Early Protocorinthian (see Papadopoulos 1994:451). There are three incised vertical strokes on top of one of the handles on the amphora C-40-370; three similar strokes are found on the vertical handle of the hydria C-1982-168, but in this case the strokes are horizontal. Three incised vertical strokes are also found on the neck on one side of the amphora C-63-650, in a position similar to some painted potters' marks in the form of crosses on wheelmade painted pottery (see Papadopoulos 1994:440–445, nos. A1, A7–A8, A12–A17). Although handmade vessels such as these could be deposited in tombs at Corinth (Blegen, Palmer, and Young 1964:41, 43), the three examples discussed here derive from fill dumped in wells. The placement of the marks on the handles of C-1982-168 and C-40-370 is not unlike that on the vessels from Torone and Marmariani, although they are placed on top of the handle arch, not at the handle base; the exception is C-63-650, where the mark is found on the neck.

In his discussion of the coarseware hydriai from the North Cemetery at Corinth, Young (in Blegen, Palmer, and Young 1964:41) noted that "the building of coarse pots by hand may well have been a craft handed down through the centuries in

particular groups or families, a craft much more conservative than that of the potter who threw his vessels on the wheel and decorated them afterward." The extreme conservatism of potters and their reluctance to innovate is stressed by Foster (1965) in his study of peasant pottery manufacture. Conservatism in the handmade pottery tradition is a feature that should always be borne in mind and it may well be that the practice of marking such vases represents an Early Iron Age survival of a much more common Bronze Age custom.[2]

The majority of the Early Iron Age potters' marks assembled here find near identical parallels among the corpora of incised, impressed, and painted marks on vessels of the Aegean[3] and Cypriot Bronze Age,[4] as well as among similarly executed marks on Hellenic vases (Johnston 1979:1). It should be stressed, however, that any similarities between the Early Iron Age potters' marks on the one hand and the earlier and later marks on the other is probably coincidental, and such ubiquitous signs as vertical strokes and dots belong, as Johnston (1979:1) puts it, to the very basic repertoire of decorative ornament, although, as he further notes "in certain aspects of material culture an unbroken, if tenuous tradition survived."

Concerning the purpose such marks served, a number of interpretations of the Bronze Age material have been suggested (for useful overviews see Halepa Bikaki 1984:42–43, Åström 1966:149–192). In the majority of cases the signs are interpreted as having served a function in the *production* and/or *distribution* of the pots on which they appear. Suggested functions include maker's mark or mark of ownership, capacity, commodity, provenance (workshop or production center), or destination.[5] Moreover, it is clear, particularly from marks found on the pottery from a specific site, that there is more than one category of mark and that the marks served a variety of purposes. For example, Halepa Bikaki (1984:42) has argued that the composite signs on the Middle Bronze Age (Period IV) pottery from Kea may indicate capacity, whereas the Linear A signs, which emerged during the later stages of the Middle Bronze Age (Period V), may have functioned as labels, possibly relating to the commodity contained in the vessel. In dealing with the distinctive Middle Helladic gold-mica wares considered to be of Aiginetan origin and found in quantity in the Argolid, Nordquist (1987:63) points to the occurrence of potters' marks on the undersides or handles of the imported vessels and suggests the marks may indicate a production aimed at export (for Aigina as the production center of the Middle Helladic gold-mica wares see Zerner 1978:57). Nordquist (1987:63) goes on to state that the potters' marks on both the imported Aiginetan and Lustrous Decorated pots more likely served the function of marking a producer, rather than a destination, because the marks on such vessels appear to be the same at most sites where they are found. Similarly multifunctional are the trade marks on Greek vases of the Archaic and Classical periods, as well as the contemporary graffiti and dipinti incised or painted after firing (Lang 1976; Johnston 1979). In an important article on Neolithic potters' marks, and in the context of the distribution of marked pots, Vitelli (1977:30) noted that the use of potters' marks suggests not the trade of objects or even verbal information but the regular relocation of potters within different settlements. Vitelli visualized a model in which the distribution of potters' marks might indicate marriage patterns and kinship ties within Neolithic communities.

As for the Early Iron Age Toronean marks, their isolated or else inconspicuous placement on a vase—whether on, below, or near a handle or on the shoulder—contrasts with the positioning of incised decoration (as on **T109-5)**, and evinces a significance beyond that of decoration. In any interpretation of the marks it is important to bear in mind the multifunctional aspects of the Bronze Age and later Greek marks. Of significance is not only the nature of the mark itself but also the shape, decoration, and function of the vessel on which it appears, as well as its context. When turning to the interpretation of the marks it is important to view the Torone examples against the backdrop of the corpus of collected Early Iron Age potters' marks, particularly in dealing with the issues of capacity, commodity, provenance, and destination.

In the majority of cases, the interpretation of the Early Iron Age marks as indicators of capacity seems unlikely because similar marks, particularly in the painted crosses on Protogeometric and Geometric wheelmade pottery (see Papadopoulos 1994:440–446) appear on vases not only of differ-

ent shapes and sizes but also of different function (e.g., drinking cups and amphorai). Similarly, a numerical value for such common marks as dots (**T66-1**, **T75-2**, **T41-3**) or simple strokes (**T10-3**, **T38-2**, **T118-1**) is usually, although not always, negated in the modern literature, as such marks are found on vessels of different shapes and sizes (Vitelli 1977; cf. Tzavella-Evjen 1980: 96; Johnston [1983:67] notes that numerals are not found for sure in the extant later Greek material before 600 B.C.; cf. Johnston 1979; Robb 1978). This in itself, however, presupposes an understanding of the numerical system employed at the time and a knowledge of its application in specific instances. It is worth remembering that the interpretation of numerical values of marks of the Classical and Roman periods often involves a good deal of controversy and doubt (e.g., Lang 1956; 1976:1, 21–23, 55–87; also Robinson 1959:95 [M123], 105–106 [M230, M232], 109–110 [M273], 115 [M330, M333]), and that Bronze Age (for which see Bennett 1950; Was 1971a; 1971b; 1972; 1973a; 1973b; 1974; 1977; 1978; Duhoux 1974; Petruso 1978; 1979; Boskamp 1982; De Fidio 1983) or later Greek methods of numerical notation (for which see Tod 1911–12; 1926–27; 1936–37; 1950; Lang 1955; 1956) should not be assumed for the Early Iron Age.

The most likely candidates for numerical notations are the strokes and dots, but in both cases definitive analysis is hampered by the quantitative meagerness of the sample. The dots on **T66-1**, **T75-2**, and **T41-3** do not manifest any apparent pattern. The fourteen preserved dots on **T66-1** were impressed near the handle base of a cup/kyathos, whereas only two dots were impressed at the base of the handle on the jug **T75-2**. The composite mark on **T41-3** is different again, combining six dots with an arrow-shaped symbol, although it is found on a shape and in a position similar to the mark on **T75-2**. In a similar vein, the majority of marks comprising strokes reveal no clear pattern. Of these, the mark on **T118-1** and the jug from Marmariani are unique and occur on vases of different shape; any number of interpretations might be suggested but few can be conclusively established statistically. The marks comprising three strokes on **T10-3** and **T38-2** are similar, but once more they are found on vessels of totally different shape, which would seem to argue against any intentional notation system based on capacity or commodity.

More interesting are the marks from Corinth discussed above, as in this case something of a pattern might appear to emerge. Each mark comprises three strokes; on the hydria C-1982-168 the strokes are set horizontally on the handle, whereas on the amphorai C-63-650 and C-40-370 they are set vertically. The mark on C-63-650 appears on the neck, that on C-40-370 on the handle. It may be tempting to suppose a consistent numerical notation to do with capacity in the case of C-63-650 and C-40-370, especially as these amphorai are considered the progenitors of the later Corinthian type A and A′ transport amphorai (Pfaff 1988:29). It should be stressed, however, that C-63-650 is considerably larger than C-40-370 and also earlier. The variance in size of the two amphorai would seem to argue against an interpretation as capacity indicators in this specific instance, although it is possible some other numerical meaning was intended.

Establishing commodity is fraught with the same difficulties as establishing capacity, as similar marks are found on vessels of different shapes, sizes, and functions. The one possible exception may be the painted mark on the underside of an oinochoe from Argos (Courbin 1966:311, n. 2, pl. 85; Papadopoulos 1994:445–446, no. A30), where, in the context of Argive Late Geometric, the complex zigzag may denote water or liquid, a symbol not inappropriately painted on the underside of a pouring vessel (see Boardman 1983:19, with fig. 2.4a, b).

That the marks are an indication of ownership also seems unlikely, as the vast majority of later Greek owners' marks are normally, although not exclusively, incised on a vase *after* it was fired (Lang 1976:23–51). An alternative suggestion, which does not appear to have been seriously considered, especially for the Bronze Age potters' marks, is that certain symbols may have denoted specially commissioned, preordered, prepaid, or reserved pots or sets of pots. In this respect, a Protogeometric amphora and a skyphos, each with a painted cross and both deposited in Tomb 34 in the Precinct XX cemetery in the Athenian Kerameikos (Papadopoulos 1994:440, A1, A2), may well have formed part of a coordinated set of pots either purchased, preordered, or specially commissioned. Two one-handled Early Geometric cups from

Mycenae deposited in the same tomb (Papadopoulos 1994:445, nos. A21, A22), each with a painted cross on the underside and surely products of one workshop if not one potter, could be interpreted in the same light; so too the kantharoi **T10-1** and **T10-3**, found in the same tomb at Torone, although in this case the marks are different from one another. Such an interpretation could apply to other Early Iron Age potters' marks, particularly as many derive from the same context and could therefore have been originally part of a specially ordered batch of pots or kiln load (cf. Papadopoulos 1994:440, A4, A5; 444–445, A12–A18), and a similar interpretation may equally apply in the case of some of the Bronze Age potters' marks already noted. Here the whole question of pottery production, market demand, and the seasonality of certain potters' activities, such as firing, is important. Most ethnographic studies of traditional modern potters of the Mediterranean (Richter 1923:xi–xiii; Casson 1938; Hampe and Winter 1962; 1965; Birmingham 1967; Hankey 1968; A. Winter 1972; Cuomo di Caprio 1983; Blitzer 1984; 1990; Voyatzoglou 1984; Betancourt 1984b; Jones 1986: 849–880; cf. Saraswati and Behura 1966; Lisse and Louis 1956; R. Cook 1984) have shown first, that many elements of pottery production are seasonally defined, with the result that purchasable pots are not available all year round; and second, that potters, especially the highly skilled, find it difficult to keep up with market demand. Assuming that seasonality of potters' activity and healthy market demand are plausible for Early Iron Age pottery production, then the possibility of a potter specially marking a pot as part of a batch, whether for a local client or for export, need not be surprising. In such a situation, the mark itself would not necessarily denote specific maker or owner or specific destination. In the context of workshop production, a mark—whether incised or painted—may have served as a reminder to the maker, for whatever purpose.

Much of the literature on Bronze Age and later Greek potters' marks has focused on pots specifically marked for export, with the symbol signifying either provenance or destination. Such a commercial possibility for the Early Iron Age was raised by Desborough (1952:83–84; Papadopoulos 1994: 443, A10, A11) in the case of two Athenian Protogeometric skyphoi with painted crosses found in tombs at Knossos. He considered such a possibility unlikely, however, largely because a similar mark was found on another Athenian skyphos deposited in a tomb in Athens (Papadopoulos 1994:440, A2). The quantity of pots of the period with potters' marks representing imports to the site where they were found is not great (see Papadopoulos 1994: 482). In some of these cases, the possibility of a mark relating to provenance or destination cannot be dismissed, but the marks can equally refer to commissions or orders, as noted above, and need not specifically mark provenance or destination.

Another function, suggested by Panayotou (1986:99), is that a mark made on a pot prior to firing serves the purpose of indicating or identifying the object as a dedication, or its owner as a dedicant. Certainly, a great many vases inscribed *after* firing are dedications or intended as votive offerings; the numerous inscriptions from Mount Hymettos (Blegen 1934; Young 1940; Langdon 1976) represent only one group of examples. As for the Early Iron Age potters' marks, such an interpretation remains untenable because not one of the vases can be shown with certainty to have been deposited in a context identified as a temple, sanctuary, or the like. This is not to say that such an interpretation is impossible for the period, only that we have no contextual evidence for it.

The most common interpretation of the Bronze Age and post-Geometric marks appears to be as makers' marks. Vermeule (1972:40; cf. Vitelli 1977:27), for example, has stated that potters' marks are simple symbols that function like a thumbprint on an object. In the case of one group of Early Iron Age marks (Papadopoulos 1994:453–455, 471, group D) a finger or thumb impression constitutes the mark. The apparent, if not obvious, similarity between the humble Early Iron Age crosses (Papadopoulos 1994) and the ubiquitous X serving as a signature for illiterate people of our own time may be noted. The use of identification marks, as opposed to words or letters, is attested in Greek literature as early as Homer (see Papadopoulos 1994:486–487).

An interesting twist to the maker's-mark or identification-mark theory is noted by Frankel (1975:38), who, following Åström (1966:189), suggested that potters' marks on some Cypriot Bronze Age vessels convey the identity of the potter and that their function was to identify individual potters' products that had been fired collectively in a

common kiln. Although such a possibility is perhaps tempting in the case of Bronze Age Cyprus, it seems less likely in Early Iron Age Greece on account of the minimal variety of vessel forms, particularly among the wheelmade wares, which suggests the work of professional potters. Furthermore, assuming that the firing of pottery in common kilns was standard practice in the Early Iron Age, then one might reasonably expect to find a higher incidence of such marks, as is the case in Bronze Age Cyprus. A more penetrating study, suggesting that the function of potters' marks was to identify several potters' products fired collectively in a kiln, is that by Donnan (1971), who provides illuminating ethnographic analogies that may cast light on the interpretation of ancient Peruvian potters' marks. Donnan distinguishes between pottery manufacture for a market center on the one hand and pottery manufacture by traveling potters on the other. In each case, potters who are not part of the same family or economic unit but who fire their pots collectively in a common kiln mark their vessels. These invariably incised marks are referred to by the modern Peruvian potters as *signales*, a term probably deriving from *signar*, meaning to sign or mark with a seal (Donnan 1971:465). It should be noted, however, that the ancient potters' marks discussed by Donnan are found only on coarse, sand-tempered utility vessels of coastal north Peru and not on the finer painted pottery of the Moche style. Another interesting ethnographic case, this one from eastern Anatolia, shows that ceramic vessels made by women in different households and fired communally in a common kiln are distinguished not by isolated or inconspicuous marks but rather by the overall decoration of each vase. Indeed, the function of the so-called decoration is to identify individual potters' products (I owe this information to Professor Özdogan). In a simulation study recreating Neolithic processes of the making and communal firing of pots, Vitelli (1977:27) has shown that hand building pottery is not only a slow and very individual process but also one in which it is very difficult for even the same person to produce several identical pots. For the firing process Vitelli (1977:27–28) states: "there is no question of identifying which pot belongs to whom when it comes to unloading the finished products." Even many of the exploded fragments (wasters) can be quickly identified by members of the group.

It may be argued that when the decoration of painted pottery is as standardized as is the case, for example, with Attic or Lefkandian Protogeometric and Geometric wares (or when there is no decoration at all, as in the case of the handmade vessels from Torone), then simple marks would suit well the purpose of identifying the products of individual potters in communal firings. In the case of wheelmade painted pots, the very standardization of shape and decoration indicates the work of specialized or professional potters, who, like many modern traditional potters of the Mediterranean, maintained their workshops and kilns individually and independently. In such a specialized pottery industry there is little room for communal firing. Similarly standardized are many of the handmade vases discussed above, particularly those from Corinth. The Corinthian potters' marks occur on several highly specialized shapes, such as the amphora and hydria. With both shapes, the similarity of clay and technique, and the lack of any major variety in individual forms, suggests a uniform and highly productive workshop (see Pfaff 1988 for illustrations). Somewhat more variety can be observed in the shape of the handmade wares of Torone, although much less so in the sphere of fabric, burnishing, and technique.

The slight differences in details of shape and proportions of the handmade jugs (**T38-2**, **T41-3**, **T75-2**, **T82-3**), for example, is perhaps due to diachronic development or change, rather than indicating synchronic differentiation. It is worth stressing that the Early Iron Age kiln at Torone, which produced evidence that wheelmade and handmade pottery was fired in the same kiln and in the same load (Papadopoulos 1989a), has produced no potters' marks. Moreover, Frankel's suggestion of communal firings is based on a mode of production that essentially meets a local or household demand. Few, if any, of the pots he specifically discusses are exported beyond the immediate region. In the case of the Aegean Early Iron Age, it is clear that potters' marks occur most frequently on the pottery manufactured at sites such as Athens, Lefkandi, and Corinth, that is, centers whose ceramic products—both wheelmade and handmade—were widely exported. The fact that the pottery of a

number of regional Early Iron Age workshops is found, often in quantity, throughout the Aegean, Cyprus, the coastal Levant, Italy, and Sicily would argue that such pottery production may have been in part directed toward an active export trade and not restricted to local consumption.

There are two important differences between Early Iron Age potters' marks on the one hand and Bronze Age and post-Geometric marks on the other that may provide some hint as to their function. The first is that the vast majority of Bronze Age, and later, marks occur on pottery found in settlement contexts; the large number of marks on pottery from Bronze Age Phylakopi, Lerna, and Keos, as well as Cyprus, are cases in point (see above; for Lerna see especially Caskey 1955:34, pl. 15c–f; 1956:156; 1960). Similarly, in the post-Geometric period it is generally rare to find vases specifically marked for commercial regulation (e.g., Greek stamped amphora handles) in any great quantity in funerary contexts (Archaic and Classical amphorai were sometimes used, or reused, as funerary containers: see, among others, Knigge 1976:13–14, 20–25, pl. 9). Of the seventy Early Iron Age pots with potters' marks assembled in 1994, at least twenty-six were found in tombs, to which a further two possible examples may be added; thirty-two were found in nonfunerary contexts, of which seven (from the Toumba building at Lefkandi) were located on the site of a well-known cemetery; the contexts of the remaining ten are uncertain or lack published details (see Papadopoulos 1994). If the latter are excluded from the calculations, then almost half of all Early Iron Age potters' marks come from tombs (the figure would be higher if the Lefkandi marks from the Toumba building were regarded as deriving from a funerary context). In certain regions or sites such as Torone, potters' marks are found only on pots deposited in tombs. The suggestion, therefore, that the *majority* of marks served some commercial purpose in the Early Iron Age seems less likely, unless the pots bearing the marks saw service before having been deposited in their final resting place. It should be stressed, however, that at many Early Iron Age sites in Greece the material largely derives from either funerary or settlement contexts; it is comparatively rare to find substantial quantities of pottery and other small finds from both settlement and tomb contexts at one and the same site.

The second point has to do with the quantity of Early Iron Age potters' marks. The quantitative analysis of the largely Middle Protogeometric deposits encountered inside and in areas immediately outside the Toumba building at Lefkandi is illuminating. Among the 26,000 or so sherds (weighing almost half a ton) recovered in the course of the excavations, only seven bear potters' marks (Catling and Lemos 1991:3). At Athens, three of the eight examples of potters' marks recovered from nonfunerary contexts were found in two wells, which between them yielded almost 3000 sherds (the total yield was 999 sherds for well J 14:2, 1972 sherds for well L 11:1). The situation is similar for sites such as Corinth, Torone, and in the Argolid, where the quantity of marked vases appears to form only a very small proportion of the total. At other sites, such as Rheneia, Klenia, Nichoria, Kastanas, Exochi, Marmariani, and Pithekoussai, a solitary mark is all that has been recorded of published thus far. There is certainly nothing approaching the quantities of marks at Bronze Age sites such as Phylakopi (Edgar in Atkinson et al. 1904) or Agia Irini, where some ninety marks were found in Period IV deposits alone (twentieth/nineteenth to seventeenth centuries B.C.: Halepa Bikaki 1984:7–21), or in contemporary Lerna, where in the Middle Helladic period well over one hundred marks are known (for references see above).

The fact that Early Iron Age potters' marks are rare in comparison to earlier and later pot marks, coupled with the fact that many are found in tombs, is of further interest, for if the pattern of deposition is not purely fortuitous, then the possibility of pots being specifically marked as intended for the tomb should not be overlooked. A pot thus marked would essentially entail a special commission, as discussed above. Here the few figured representations constituting possible potters' marks (fully discussed in Papadopoulos 1994:455–456, 471–473, 490–491, group E) are of particular interest. I have argued elsewhere that the function of the painted horses and birds representing the group E potters' marks would not be unlike the later potter or painter signatures on Greek vases, where the maker explicitly signs his name—those that sign are evidently all men—with *egrap(h)sen* or *epoiesen*, in any number of spellings. Once more, Vitelli's experimental studies with a group of students simulating the processes of

the prehistoric potter are of interest: "Many of them do mark their creations, usually by incising initials or a symbol on the bottom of their objects" Vitelli (1977:27). If Vitelli's students, like the potter craftsmen of sixth- and fifth-century B.C. Athens, felt the urge to sign or mark their pots, why not the Early Iron Age potter? In the context of a nonliterary, or protoliterary society, a simple X or several strokes—or a horse or bird—could easily have served as a signature of sorts, and it is perhaps not surprising that the earliest *alphabetic* potter's signature can be traced back to the later eighth century B.C. (see Peruzzi 1973: pl. 3; Jeffery 1976; fig. 1; 1982:829, fig. 2; Heubeck 1979:123, fig. 50; Johnston 1983:64, fig. 4; B. Powell 1991:128, no. 10).

In dealing with the Aegean Bronze Age marks, Dow (1973:585) wrote: "we may urge that most potters' marks are not whimsical scratches, but are lines drawn with full intent; they mean something. Whatever the purpose(s) . . . the impulse was common." In discussing the welts identified as potters' marks on Middle Neolithic pottery of southern Greece, Vitelli (1977:17) wrote: "They are quite intentional; but if they are not decorative they must have some other meaning or reason for existing." In looking at the Bronze Age material Sacconi (1974:207–209) concluded that potters' marks are only occasional notations and do not constitute a system of any kind. She further noted that they show no evolution through time and that any resemblance they may have to Aegean scripts is purely fortuitous. Other scholars recognized in potters' marks some remote connection to literacy: "potters' marks were in the soil from which literacy grew" (Dow 1973:585). Still others (e.g., Pope 1964:4) believed certain Bronze Age potters' marks suggest, but by no means prove, a contemporary knowledge of writing.

Any similarity between such symbols as the lambda-shaped mark on **T82-3** and earlier Aegean scripts or later Greek alphabetic scripts must be purely coincidental. As Johnston (1983:66; cf. Popham, Sackett, and Themelis 1979–80:89–93; and, generally, Jeffery 1967; Jensen 1970:123–161, 450–582; Heubeck 1979; Best and Woudhuizen 1988) has pointed out, the evidence from Lefkandi and Pithekoussai shows that the adoption of the Phoenician alphabet by the Greeks probably took place a generation before the first previously known surviving Greek graffito of ca. 740 B.C. Powell (1991:18–19), following Carpenter's (1933; 1938; cf. Day 1934) and McCarter's (1975a:123–124) comparison of Greek and Phoenician letter forms, concluded that the Greek alphabet was created about 800 B.C. (cf. C. Watkins 1976a; 1976b; Johnstone 1978; Isserlin 1983; Allen 1987:169; Wachter 1989; for orality and literacy see, among others, Ong 1982:17–20; R. Thomas 1992:52–73; see also Nieddu 1982; Vegetti 1983; Havelock 1982:39–88; 1986). The proponents of an earlier date of transmission have not won general acceptance. Bernal's (1987a; 1987b:34–35, 86–87, 393–399, 427–433; 1990; 1991:501–502) radical suggestion that the history of the Greek alphabet can be traced to the middle of the second millennium B.C. has met with stiff resistance (e.g., S. P. Morris 1989b; Muhly 1990:92–94). Perhaps the most serious challenge has come from Naveh (1973; 1982: ch. 6; cf. Ullman 1934), who contends that the transfer occurs as early as 1100 B.C. (cf. McCarter 1975a:113–118; Cross 1980:17; Logan 1986:41–43; Goody 1987:61). Although there are to date no verified Greek alphabetic inscriptions before the eighth century B.C., the fact remains that surviving examples of early Phoenician writing earlier than 500 B.C. are not only rare but often insecurely dated (Donner and Röllig 1962–64: nos. 1–8; Edwards and Edwards 1974; McCarter 1975b; Isserlin 1982:804; Powell 1991:20; see also Sznycer 1979). In view of the nature of the evidence, I concur with Millard's (1976:142; cf. 1986; also Finley 1965:9) judicious statement: "The arguments for a high date, as for a low, are based on the hazards of survival and recovery, liable to be overthrown by a single find. Unsatisfactory though the position may be, no more precise date can be given for the adoption of the alphabet by the Greeks than the three centuries and a half, 1100 to 750 B.C." But even if unrelated to any script—that is, a known system of writing—the Early Iron Age potters' marks nevertheless constitute in themselves a system of symbols (cf. Halepa Bikaki 1984:1).

The history of potters' marks in the Aegean may be traced back to at least as early as the Middle Neolithic period (Vermeule 1972:40–41; Dow 1973:584; Vitelli 1977; see also Tringham and Krstić 1990:702, pl. 16.1; Winn 1981; Masson 1984). They take hold in the Early Helladic period

and are abundant during the Middle and Late Bronze Age. From the beginning the marks appear to be a constant feature of the Aegean potters' craft (Dow 1973:585). Although ceramic styles develop and change, the craft of the potter remains essentially conservative and traditional (Hampe and Winter 1962; 1965; Papadopoulos 1992).

In viewing potters' marks against the backdrop of Aegean pottery production, however, there are, in terms of technology, a number of radical changes in pottery manufacture. Not least among these is the introduction of the kiln, which, on the basis of the available data, does not appear before the Early Bronze Age, although some scholars have argued that the domed ovens and circular hearths found in Neolithic settlements, used for cooking and to bake bread, may have also been used for firing pottery (e.g., Valmin 1935:26, fig. 8; cf. Gimbutas, Winn, and Shimabuku 1989: 32–74). As far as I know, the earliest verified potter's kiln, with clear evidence of its firing load, remains that uncovered by Heurtley and Radford (1927–28: 152–155; Heurtley 1939:5–7, figs. 6–7b) at Agios Mamas in Chalkidike and assigned to the Early Bronze Age. The Late Neolithic "kiln" from nearby Olynthos published by Mylonas (1929:12–18; cf. Jones 1986:776–777) is best seen as an oven. Other important technical innovations include the introduction of the wheel, controlled reduction firing, and a number of devices used for painted decoration, such as the pivoted multiple brush (Boardman 1960b; Papadopoulos, Vedder, and Schreiber 1998). Although potters' marks are found from the Neolithic into historic times, it would be wrong to imply that the need or function of such symbols was a constant throughout these periods, especially when their popularity, ranges of form, and use, coupled with the technical aspects of pottery production, so clearly varied across time and place within the Aegean. Nevertheless, the question of continuity, particularly from the Late Bronze Age into the Early Iron Age, deserves to be addressed from the view of pottery manufacture (for continuity in other aspects see Hooker 1988; S. P. Morris 1989a; 1992a; Deger-Jalkotzy 1991).

In terms of technique and technology in pottery, the transition from bronze to iron sees no major change. Early Iron Age kilns are virtually identical to those of the Bronze Age, as they are to those of Classical, Hellenistic, and Roman times (see, e.g., Cook 1961; Ziomecki 1964: esp. 25–31; Davaras 1973; 1980:118–120, nn. 6–20; Despoine 1982:80–91, nn. 1–10; Papadopoulos 1989a; 2003), and there is little difference in the preparation of clays, slips, and glazes or paints (Jones 1986). There is, moreover, a good deal of continuity in the sphere of vase shapes, as there is in the details of decorative motifs, although mechanically drawn circles and semicircles replaced the hand drawn, and there was a new interest in achieving a good glossy black (Papadopoulos, Vedder, and Schreiber 1998; Papadopoulos 2003). The ceramic products of the Early Iron Age do not degenerate to a small household production, meeting the modest needs of a small and isolated community living in the ashes of a Mycenaean citadel. Indeed, the products of a number of regional Early Iron Age workshops were as widely sought after in foreign markets as were the products of the Minoan and Mycenaean "palaces." It is perhaps in such a context of continuity in craftsmanship that the Early Iron Age potters' marks should be viewed.

Continuity from the Late Bronze Age is perhaps also seen in another symbol from the Early Iron Age: two similar marks on a Protogeometric foundation block at Iolkos (Orlandos 1960:58, fig. 69; Theocharis 1960: pl. 35a; Snodgrass 1971:373; Vermeule 1972:41, fig. 6bb; Papadopoulos 1994: pl. 120c). Snodgrass (1971:373) compared the sign, which is repeated twice on the block, with sign 24 of the Linear B script and considered it a survival of a hereditary skill.[6] Theocharis (1960; Orlandos 1960:58) compared the symbol to the letter Ψ of the Greek alphabet.

There is little doubt that the eight Early Iron Age potters' marks from Torone, together with contemporary marks assembled from other parts of the Greek world, represent an important addition to our knowledge of such symbols for the period. They eloquently show yet another element of continuity in the Greek tradition throughout the Early Iron Age. However such marks may actually have functioned in Early Iron Age society, their identification is open to a number of possibilities. Whatever their interpretation, the very fact of their existence is of some importance, for they represent some of the earliest, archaeologically traceable evi-

dence, in the period after the demise of the Mycenaean way of life, of the need for some system of symbols. They establish that the far better documented traditions of potters' marks in the Bronze Age on the one hand, and in the Archaic to Classical periods on the other, were linked by a previously underappreciated, indeed virtually unrecognized, Protogeometric and Geometric tradition.

THE COMPASS-INCISED CIRCLE ON **T113-10**

The fragment **T113-10** (**fig. 169j**; **pl. 407**) was encountered among the fire-affected sherds recovered from the pit fill of Tomb 113, although itself preserving no visible signs of having been burned (compare especially the fire-affected sherds of Tomb 101 where some joining fragments were intensely burned while others were unaffected by fire; cf. Hampe 1960:74; Kistler 1998; Kokkou-Vyridi 1999). The sherd, broken on all sides, preserves a small portion of the shoulder of a large wheelmade, thick-walled, closed vessel, probably an amphora. The entire preserved exterior is painted solid and the fabric and feel is not unlike some examples of SOS amphorai, which are later (for which see Johnston and Jones 1978; Docter 1991; Papadopoulos and Paspalas 1999:170–172). The fragment preserves one almost complete circle executed with a compass that measures 0.05 m in diameter; also preserved is the central dot created by the compass point. The circle was incised after firing, with the cut edges slightly chipped or splintered on account of the resistance offered to the cutting implement by the hardened surface of the pot. The fragment can be dated, by associated pottery, to the earlier or middle stages of Protogeometric and is of some interest as it represents, as far as I am aware, the earliest use of compasses for incising a mark on the surface of a pot. The use of cutting compasses, although rare, is attested in later Greek graffiti (Johnston 1979:5, 81, graffito type 21A vii, SO, where the omicron is compass incised), while the use of a similar cutting implement in sculpture is well established by the early Archaic period (e.g., Dontas 1970: pls. 8, 10, 12 [Temple of Artemis, Korkyra]; Brouskari 1974: pl. 18 [Athenian Akropolis]; cf. Beyer 1976: pl. 57, pl. 53, no. 1).

It has to be stressed that the single-arm "compass"—perhaps little more than a string with points made of a hard material (probably metal) at either end, one accounting for the pivot point, the other for the inscribing point—is not the same as the pivoted multiple brush used for drawing the sets of concentric circles and semicircles on the wheelmade and painted pottery (for which see Papadopoulos, Vedder, and Schreiber 1998). The appearance of this incised circle, together with the mechanically drawn concentric circles and semicircles on the local wheelmade pottery, is symptomatic of the local potters' acceptance of the Protogeometric style and their willingness to experiment during the earlier stages of the period of use of the cemetery. Echoes of the same experimentation are found elsewhere in Macedonia in the remarkable painted pithos from Vergina published by Petsas (1964; Snodgrass 1971:74, fig. 33a–b), on which not only is the pivoted multiple brush used to paint sets of concentric circles, but the multiple brush is employed freehand for sets of tremulous lines.

Concerning compasses, as well as the multiple brush, Eiteljorg's (1980) experiments have raised a healthy degree of doubt as to the precise nature of the application of decoration on vases of the Protogeometric style. Many of his observations and conclusions were first discussed by Wells (1983a:120), while a simple instrument, fashioned from material readily at hand in the Early Iron Age, that replicated the concentric circles and semicircles found on Protogeometric pottery was eventually made by Vedder (Papadopoulos, Vedder, and Schreiber 1998). This instrument is different from a true compass, and is best described as a pivoted multiple brush.

NOTES

1. Cf. the well-known early Greek alphabetic inscriptions incised after firing, such as Snodgrass 1971:351, fig. 111; Coldstream 1977:295–302; Jeffery 1989: pls. 1, 9:18, 22:1, 47:1 and 3, 57:43b, 68:32a, 69:43–44. Also the graffiti from Xeropolis (Popham, Sackett, and Themelis, 1979–80:89–93, pl. 69a–l [incised after firing], and pl. 69m [incised prior to firing]; Papadopoulos 1994:448, pl. 114c, no. B2). Compare further the graffito at the base of the handle on a cup in the Mitsotakis

Collection (Tsipopoulou 1978:166, fig. 11, pl. 44, no. 1978) and that immediately below the handle on a Geometric cup from the Eleusis Cemetery (Skias 1898:58, fig. 4; cf. 85, fig. 18 [which is earlier]) with a potter's mark associated with a mastos, not unlike those on **T75-2**. Note also the discussion of the "trademark," incised after firing, on the north Aegean amphora from Lefkandi published by R. Catling (1996).

2. For the marking of the handle bases on Bronze Age transport and cooking vessels, especially the handles of medium-coarse Minoanizing Lustrous Decorated ware and less often Aiginetan cooking pots, which are executed in much the same way as the handmade Early Iron Age vessels discussed here, see Zerner 1986; Nordquist 1987:63 (cf. Frödin and Persson 1938:230, fig. 168, no. 3 [Early Helladic]; 283–284, fig. 195 [Middle Helladic ii]; Hägg and Hägg 1978:31, fig. 18; Dietz 1980:67, fig. 79, no. 63; 137, fig. 131). For the marking of vases, including handle bases, before and after firing in the Late Bronze Age see below. For similarly marked Etruscan coarseware amphorai of the Archaic period see esp. Albore Livadie 1978:88, fig. 6; 84, fig. 2; 85, fig. 4; 90–91, figs. 8–9; 93–94, figs. 11–12; 97, fig. 14; 103–104, figs. 18–19; 113, fig. 25.
3. The bibliography on Greek Bronze Age potters' marks is substantial; for full references to the literature up to the early 1980s see Halepa Bikaki 1984:xii–xiv (cf. Caskey 1970); see now Hirschfeld 1999. For the Early Bronze Age see esp. Blegen 1928:107, fig. 92; Tzavella-Evjen 1980; MacGillivray 1981; Pullen 1985, which includes the most up-to-date discussion of Early Helladic potters' marks. See also Branigan 1969. For the implications of these marks for Early Helladic trade and economy and their role in the development of linear writing see Renfrew 1972:411–414. For the Middle Bronze Age see esp. Crouwel 1973; Coleman 1986:12, pl. 19a, no. A17; Nordquist 1987:63, with references; Zerner 1988; Overbeck 1989:32–33. For the Late Bronze Age especially useful are Kober 1948; Raison 1968; Sacconi 1974; Döhl 1978; 1979; Olivier 1988; Tsipopoulou 1990 (mostly, but not exclusively, Late Minoan I). Hirschfeld 1990 is useful for postfiring marks added to Late Helladic and Minoan vases found on Cyprus. For Aigina (Middle and Late Helladic) see Walter and Felten 1981: pls. 124–125; also Bernabò-Brea 1952. The table of potters' marks compiled by Edgar in Atkinson et al. (1904:178) is still useful and offers many close parallels for most of the Toronean marks. See also Kontoleon 1965; Webster 1966; Åkerström 1974; Popham, Pope, and Raison 1976.
4. The Cypriot corpus of Bronze Age potters' marks is extensive; see esp. Daniel 1941:273–275; Stewart and Stewart 1950:390–394; Stubbings 1951: 45; Åström 1966:149–192; 1967; 1969; Masson in Karageorghis 1974a:145–147 (Kition); Frankel 1975; Vermeule and Wolsky 1976; 1990:351–354; Karageorghis and Masson 1968; Palaima, Betancourt, and Meyer 1984; for the trade link between Cyprus and Greece see Catling et al. 1980. For Cypro-Minoan inscriptions on vases, mostly incised after firing, see Persson 1937 (cf. Mitford 1971). See also Hirschfeld 1999.
5. Other suggested functions that have been aired may be more summarily treated. For example, Vitelli (1977:26) noted, but quickly dismissed, the possibility that pots were marked to avoid spreading contamination from diseased owners. Another possibility suggested for the more tactile marks of the Neolithic period is that they were designed as aids for blind users of vessels. Although discussing blindness at some length, Vitelli (1977:23) noted that the question of what kind of aid the marked vessels provided would still remain. In his study of the markings on early prehistoric artifacts, Marschack (1972:27) suggested that they served a time-factoring purpose, specifically for keeping track of time in order to anticipate seasonal changes. In discussing this particular suggestion, Vitelli (1977:28) wrote: "The potting process itself is time-factored, probably seasonal and cyclical, but how the … marks on pots might be related to that cycle escapes me."
6. Symbol 24 (basic value *ne*) of the Mycenaean syllabary, found with variants at Knossos, Pylos, Mycenae, and Thebes, differs from the more straightforward symbol 27 (Ψ; basic value *re*) in that the upper terminal of the vertical is distinguished by a short horizontal line and that in some of the variants there are two arms on the left side, not unlike, though not identical to, the Iolkos marks. For the Mycenaean syllabary see Ventris and Chadwick 1973:41, fig. 9 (after Bennett), 23, fig. 4, for the proposed value of the syllabary. For related symbols in Linear A see Ventris and Chadwick 1973:33, fig. 6, l54, also l52 (after Carratelli); Platon and Brice 1975:96, l54, l52.

7

Small finds other than pottery

The general paucity of small finds, other than pottery deposited in tombs as *kterismata* or items of personal decoration worn by the deceased, is a feature of the cemetery that has been continually noted; the significance of this material as tomb furniture has been discussed in chapter 4. In addition to the objects from tombs, the few small finds other than pots from the Early Iron Age deposit type 4 (**43**, **55**, **56**, **57**, **58**, **59**) are here discussed, as are two terracotta loomweights (**82**, **83**) found in the vicinity of the Early Iron Age kiln and believed to be associated with it. There are in addition two terracotta spindlewhorls, beads, or buttons (**91**, **92**) of Early Iron Age types from the 1975 excavations at Structure 1, from a context otherwise predominantly of Classical date (see chapter 2).

As with the pottery, a good proportion of this material is poorly preserved. Apart from objects recovered in fragmentary or incomplete state, a number (principally of bronze) were found inside ash-urns along with the cremated remains of the dead; having been subjected to fire they left only minuscule fragments from which it was impossible to determine the original object. Nevertheless, although small in quantity and unimpressive, these finds as preserved afford a glimpse of certain types of personal objects in current use. The small finds are grouped below under the heading of the material from which they were made. With the exception of the two loomweights associated with the kiln, all these objects belong to the period of use of the cemetery; a few may be dated more precisely on the basis of associated material, primarily painted pottery.

Objects of terracotta (**pls. 450–452**)

Spindlewhorls, beads, or buttons

Eight terracottas may be classed as spindlewhorls, beads, or buttons, all of biconical or related form (the terracotta **T69-3** is discussed later):

Final Mycenaean/Submycenaean	**T7-5**
Early (Submycenaean–Developed Protogeometric)	**T10-5**, **T51-5**
Not precisely dated	**T46-3**, **55**, **56**, **91**, **92**

These small pierced terracottas are usually variously classified as spindlewhorls, beads, or buttons (cf. Heurtley 1939:165, fig. 35p; 203, fig. 67l–ee; 213, fig. 83l–o; 231, fig. 104a–l; 240, fig. 112h; Popham, Sackett, and Themelis 1979–80:83; McDonald, Coulson, and Rosser 1983:287; Wells 1983a:80; Barber 1991:39–78), designations that cover the range of likely possibilities. Of these eight, four were encountered in tombs; **T46-3** and **T51-5** came from cremation tombs (both were placed in the tomb pit beside the ash-urn), **T7-5** and **T10-5** from inhumation tombs. The respective positions of the latter in situ are worth noting: **T7-5** was found by the outstretched left hand of the skeleton of Tomb 7 (**fig. 24d**) making it difficult to visualize the object as a bead or button actually worn by the deceased at the time of death, although it may originally have served such a function in life. **T10-5**, on the other hand, encountered beside the cranium of the deceased in Tomb 10 (on the left side) could have been worn as a

bead around the neck or as a button for some garment otherwise not preserved (**fig. 32f**). **T10-5** may also have been simply placed into the tomb as *kterisma*. Mylonas notes: "That the bodies were laid dressed is indicated by the discovery of a great number of buttons (often called spindlewhorls) . . . attached to the clothes" (Mylonas 1948:73; see n. 67 for a list of examples). Iakovides (1977:113–119) proposes a function for them as dress weights (see also Iakovides 1969–70, vol. 2:277–281; Furumark 1972b:89, with references, and, more recently, Barber 1991; Rehak 1996).

On the basis of visual criteria, the fabric of all eight looks local, consistent with the variety of clay used for handmade pottery, although the possibility of **91** representing an import is noted. With the exception of the latter, they are all plain, with surfaces smoothed; **91** bears incised decoration (see especially Barber 1991:303–310). The basic form is biconical, comprising two more or less equal symmetrical parts. In the case of **55**, **92**, and **T46-3** the sides, in section, are straight; **91** and **T51-5** are slightly more rounded but still biconical, whereas the sides of **56** are concave. This basic type of biconical spindlewhorl, bead, or button is standard in Macedonia during the course of the Bronze and Early Iron Ages,[1] and is common elsewhere in Greece in Bronze Age and much later contexts.[2] Quite a number have also been found at Koukos (e.g., Carington Smith and Vokotopoulou 1988:368, no. 5). Variants to the standard symmetrical biconical form are **T10-5** and **T7-5**, both of which are early. The largest, **T10-5**, is heavy, rather crudely formed, and poorly finished in comparison; its shape is more rounded and pushed down, but still essentially biconical. **T7-5** is similar, but smaller and somewhat better finished; both find close counterparts at Bronze Age Axiochori/Vardarophtsa (for **T10-5** cf. Heurtley and Hutchinson 1925–26:36, fig. 21, no. 13; for **T7-5**, cf. 36, fig. 21, no. 9; Heurtley 1939:231, fig. 104h; cf. also Popham, Sackett, and Coulton 1993:78, pl. 34, no. 39, described as a "disc weight": cf. Popham, Sackett, and Themelis 1979–80:82–83; for an earlier Mycenaean example see Dietz 1984:59–60, fig. 63 [bottom row, left]).

The decoration on **91** covers the entire surface of the terracotta with many variously arranged incised motifs—small dots; vertical, horizontal, and diagonal lines; crosses; chevrons; triangles; and zigzag patterns (see Cambitoglou, Papadopoulos, and Tudor Jones 2001:303–305, 308, no. 4/10). Beads or spindlewhorls of this basic form (biconical or spheroid) with incised decoration are discussed at some length by Smithson (1961:170–173, pl. 30, no. 55; cf. 1968: pl. 30, nos. 60–63; and cf. the incised clay balls nos. 56–59), Boardman (1960a:146–148), and Sourvinou-Inwood (1975: 169–171). In Athens they are closely related to the handmade pyxis (cf. **T112-1** and Kraiker and Kübler 1939: pl. 74, inv. 764; Kübler 1943:15, 19, 25; 1954:38, n. 85; 139, n. 106; Bouzek 1974b:14–16, figs. 7–8; Smithson 1974: pl. 73b–c), but unlike the pyxides (and the associated incised "dolls"), they are distributed over a much wider area and chronological range. In Athens related examples appear in later Protogeometric contexts and drop out of fashion toward the end of Early Geometric (Smithson 1961:171). Contemporary, or near-contemporary, examples can be cited from Lefkandi (Popham, Sackett, and Themelis 1979–80:83, pls. 125, 154, 214), Asine (Wells 1983b:255, fig. 193, no. 744; cf. no. 743), Lindos (Blinkenberg 1931: pl. 10, nos. 152–153), Delos (Deonna 1938: pl. 83, no. 704.3), Andros (Cambitoglou et al. 1988:228, pls. 270c–e, 271a–b, 2721–b), Thasos (Koukouli-Chrysanthaki 1992: 410, type 4; pl. 186, no. 8 [E2]; cf. pl. 28, no. 13), even Epiros (Vokotopoulou 1986:315–317, pl. 110a), and the type is particularly common in Crete where some examples are dated as early as Subminoan to Early Protogeometric (Brock 1957:207; Boardman 1960a:146–148; 1961:127–128, fig. 47, no. 552). In discussing the Cretan material, Boardman (1960a:146–148; cf. Sourvinou-Inwood 1975:170) points to Anatolia as the likely place of origin, where incised terracotta beads or spindlewhorls of various shapes abound throughout the course of the Bronze Age.[3]

Worth drawing attention to are similar examples from Cyprus (Karageorghis 1965a:49, fig. 16; 58, fig. 17; Benson 1972: pl. 37; Chavane 1975: pls. 27, 64, no. 269; Karageorghis 1975: pl. 81, no. Q4; Vermeule and Wolsky 1990:347–351, pl. 134), and quite a number from Early Bronze Age Samos (Milojcić 1961: pl. 23, nos. 5–8; pl. 32, no. 6; pl. 41, nos. 28, 33; pl. 43, nos. 4–8; pl. 49, nos. 3–6; see also Barber 1991:303–310, with Aegean and Near Eastern examples listed on 391–393), Chios (Hood

1982:639, fig. 288, pl. 133, nos. 23–47), Lesbos (Lamb 1936:163, fig. 47, nos. 1–25), and Lemnos (Bernabò-Brea 1976: pls. 227–233; cf. also those from Dikili Tash: Daux 1962:919, fig. 10).

Other scholars prefer a northern origin: Bouzek sees a middle Balkan source as likely (1974b; 1985:200–101), while Sourvinou-Inwood (1975:170), following an alternative earlier proposed by Boardman (1961:132), reconstructs a northern route from the Troad through the intermediary of her "Macedonian loose *koine*," down into Attika, Crete, and other southern centers. Bouzek's argument may be summarily dismissed for the same reasons as a northern (central Balkan) origin for the pyxides: most of the examples he cites are later than, and stylistically different from, those in Greece (see Bouzek 1966:65; 1969a:112–115; 1969b:43, 54; 1974b; 1985:198–199; contrast Sourvinou-Inwood 1975:167–168; for the chronology see Sandars 1971:24–25; Wardle 1980:262; also the comments in Smithson 1961:171, 174–177; Desborough 1972:142–144). With regard to Sourvinou-Inwood's proposed route, it should be noted that this type of terracotta is already established in Macedonia during the course of the Late Bronze Age[4] and that the type may be traced back to Late Neolithic at Olynthos (Mylonas 1929: fig. 91a, also 91b [= Heurtley 1939:165, fig. 35p]; note also the clay "slingbullet," Heurtley 1939:81, fig. 92). This in itself does not preclude a link between Macedonia and northwest Anatolia during the course of the Bronze Age (on this see especially Hochstetter 1984:373–375; Barber 1991), nor between Macedonia and Attika during the Early Iron Age, but the evidence at hand does not neatly point to a common origin for the distribution of the type in the Aegean and there remains the uncomfortable chronological factor of the Cretan examples being earlier than the Attic, which would seem to argue against the route from the Troad through Macedonia. In any case, it is worth remembering that the idea of applying incised decoration to a simple clay bead or whorl may well have evolved independently in different regions at different times, or that it may have been inspired by some other medium—incised decoration on local pottery, for instance—and does not necessarily require direct contact with similar objects from other regions (here my focus has been on incised decoration on all types of spindlewhorls, not only those of the distinctive concave form discussed by Barber 1991:303–310: cf. Carington Smith 1975:353–389).

Loomweights (**fig. 63**)

Two examples, **82** and **83**, the former encountered in deposit type 6 in the immediate vicinity of the Early Iron Age kiln and thus believed to have been associated with it; the latter found built into Trench 43 Classical wall *d* a few meters to the east. Although both are best seen as belonging to the eighth century B.C., their exact date could not be established with certainty through context. There were no loomweights encountered in tombs. The possibility of weights of discoid form at Lefkandi serving some other function(s) was noted on the basis of two instances in tombs (Popham, Sackett, and Themelis 1979–80:82). The identification of **82** and **83** as loomweights is suggested primarily by their similarity to later material (see especially Bieber 1928:3, figs. 5–6; Davidson and Thompson 1943:65–73; Davidson 1952:146–148; also Marinatos 1967; Popham, Sackett, and Themelis 1979–80:227–229; Popham and Sackett 1984:247, nn. 174–175; Barber 1991:299–303).[5]

Both are of identical form, being large and heavy weights of pyramidal shape, rather crudely formed and with their surfaces roughly smoothed. The intact **83** preserves a single elliptical suspension hole pierced horizontally toward the top; the upper portion of **82** was not preserved. Four pyramidal weights of similar form, two of which are also of comparative size, are known from the settlement at Lefkandi assigned to Late Geometric (Popham, Sackett, and Themelis 1979–80:82–83, pls. 64p–s, 70l–n); a further eight, at least, were found at Zagora, also of the eighth century B.C. (Cambitoglou et al. 1971:61; 1981:75–76, fig. 39), a date that accords nicely with that presumed for the two Toronean examples. Pyramidal loomweights have also been found at the Late Geometric and Archaic settlement at Ypsile on Andros (Televantou 1993:204, pl. 8), mostly rather small. With regard to the Lefkandi weights, the excavators (Popham, Sackett, and Themelis 1979–80:82–83) note that the pyramidal loomweight is an innovation at Lefkandi, introduced in Late Geometric; they further note that evidence for its use elsewhere is generally later than at their site. Although

pyramidal loomweights do not appear to be common in Early Iron Age contexts before Late Geometric, a number are known, such as the earlier Iron Age example found in Tomb V at Marmariani (Heurtley and Skeat 1930–31:41 [not illustrated]); a number of pyramidal weights from Corinth are contemporary with those at Lefkandi and perhaps slightly earlier (Pfaff 1988:79, pl. 32, nos. 118–119 [with reference to a further three and possibly four similar examples from the site]). It is also worth noting that Bronze Age pyramidal loomweights are often comparable to **82** and **83**, although many of these date to the Early Bronze Age, such as those from Perivolaki/Saratsé (Heurtley 1939:203, fig. 67ll–mm) and Kastanas (Aslanis 1985: pl. 83, esp. nos. 1–2). Later (Classical) pyramidal loomweights, both at Torone and elsewhere, are usually smaller and much better finished than **82** and **83** (cf. Davidson and Thompson 1943:73–76, 80–89, figs. 32–37, nos. 1–115; Davidson 1952:161–162, 170–171, pls. 76–77, nos. 1192–1204; for further discussion see Papadopoulos 1989a:26).

Other (**pls. 451–452**)

There are only two other terracotta objects, both from tombs: the small pierced disk **T69-3** (**fig. 125c**; **pl. 451**), which belongs to the later part of the period of use of the cemetery, and **T54-2** (**fig. 110b**; **pl. 452**) of uncertain date. **T69-3** should, strictly speaking, be classed as a spindlewhorl, bead, or button, but is here distinguished only on account of its shape. It was found inside the ashurn **T69-1** along with the fragments of a bronze spiral ornament (**T69-4**, see below), two seashell fragments, and a pebble. The object is a small flat disk pierced vertically prior to firing; it has a maximum diameter of 0.041 m and a thickness of only 0.008 m; its size and lightness may suggest a bead or button, although a very similar example from Corinth, of Late Geometric to Protocorinthian date, is classified as spindlewhorl (Davidson 1952:175, pl. 177, no. 1215). Whatever its purpose, it was clearly formed of prepared clay and is not a disk or roundel (often referred to as "counters" or "gaming pieces" [*pessoi*]; see, for instance, Wells 1983b:228, nos. 516–518; Papadopoulos 2002) fashioned from a sherd by chipping the edges, like the many known throughout Macedonia of various periods (Heurtley 1939:139, fig.7k–l [Early Neolithic]; 203, fig. 67gg–jj [Early Bronze Age]; 213, fig. 83u [Middle Bronze Age]; 231, fig. 104m–p [Late Bronze Age]; 240, fig. 112i–j [Early Iron Age]), and those from the settlement and tombs of Lefkandi (Popham, Sackett, and Themelis 1979–80:83–84, pl. 65a–m, some of which are not pierced; cf. Wells 1983b:55, fig. 193, no. 742, fashioned from the foot of a vase). A few disks similar to **T69-3** are known elsewhere in Macedonia (Heurtley and Hutchinson 1925–26:36, fig. 21, nos. 5, 10; Heurtley 1939:203, fig. 67dd; 231, fig. 104a), and outside the region similar types appear commonly at many sites over a wide area (see Milojcić 1961: pl. 49, no. 7 [Early Bronze Age]; Bernabò-Brea 1964: pl. 169, no. 22; Müller-Karpe 1959:265, pl. 93, no. A14 [Este, Early Iron Age]; Davidson 1952: pl. 177, no. 1215; cf. also the "turning disk" with two pierced holes: Wells 1983b:227, fig. 171, no. 513).

T54-2 was encountered in the pit of cremation Tomb 54; it is a thin flat piece of clay, roughly almond shaped, with the surfaces carefully smoothed and the edges rounded (L: 0.074 m; TH: 0.004 m); there is a hole pierced prior to firing at each end along the long axis. The function of the object is not immediately clear and context provides no clue; a close parallel, slightly more circular and fractionally thicker, was found at Saratsé (Perivolaki), referred to as "lid," although the circumstances of the find did not establish its function (Heurtley and Radford 1928–30:145, fig. 32, no. A3.3; the object is one of five similar, but not identical, examples). The object bears a strong similarity to the handmade lids, which usually have a small central knob, associated with the distinctive pyxis already discussed (**T112-1**), with good parallels from Athens, Salamis, Tsaousitsa, and Kastanas (Casson 1923–25:10, fig. 3f; Smithson 1961: pl. 30; Styrenius 1962:115, pl. VIII, no. 3605; Hochstetter 1984: pl. 196, no. 7; Reber 1991:119–125; for earlier lids of this form in Macedonia, in clay and stone, see Heurtley 1939:164, fig. 34k [Late Neolithic]; 170, fig. 41 [Early Bronze Age]). A handmade lid of similar form with a small knob and two pierced holes at either end and dating to Early Geometric was found at Mycenae (Desborough 1973:89, no. 12, pl. 32c); a counterpart without knob, very similar to **T54-2**, serving as lid for a small vessel related to the pyxis, is known from

Donja Dolina in Bosnia (Bouzek 1969b:53, fig. 7, C4; for Donja Dolina see further Truhelka 1904; Childe 1929:409).

But however tempting it is to identify **T54-2** as a lid suitable for a vessel like **T112-1** there is the problem of context, as the object was found with the handmade jar **T54-1** for which it is an unlikely lid (the fabric of **T54-2** is different from that of **T54-1** and **T112-1**). A plausible alternative may be that **T54-2** served as a pendant, suspended by the holes at either end (cf. the so-called pendants from Rhodochori Cave [Late Neolithic] either made of marble or fashioned from seashells with two or three perforations on either side for suspension: Rodden 1964:116–117, pls. 8A–B). Another possibility is that it was worn on the (left) wrist as a bracer or guard for protection from the recoil of the bowstring, that is, an archer's wristguard (for archery in Early Iron Age Torone, see also the arrowhead **T56-3** below). In discussing the distinctive rectangular small stone "palettes" common in the Cyclades and usually flat with holes at each corner, Bosanquet (1896–97:67–70, pl. V, no. 4) suggested the possibility of their serving as archers' wristguards (for the mistaken identification of whetstones as wristguards see Xanthoudides 1924:20). These are consistent with European wristguards of stone that are evidently a hallmark of the so-called Beaker Culture (Childe 1929:191: cf. 179, 193, 198, 200, 208, 224; also 1957:224–225, fig. 112), and indeed, some of the European examples are found in tombs in situ between the bones of the left forearm, evidently verifying their identification (Bosanquet 1896–97:68). Buchholz (1962:8–20), who provides a useful survey of wristguards in his study of Late Bronze Age Minoan and Mycenaean arrowheads, notes that in addition to stone, bone and clay were commonly used for this type of object. Particularly close to **T54-2** is a clay example from Troy with two pierced holes at either end (Buchholz 1962:5, fig. 3a, with two other illustrated examples from Alishar and Tell-es-Safi of bone; for clay wristguards found at Beaker sites in Portugal and Spain see Childe 1957:225–226). During the Middle Ages ivory was often used for the purpose (Bosanquet 1896–97:68), whereas modern archers' wristguards, perhaps like some of their ancient counterparts, are invariably of stiff leather or else of synthetic material.

OBJECTS OF METAL

Excluding lead clamps, the total number of base-metal objects encountered in tombs stands at twenty-two; this figure is based on a count of all possible objects, including the minuscule scraps of fire-affected bronze found inside ash-urns. A further three objects (**43**, **57**, **58**), two of which were only partially preserved, were encountered in the Early Iron Age deposit type 4. Objects of gold and other precious metals remain unattested in Early Iron Age Torone, although they are known from the nearby settlement and cemetery at Koukos (Carington Smith and Vokotopoulou 1988:370, no. 12). The small quantity of metal finds at Torone stands in contrast to the situation elsewhere in Macedonia, where bronze *kterismata* are a feature of most cemeteries, notably Vergina. Among the tombs excavated by Andronikos, 632+ bronze ornaments and ninety-two iron weapons were found (Andronikos 1969:224–273; 1970:168–171; Radt 1974:123–140 [the figure of 632 does not include the 890 small bronze "studs" and 440 beads]; see also, generally, Vickers 1977; cf. Bouzek 1974a). At Lefkandi more than 250 base-metal objects were found in the three cemeteries in addition to the notable quantity of gold jewelry (Popham, Sackett, and Themelis 1979–80:231, 217–222; Popham, Touloupa, and Sackett 1982a:236–242). In this respect the Early Iron Age cemetery at Torone finds similarities with cemeteries in central and southern Greece, notably the Athenian Kerameikos (see Müller-Karpe 1962; Styrenius 1967:38–48, 80–84, 99–110; for the paucity of metal finds at Asine see Wells 1976:21–23; 1983a:79–80, 88, 101, 116).

The material is presented below according to metal; the identifiable bronze objects are exclusively items of personal decoration—anklets, finger rings, hair rings/spirals, or dress fasteners (fibulae). In contrast, iron and lead served more utilitarian purposes: lead for the mending of broken pots, iron for small blades and weapons. The same is true for other parts of Macedonia; as early as 1923 Casson (1923–25:21) stated: "For implements of use iron was the predominant metal.

Bronze was in use in large quantities, but mainly for ornaments."

BRONZE

Fibulae (**pls. 453–455**)

Of the three certain fibulae—**T16-1**, **T115-2** (**fig. 171b**), **T115-3** (**fig. 171c**)—not one is completely preserved. The two arched fibulae from Tomb 115 may, from associated pottery, be dated to earlier Protogeometric; the fragmentary **T16-1**, although not precisely dated, is more likely to be early on the evidence of tomb type (see chapter 4). There are, in addition, two small pin-shaft fragments (**T104-8** [**pl. 456**], **58**) that are perhaps from fibulae rather than dress pins (for a useful survey and introduction to fibulae see Alexander 1973b; Desborough 1972:300–303; Alexander and Hopkin 1982:415–416; and various volumes of the *Prähistorische Bronzefunde*).

The two arched fibulae differ slightly from one another; the better preserved **T115-2** is characterized by a stem, bow, and forearm articulated by double fillet moldings. The bow itself is slightly swollen and circular in section, whereas the stem and forearm are thinner and more oval. The catch plate is short but wide, the spring (two turns) with catch to left; the pin itself is not preserved. The basic type is Blinkenberg type II (varieties with symmetrical and with asymmetrical arch; see Blinkenberg 1926:12, 17, 19), as well as with certain examples of island varieties, type IV (Blinkenberg 1926:87ff; Sapouna-Sakellarakis 1978: pl. 20, no. 622; pl. 19, no. 614 [Kardiani]; pl. 22 [Skyros], notably nos. 651, 653, 659A; also no. 649 [Hephaistia]). The general type is common over a wide area during the Early Iron Age.[6] **T115-3** is also consistent with Blinkenberg type II, but is more clearly of the variety with asymmetrical arch (Blinkenberg 1926:15–23). The thin circular stem is only very slightly articulated from the bow, which is circular and even in section. The forearm is noticeably thicker, circular to plano-convex in section, but corroded. The catch plate is small; spring and pin are not preserved. This variety is also common in the Early Iron Age, but the thickening of the forearm is a little unusual.[7]

The fragmentary **T16-1** is beyond restoration (**pl. 455**); preserved are seventeen fragments, including the central portions of two spirals, many smaller fragments of the outer parts of the spirals (which are made of continuous thin wire, round in section), as well as what appears to be a fragment of the central connection, or bridge, of the two spirals; pin and catch plate are not preserved. The form is that of Blinkenberg (1926:253–262) type XIV, often referred to as spectacle fibula. As Alexander (1965) points out, this type of fibula, ornamented with spirals of wire, is found from the Baltic to the Mediterranean and from Switzerland to Poland in contexts of the first half of the first millennium B.C. By 1965 Alexander was able to bring together more than six hundred examples from 330 sites south of the Danube, the majority from the Balkans (Alexander 1965:7; cf. Benton 1950; 1952:119). Since then a good many more have come to light, some of which are published in the various volumes of *Prähistorische Bronzefunde*, *Abteilung XIV*. In Macedonia, both arched and spectacle fibulae are well attested, as is the earlier "violin bow" type (Blinkenberg 1926: type I; cf. Heurtley 1939:231, fig. 104aa), although the spectacle type tends to predominate (cf. Heurtley 1939:240, fig. 1120; D. Robinson 1941:95ff, pls. 19–20; Andronikos 1969:227–230). At Vergina there were 105 spectacle fibulae among the tombs excavated by Andronikos (104 bronze, one of iron) as opposed to nineteen bronze arched fibulae, plus two of iron; at Tsaousitsa spectacle fibulae outnumbered the arched by seven to two (Casson 1923–25:24–25; see also Andronikos et al. 1988: 171, no. 90; 175, no. 97 [Vergina and Dion]; 268, no. 215 [Tragilos, sixth century B.C.]).

Anklets (**pls. 458–459**)

Two well-preserved examples, **T7-7** and **T7-8**, from the same inhumation tomb found in situ, one on each leg of the deceased (**fig. 24d**; **pls. 79–80**, **84**). Both are of similar form, comprising a fairly thin bronze strip, plano-convex in section, and tapering slightly to flattened, overlapping terminals. The two may be dated as Final Mycenaean/Submycenaean. Normally referred to as bracelet when the diameter is less than 0.080 m and as armlet or anklet when the diameter is 0.080 m and above (Catling 1964:230–232), **T7-7** and **T7-8** have diameters of 0.080 m and 0.077 m, respectively. A brief but useful survey of this type of object in the Early Iron Age is provided by Catling who, al-

though citing parallels for the Lefkandi material from Thessaly, Macedonia, Skyros, the Peloponnese, and Athens/Attika, notes that the type is never particularly popular (Popham, Sackett, and Themelis 1979–80:246–247; of the nine examples at Lefkandi eight are Subprotogeometric I–III and only one is Middle Protogeometric; consequently, all the Lefkandi examples are later than those from Torone; cf. Koukouli-Chrysanthaki 1992:414, fig. 104, pl. 357, nos. 2, 4; L. Morricone 1978:65, fig. 40 [left]), an observation that appears to hold true for the Late Bronze Age as well (Catling 1964:230–232). It is worth noting that at Vergina this simple variety with overlapping terminals is outnumbered by the comparatively popular ψέλια or *Armspiralen* (Petsas 1961–62a: pl. 145γ; Andronikos 1969:241–243, figs. 82–83; Radt 1974: 129, pl. 39, nos. 20–26), although the former, judging by the examples now in Oxford, appears to be quite common at Poteidaia (Vickers 1977:29, fig. IV, nos. 1–11); it is also common at Tsaousitsa (Casson 1923–25:25; cf. the "bracelets" from Koukos: Carington Smith and Vokotopoulou 1988: 368, no. 6 [six examples]). During the course of the Geometric period, as both Catling and Snodgrass note, this type of object is no longer a rarity (Snodgrass 1971:270; Popham, Sackett, and Themelis 1979–80:247; cf. Higgins 1980:89), with numerous examples, both plain (like **T7-7** and **T7-8**) and decorated, known from various sites, notably Pherai (Kilian 1975a: pls. 66–68, esp. pl. 66, nos. 4–8, which are close to **T7-7** and **T7-8**) and Olympia (Philipp 1981: pls. 12–17, 45–58, esp. pl. 14, nos. 824–825, 861; pl. 45, nos. 723–726; pl. 52, no. 825).

Finger rings (**figs. 59**, **60**, **70a**; **pl. 460**)

Three finger rings were found: **T11-1** from Inhumation Tomb 11, and clearly from early in the period of use of the cemetery, was found in fragmentary state near the cranium of the deceased; **43** and **57** were recovered from deposits type 2 and 4, respectively, and therefore are not precisely datable.

The three rings are of two types: **43** (D: 0.024 m) and **57** (D: 0.023 m) correspond to Lefkandi type 2 (Popham, Sackett, and Themelis 1979–80:247–248), and consist of a closed ring that is fairly solid and plano-convex in section. Twelve examples of this type were recorded from tombs at Lefkandi, five Submycenaean, six Early Protogeometric, and one not dated. The second type, of which **T11-1** is the only example, corresponds to Lefkandi type 3, and is an open ring with overlapping terminals, usually made of a flat hammered strip coiled over (the terminals of **T11-1** are not actually preserved); of nine examples at Lefkandi six are Submycenaean, two Early Protogeometric, and one is assigned to Subprotogeometric I (Popham, Sackett, and Themelis 1979–80:247–248). Both types are attested in the Athenian Kerameikos (Kraiker and Kübler 1939:85, fig. 3) and in most other parts of Greece (see especially Higgins 1980:88–93; also McDonald, Coulson, and Rosser 1983:300, figs. 5.9, 5.10; 302, fig. 5.47), including Macedonia (principally Andronikos 1969: 238–241, figs. 80–81). These two types, along with finger rings with shield-shaped bezels (Popham, Sackett, and Themelis 1979–80:247, Type 1; Kraiker and Kübler 1939:86, fig. 5; Higgins 1980: 89; 1969, pl. 34a), and those with spiral terminals (a list of these has been compiled by Kilian-Dirlmeier 1980:249–269, esp. 260 for Submycenaean and Protogeometric; this is also the predominant type in Thasos: see Koukouli-Chrysanthaki 1992:414–415, pl. 357, nos. 3, 5), constitute the four principal Early Iron Age types (Higgins 1980:88–93, 210–212; also 1969; Desborough 1972:304; cf. Vokotopoulou 1986:312–315, fig. 31, pls. 112–113; Arachoviti 1994:134, fig. 11).

Hair rings/spiral ornaments and spiral beads (**pls. 461–464**)

The single intact example, **T7-6**, was recovered near the preserved lower jaw of Inhumation Tomb 7 in a position where the missing cranium would have rested (**fig. 24d**; **pl. 81**), and its identification as a hair ring seems fairly certain. The object is small and made of thin bronze wire, round in section, and coiled to form a spiral with the terminal slightly flattened at one end and very slightly thickened at the other. It comes from the same tomb as the two anklets and may therefore be assigned to Final Mycenaean/Submycenaean. This type of personal ornament, as Desborough (1972:304–305; cf. Higgins in Popham, Sackett, and Themelis 1979–80:220) notes, is mostly found in central mainland Greece with evident northern

connections, and examples are fairly common both in bronze and gold.[8] The type is quite common in Macedonia in both metals, especially at Vergina (Andronikos 1969:240, fig. 80; 241, fig. 82 [bronze]; 259, fig. 99 [gold]; cf. Casson 1923–25:25 ["finger rings" of wire of several convolutions]).

In addition to **T7-6**, there are three poorly preserved fragmentary spirals of fine bronze wire, **T10-8**, **T69-4**, and **T102-6** (**pls. 462–464**). **T10-8** was found on the left side and very close to the cranium of the inhumation; its identification as hair ring—or possibly earring—seems clear enough. The fragments of **T102-6** were recovered from the blackened fill of cremation Tomb 102 along with fragments of cremated human bone, fire-affected sherds, and the fire-affected bronze fragment **T102-7**, although **T102-6** was evidently unaffected by fire; the poorly preserved **T69-4** was found inside the ash-urn of its tomb and was at least partially fire affected. Judging by the preserved fragments of **T102-6** and **T69-4**, both are more likely to be from hair rings as **T7-6** rather than spectacle fibulae as **T16-1**, although the possibility of some other type of spiral ornament, such as pendant/earring (e.g., Radt 1974: pl. 40, nos. 15–20; Higgins 1980: pl. 16j; cf. Bielefeld 1968:13, fig. 2e, t, pl. 4a), buckle (cf. Brouskari 1985:30, inv. 46), or even finger ring (Kilian-Dirlmeier 1980: 249–269; cf. Andronikos 1969:238, figs. 78–79) should not be overlooked. **T10-8** and **T102-6** may be dated to the earlier part of the period of use of the cemetery, whereas **T69-4** is later.

The small spiral ornament **T108-8** has a very different appearance, especially with its cylindrical form and narrow diameter. It is not absolutely clear whether the piece is virtually intact or is a fragment of a once larger object, although the general appearance of the terminals or preserved ends suggests it is more or less intact. It was recovered from the fill of the tomb pit of Tomb 108 in the process of water-sieving and should be roughly contemporary with **T10-8** and **T102-6**. It is considerably smaller than the other objects assembled under this heading (max. L: 0.011 m) and is most probably a small spiral bead. Although it resembles many of the so-called σύριγγες so common at Vergina (Andronikos 1969:225–227, with references; Radt 1974:124, pl. 38, nos. 1–3; Andronikos et al. 1990:176, no. 98; cf. Vokotopoulou 1986: pl. 111α–γ; Koukouli-Chrysanthaki 1992:412, fig. 99, pl. 356, nos. 4–6), with clear northern connections discussed by Andronikos (1969:225–227, with references; Radt 1974:124; see further Müller-Karpe 1959: pls. 62–64; Willvonsender 1937:147–149, pl. 38, no. 5; Kilian 1975a: pl. 70, nos. 43–51), it is considerably smaller (a few examples of *Spiralrollen* from Pherai [see Kilian 1975a: pl. 70, nos. 43–44], approach **T108-8** in size, but are still larger). Its size and general appearance more closely resemble the small bone and glass compound beads from Tomb 10 (**T10-6**, **T10-7**). A very similar bronze spiral bead is known from Early Iron Age Crete, with cited parallels from Aigina, Chios (Phanai and Emporio), Olympia, and Korone (Boardman 1961: 49–52, n. 3, fig. 24, no. 229; Boardman further notes that the type is more common in Italy and Europe, where it enjoys a longer history). The piece is of further interest on account of the high level of silver sulfide corrosion on the surface, which would suggest a bronze with high silver content, or else that the bead was gilded.

Uncertain or unidentified objects (**pls. 457**, **465–467**)

Nine pieces fall under this category: **T18-2**, **T58-3**, **T101-16**, **T102-7**, **T104-6**, **T104-7**, **T104-8**, **T124-4**, and **58**. Of these, seven had been subjected to fire as part of the cremation process and reduced to minuscule fragments or misshaped lumps of bronze from which it was impossible to identify the original object, although **T104-6** may possibly represent the catch plate of a fibula. These objects would presumably have represented items of personal decoration or dress fasteners worn by the deceased at the time of cremation (for similar fragments of fire-affected bronze found inside an ash-urn at Troy see Blegen, Caskey, and Rawson 1953: fig. 341, inv. 34.484). Four of the seven were found inside ash-urns (**T18-2**, **T58-3**, **T101-16**, **T124-4**) and three were encountered in the fill of the tomb pits in association with fragments of cremated bone and burned sherds (**T102-7**, **T104-6**, **T104-7**).

Two of these fragments of bronze, **T104-8** and **58**, were unaffected by fire. **58** was encountered in deposit type 4, **T104-8** in the upper part of the fill of the cremation cist, Tomb 104. Both are small fragments of pin shafts (the fragment **T104-8** pre-

serves the actual tip of the point of the pin), perhaps of fibulae rather than dress pins (both are slightly bent, as preserved), although this remains uncertain. There are to date no certain examples of dress pins attested in Early Iron Age Torone.

IRON

In comparison to bronze, objects of iron are rare at Torone. From Terrace V only four pieces are known, mostly very poorly preserved, and all from tombs. The four pieces represent two types of object—small blades and a possible arrowhead—and are therefore tools or weapons rather than items of personal decoration. All four were encountered inside their respective ash-urns; the earliest, **T52-4**, may be assigned to Protogeometric on account of the ash-urn of the tomb **T52-1**, whereas **T56-3** and **T56-4**, found in the same ash-urn, belong to the very latest stages of the period of use of the cemetery; the fourth, **T38-3**, is not precisely datable. The question of the introduction of iron, iron-working, and the transition from Bronze to Iron Age has been fully treated in a number of studies, particularly by Muhly, Snodgrass, and Waldbaum (notably Muhly 1980; Snodgrass 1980b; 1982a; Waldbaum 1980; 1982; Wertime and Muhly 1980; Muhly, Maddin, and Karageorghis 1982; Varoufakis 1982; see further Sandars 1971; Waldbaum 1978; and various papers in Ward and Joukowsky 1992; for iron in Mycenaean contexts see Avila 1983b:36).

Small blades (knives) (**pls. 468–470**)

Three examples: **T38-3**, **T52-4**, and **T56-4**, of which only **T52-4** is sufficiently preserved to determine details of its original form. The knife was found in one piece but badly corroded. The haft termination is unclear, thus its overall length remains undetermined; as preserved, it measures 0.104 m long (for a similar bone-handled iron knife found in the 1976 excavations at the Gate Area in a context of the fourth century B.C. see Cambitoglou 1977: pl. 73γ, inv. 76.738). An unriveted bone handle is offset from the blade by a clear, but much corroded, flange, which continues round the top of the haft. The blade core is very thin in section with the cutting edge, on the concave side, perhaps originally much whetted (note the whetstone **T52-5** with which it was found). The blade was wrapped in what appears to have been a soft leather sheath or scabbard, preserved hard due to oxidation, but in the form of a positive matrix rather than a negative impression, and with the folds of the material clearly visible on one side. Very slight traces of a similar leather sheath are preserved on the small blade fragment **T56-4**, which also preserves remnants of a bone handle at one end. The fragment is only 0.042 m long, but enough is preserved of the blade and cutting edge to indicate a small knife very similar to **T52-4**. The third example, **T38-3**, is attested only by the fragments of the bone handle, which is similar to **T52-4** in shape and size; it has clear traces of iron corrosion staining its surface and core. Although all three were encountered in ash-urns, **T52-4** was clearly unaffected by fire, and even the fragmentary **T38-3** and **T56-4** display no conspicuous signs of having been burned.[9]

Similar small iron knives are known at Lefkandi (Middle Protogeometric–Subprotogeometric I) and are, as Catling so nicely puts it, "ideal general purpose implements that would be equally useful for cutting food, cleaning game, whittling, pruning and—conceivably—shaving" (in Popham, Sackett, and Themelis 1979–80:257, and cf. especially P16.7 and P31.7, pl. 246h). They are also known in Athens (primarily of Early Geometric date, but with some Protogeometric examples: Müller-Karpe 1962:66, with useful additional comments in Popham, Sackett, and Themelis 1979–80:258; see further Thompson 1947:196, fig. 1, pl. XLI, no. 2; Young 1949a:297, pl. 72, no. 31; Blegen 1952:281, fig. 3, pl. 75c, no. 4). Similar knives at Vergina (Andronikos 1969:266–269, figs. 104–105; Radt 1974: 139, pl. 42, nos. 5–12), Tsaousitsa (Casson 1923–25:21–22, pl. IIb–d), and Palaio Gynaikokastro (Savvopoulou 1988:229, fig. 13 [top row]) show the type is well represented elsewhere in Macedonia; it is interesting to note that **T52-4**, at least, is as early or slightly earlier than the majority of published examples from central and southern Greece. Numerous iron knives have more recently been published from Thasos (Koukouli-Chrysanthaki 1992:404–408, figs. 90 [bronze], 91 [iron], pls. 350–353, esp. pl. 353, nos. 13–16) and Epiros (Vokotopoulou 1986: 297–299, pls. 90–92). Perhaps the closest parallel, almost identical to **T52-4** and complete with remains of leather sheath and unriveted bone handle,

is an iron blade from Theotokou Tomb B (Wace and Thompson 1912:212–213, fig. 147i; more fully described in Wace and Droop 1906–07:326; 323, fig. 12i; cf. McDonald, Coulson, and Rosser 1983: 310, no. 92; 303, fig. 5–55); elsewhere in Thessaly the type is well represented by slightly later examples from Pherai (Kilian 1975a: pl. 93, nos. 3–10).

Similar small iron knives are also common over a wider area of Europe and a number of scholars have emphasized the relationship of these to those of Greece (see Andronikos 1969:266–269, with references; see further Foltiny 1961:289–290, pl. 95, fig. 1, nos. 4–5 for knives; cf. Randall-MacIver 1927: pl. 6, no. 5), although in dealing with the material from Lefkandi, Catling (in Popham, Sackett, and Themelis 1979–80:258) could find nothing to suggest foreign influence on knife design. A related problem is that concerning the Bronze Age antecedents in the form of the one-edged bronze knives (normally with riveted handles) and their local Aegean versus European-influenced development, which has an important bearing on the development of Early Iron Age types (Sandars 1955, stresses local Aegean development, whereas Milojcić 1948–49 and, more recently, Harding 1975:195–200 emphasize the similarity of Mycenaean and Italian types; see further Bianco Peroni 1976: pl. 39, nos. 342–343; pl. 40, esp. nos. 346, 354 for bronze examples of the eighth and seventh centuries B.C.).

Arrowhead(?) (**fig. 112c**)

One possible example, **T56-3**, described more fully in chapter 3, found inside the ash-urn of the tomb along with the small blade fragment **T56-4**, and evidently unaffected by burning. Although clearly not complete and much corroded, enough features are preserved to warrant its plausible identification as an arrowhead. It can be dated to the latest stages of the period of use of the cemetery on account of the ash-urn of the tomb, **T56-1**.

As has been repeatedly noted in the modern literature, the abundance of arrowheads and the evidence they provide for the practice of archery in the Late Bronze Age is matched by their rarity during the Early Iron Age (see Snodgrass 1964: 144, 148; 1971:274–275; Popham, Sackett, and Themelis 1979–80:256–257 [Buchholz 1962 is now supplemented by Avila 1983a]). Nevertheless, the discovery of fifteen arrowheads at Vergina by Andronikos (1969:272–273), and of more examples by Petsas (196162a:227, fig. 10, grave LXV BΔ; cf. Radt 1974:140), the recent finds at Lefkandi—the "quiverful" of iron arrows from the Late Protogeometric T26, the possible remains of a bow, and the figurative representation of archers on the Middle Protogeometric hydria S51.2 (Popham, Sackett, and Themelis 1979–80:256–257)—coupled with the publication or mention of previously overlooked examples,[10] has added significantly to the evidence of the practice of archery during the Early Iron Age, and the discovery of a solitary arrowhead at Torone need come as no surprise (see further the possible terracotta wristguard **T54-2** discussed above).

LEAD AND THE MENDING OF POTTERY

Although there are no personal ornaments, tools (apart from clamps), or weapons made of lead (for lead ornaments, see, among others, Andronikos 1969:260; Popham, Sackett, and Themelis 1979–80:258–259), the practice of mending broken pottery with lead rivets or clamps is well attested at Torone. Six vessels from tombs preserve lead clamps: **T20-1** (three clamps), **T43-1** (two clamps), **T67-2** (two clamps), **T79-1** (one clamp), **T86-2** (one clamp), and **T116-1** (three or four clamps). In addition to these, a number of fragmentary vessels and fire-affected sherds preserve mending holes but no trace of the actual clamp (examples include **T101-15**, **T113-7**, **T129-1**, **71**; holes drilled after firing are a feature of pottery of widely different dates and are normally regarded as repair holes, enabling cracks or breaks to be repaired by binding: see Cleal 1988:139). Chronologically these pieces span the entire period of use of the cemetery from Submycenaean (**T101-15**) through to the period immediately following the use of the cemetery (**71** is of postcemetery date), and it is clear lead was considered expendable enough to use in mending pottery.

With the exception of the large clamp on the krater **T79-1**, the clamps themselves were of a standard type of which the illustrated example from the krater **T116-1** (**fig. 172c**; **pl. 471**) may be taken as representative. The clamps, normally 0.025–0.045 m long, are composed of two cylindri-

cal struts that are passed through the drilled mending holes on the broken pot, with the upper and lower connections flattened against the surface of the vessel (the process of mending is described more fully in Iakovides 1969–70, vol. 2:64–65, fig. 5; for mending in the Classical period see especially R. M. Cook 1972:249; Noble 1988:94, figs. 253–254; Robinson 1941: pls. 89, 98–99, for bronze and lead clamps/rivets). More unusual is the lead clamp on **T79-1** (**pls. 330a–b**), partially preserved in two joining fragments and comprising a large flattened disk of lead employed not only to hold together the broken fragments of the pot but also to fill or seal a hole created at the base of the vessel by the breaking of its foot (the only other instance of a similar clamp at Torone was encountered in a Classical deposit on Promontory 2, inv. 82.623; the lead clamp in Robinson 1941:334, pl. 100, no. 1592, may have served a similar function; a much earlier clamp from prehistoric Lemnos is very similar: Bernabò-Brea 1976:292, pl. 234s).

The incidence of mending broken pots and other types of vessels (see, for example, the mending holes on the Cycladic marble phiale in Papathanasopoulos 1961–62: pl. 69, EM 8825) with lead or bronze rivets is well attested over a wide area throughout the course of the Bronze Age, with Early Bronze Age clamps known at Lemnos (Bernabò-Brea 1976:292–293, pl. 234r–t) in Messenia (Valmin 1938:373), and Middle Bronze Age clamps in the Argolid (Nordquist 1987); judging by mending holes preserved on a good number of pots, the antiquity of this practice may be traced back to the Neolithic, although the binding in the earliest examples would not be of metal.[11] In Macedonia the earliest verified incidence of lead occurs in contexts of the Late Bronze Age (Davies 1939:253–255; Heurtley 1939:102), but mending holes are commonly met on vessels assigned as early as Late Neolithic, through the course of the Bronze Age, and into the Early Iron Age.[12] In other parts of Greece pots of Protogeometric and Geometric date mended with clamps are very common.[13]

It is worth noting here the remarks of Evely (in Popham and Sackett 1984:255) that the source of the lead from the Late Minoan II Unexplored Mansion at Knossos was most probably the Laurion region in Attika, where the processing of silver and lead during the ninth century B.C. is attested by the excavations at Thorikos (Coldstream 1977:70–71, with references; Popham, Sackett, and Themelis 1979–80:259; J. Jones 1984–85), and where the earliest evidence for the mining of argentiferous lead ores dates at least as early as the Middle Bronze Age (Mussche 1974:59–66). R. E. Jones (in Popham, Sackett, and Themelis 1979–80:458) presumes a similar source for the lead found at Lefkandi. Although Laurion represents an important source of silver and lead in the Aegean, and although no isotope analysis of the Torone lead has been carried out, it would still be wiser to look to the local Chalkidic silver and lead mines (**fig. 3**) as the likely source for the Toronean lead. If the results of the recent lead isotope analyses carried out in Oxford are correct, then Chalkidic silver was exploited at least as early as the Shaft Grave period (Stos-Gale and MacDonald 1991:273–279; for recent discussion and debate on lead isotope analysis see Budd et al. 1995, with responses by various scholars in the same volume).

The occurrence of drilled holes and the mending of pottery elsewhere in Europe has received useful discussion. For example, Cleal (1988) has argued that in the context of later Neolithic pottery in Britain, drilled holes are more common in the Grooved Ware tradition than in the Beaker or Peterborough traditions, and suggests this may be due to the high symbolic value of Grooved Ware, rendering the repair of such vessels particularly worthwhile to their users. Another suggestion, fully discussed by Howard (1981), is that seasonality of potting may be an important factor in the repair of pottery. In the context of Early Iron Age Torone it is important to bear in mind that the use of mended and even broken pots in tombs, or the use of pottery worn by normal use, suggests that a good number of vessels saw service, for whatever purpose, prior to being deposited in the grave. As for any conscious preferences in terms of which particular vessel types were mended, there were no clear patterns. A wide variety of shapes, both wheelmade and handmade, were mended, although the wheelmade outnumbered the handmade by seven to three. Similarly, there does not appear to have been any clear preference in terms of the funerary function the mended vessels served: ash-urns, lids, *kterismata*, as well as vessels burned as part of the funerary ritual were all mended.

OBJECTS OF STONE

Whetstones
(figs. 66b, 108E, 160E–F; pls. 472–473)

There are four stones from tombs that may be reasonably classed as whetstones: **T6-2**, **T52-5**, **T104-4**, and **T104-5**; the latter three can be dated to Early Protogeometric on the basis of associated pottery, and **T6-2** is slightly earlier. Evely, in dealing with material from a settlement context, stresses the need for caution with this class of object, and goes on to distinguish between "true whetstones" characterized by grooves, channels, or hollows created as a result of the sharpening action, and objects of "similar appearance, but which were used as polishers," which may come in a variety of shapes but without the whetting channels (Evely in Popham and Sackett 1984:226; for stones with grooves [evidently caused by sharpening action] see Heurtley 1939:230, fig. 103g, h, i; 138, fig. 6p). Although none of the Toronean examples preserve such grooves or channels, the identification of **T52-5** as an object used for sharpening a metal blade is assured, it having been found together with the small iron knife **T52-4** inside the ash-urn (the stone preserves considerable traces of iron corrosion on one side where it was in contact with the iron knife); a similar function may be reasonably assumed for **T6-2** and for the two examples from Tomb 104, although the possibility of **T104-4** having served as a pendant cannot be categorically dismissed (Holmberg 1944:127 lists the range of possibilities for these distinctive types of stone as whetstones, idols, amulets, and pendants).

All four are of different stone: **T104-5** is a fine-grained light gray schist (phyllite) of local variety; **T104-4** is local schist or mudstone, **T52-5** resembles the local Hill 1 limestone, and **T6-2** is clearly sedimentary, probably sandstone (for the use of fine-grained stone for whetstones [mostly limestone, slate/shale, occasionally sandstone] see Evely in Popham and Sackett 1984:226; for the specific use of schist see Holmberg 1944:126–127; Blegen et al. 1973:161; Popham, Sackett, and Themelis 1979–80:85, nos. 11–12). Each of these types of stone occurs naturally as beach pebbles along the various coves on the west side of the site (I am grateful to Richard Jones for his assistance in identifying the type of stone and for discussion of the local geology, for which see further Whitbread 1995). The four whetstones may be divided into two broad types: the first, which includes **T52-5** and the partially preserved **T6-2** and **T104-5**, is of plain form, oval to somewhat more rectangular in shape, fairly robust but still rather thin, with edges rounded and surfaces quite smooth. Being of such simple form, similar stones are, naturally enough, often overlooked in excavations unless context can provide some clue to their function. Nevertheless, a number of examples similar to **T6-2**, **T52-5**, and **T104-5** may be cited from various sites in the Aegean of different periods (cf., among others, Heurtley 1939:200, fig. 65h; Holmberg 1944:126, fig. 118, no. 8; Davidson 1952:195, pl. 89, no. 1480; Iakovides 1969–70, vols. 1, 3:429, pl. 128, no. L237; Popham, Sackett, and Themelis 1979–80:85, pl. 67j, no. 12, with drilled hole at top right hand corner; Evely in Popham and Sackett 1984: pl. 227, nos. 17, 20).

The second type, of which **T104-4** is the only example, is more distinctive; it is a well-worked long rectangular stone 0.086 m in length, almost square in section, with a small drilled hole (D: 0.004 m) at one end, and with all surfaces well smoothed. Evely (in Popham and Sackett 1984:226) notes that the hole was "either to take a carrying thong or to hang on a convenient nail or peg" (of the two possibilities the former seems the more likely as the hole is rather too small to fit any reasonable Early Iron Age nail or peg). This type, elsewhere variously identified,[14] is particularly common in Macedonia (Heurtley 1939:200, fig. 65j–l, p, the latter with perforation at either end [Early Bronze Age]; 213, fig. 83g [Middle Bronze Age]; 230, fig. 103d, f [Late Bronze Age = Andronikos et al. 1988:148, no. 54]; 240, fig. 112d [Early Iron Age]; Andronikos 1969: pl. 106b; Wardle 1980: pl. 22a for examples with hole [one without]), as it is in Epiros (Vokotopoulou 1969b: pl. 255γ; 1986: 319, pl. 115, no. κστ; T. Papadopoulos 1976:293–294, pl. 10γ, no. 3317) and Thasos (Koukouli-Chrysanthaki 1992:409, 411, fig. 95; pl. 354, nos. 1–6), and is conspicuous in Bronze and Early Iron Age contexts all over the Greek world.[15]

It is worth adding here, as discussed in chapter 4, that whetstones found in tombs have traditionally been taken as indicators of male burials. Although it is clear that the occupant of Tomb 6 was

male, it is highly likely that the individual cremated in Tomb 104 was female; the sex of the occupant of Tomb 52 is not known. It is therefore unwise to assume that this type of object is gender specific.

Large stone disks (lids) (**figs. 84d**, **104b**)

Among the better preserved cremation tombs it was common to find stones (local limestone, schist, granodiorite, and occasionally conglomerate) laid flat over the ash-urn or tomb pit as a cover (see chapter 4). Many of these stones were either unworked or only very crudely hewn, but a number were more carefully shaped into the form of a large disk with the edges neatly chipped and partially smoothed. The most conspicuous instance of a fairly well-worked stone was **T28-2** (schist), which served as lid for the ash-urn of the tomb and above which was placed the fragment(s) of a pithos, **T28-3**. With a diameter of 0.240 m and a regular thickness of 0.007–0.015 m it closely resembles the common schist disks of various sizes from the Geometric settlement at Zagora, which were used primarily as lids for pithoi but also for some smaller vessels (Cambitoglou 1968: pl. 347c; Cambitoglou et al. 1971:61; 1988:231); similar schist pot lids have been noted from the Early Iron Age settlement at Assiros (Wardle 1980:261). In addition to their use as lids, such disks may have served as platforms on which pots or other objects were placed, or even as surfaces for preparing food (cf. Cambitoglou et al. 1988:231). A function for **T28-2** as lid is clear, whether specifically intended for the dead or reused from the settlement of the living. The larger granodiorite disk **T48-2** (**fig. 104b**) may be compared; it was also placed directly above the ash-urn of the tomb (the krater **T48-1**) as a lid or cover, but it is considerably heavier than the schist disk **T28-2**.

OBJECTS OF BONE, GLASS COMPOUND, AND AMBER

BONE

Worked bone handles with polished surfaces and attached to iron knives, evidently without rivets, are found on all three of the small blades discussed above (**T38-3**, **T52-4**, **T56-4**), two of which are very poorly preserved. The vestiges of the bone handle on **T52-4** were insufficient to identify the species of animal from which the bone was used, but according to Professor Bökönyi it is probably a rib bone.

In addition to these, there is only one object of bone, the small cylindrical bead **T10-7** (**fig. 69g**; **pl. 474**) measuring 0.022 m in length and worked in such a way as to create three thin horizontal relief bands (which have mostly chipped off), one at each end and another slightly off center. The bead was found by Dr. Musgrave during the cleaning of the skull of Inhumation Tomb 10 in the excavation base and it appears it was originally beneath the cranium. The bead is virtually identical in form to another (**T10-6**) from the same tomb but made of glass compound (see below), which was found in situ beneath the chin of the deceased. It is possible both were part of a necklace worn around the neck; an alternative suggestion, put forward by Carington Smith, is that the bead **T10-7** may have been part of a hair tie made of a string of organic material not preserved. According to Bökönyi, **T10-7** was made from an antler fragment, probably of red deer (see appendix B). The closest Early Iron Age parallel to the size and general appearance of **T10-7** is a small "bone cylinder" from an Early Geometric grave in Athens (Young 1949a: 297, pl. 72, no. 30) 0.025 m long and 0.008 m in diameter. It is decorated with pairs of closely spaced grooves around the outside at each end and a more widely spaced pair round the middle (for a plain cylindrical bead of contemporary date see McDonald, Coulson, and Rosser 1983:314, no. 236, pl. 5.40; there were no bone beads at Lefkandi, and the solitary bone bead in Brock 1957: 59, no. 637, tomb VIII, is described as flat and "shaped like a melon seed"). I know of no exactly comparable bone bead from an Early Iron Age context. Of interest, however, are ten very similar grooved bone beads, part of the same necklace, which was further composed of perforated dog or wolf teeth, claws, and a single paste bead, discovered by Heurtley at Agios Mamas in Chalkidike, in an Early Bronze Age context (Heurtley and Radford 1927–28: fig. 29; Heurtley 1939:202, fig. 66j; Andronikos et al. 1988:139, no. 41). Another class of object with which **T10-7** may be loosely compared is the series of bone pins with decorated beads that appear to be quite common in

Macedonia during the Late Bronze Age (cf. Heurtley 1939:230, fig. 130m–s, w [examples from Vardarophtsa, Saratsé, and Vardino]; Wardle 1980: 253, pl. 22d).

The scarcity of worked bone or ivory is a feature of the Early Iron Age repeatedly noted in the modern literature (Brock 1957:209; Boardman 1961:67, 129–131; Popham, Sackett, and Themelis 1979–80:84, 225–226), and the dearth of such objects at Torone is consistent with the situation elsewhere in the Aegean. This said, a large fragment of a massive scapula of a fin whale (*Balaenoptera physalus*) was fashioned into a working surface or small table of sorts, conceivably for leather working, and ultimately discarded in the fill of an Early Geometric (ca. 850 B.C.) well in the area of the later Athenian Agora (Papadopoulos and Ruscillo 2002). **T10-7** may be dated to the early part of the period of use of the cemetery.

GLASS COMPOUND/FAIENCE

There are only two beads of this material: **59**, recovered from the Early Iron Age deposit type 4, and **T10-6**, from the same tomb as the bone bead **T10-7** already discussed. **59** is a small disk bead in the form of a ring, square in section, and 0.0065 m in diameter; it is identical to thousands of beads from a number of tombs at Lefkandi dating to Late Protogeometric and Subprotogeometric I–II described as being of faience and blue compound (Popham, Sackett, and Themelis 1979–80:223, pls. 219a, 234a; a further 10,500 faience beads of the normal disk type were published in Popham, Touloupa, and Sackett 1982a:237, 242–245, pl. 17, nos. 56, 45–46; pl. 21, nos. 20–22; pl. 23, no. 21). Similar beads may be cited from Athens and Cyprus (Popham, Sackett, and Themelis 1979–80:223; Smithson 1968:114, pl. 33, no. 78a [1100 beads]; Gjerstad et al. 1934–37, vol. 2: pl. 20, no. 31; pl. 25, nos. 49–50), Kos (Morricone 1978:65, fig. 40; 69, fig. 50 [left]; 72, fig. 54; 84–85, figs. 77–78; 264, figs. 548–549; 281, fig. 593; 294, fig. 627), and hundreds more were found at Eleutherna on Crete (Stampolidis 1990a:383–384, fig. 11; Stampolidis argues that such beads were probably originally embroidered on dresses).

The bead **T10-6**, although encountered whole in situ, shattered into a mass of unrestorable chips on removal; the excavator described it as being of identical form and size to the bone bead **T10-7**. Study of the fragments under a microscope showed it to be a cylinder of black/blue-colored glass with silver/yellow-colored glass applied bands evidently arranged in the same manner as **T10-7**, one at each end and another in the middle. The bead is very similar to a seventh-century B.C. counterpart from Chios described by Boardman as an early type with further examples cited from Crete and Rhodes (Boardman 1967:240, fig. 161, no. 554; 238, n. 2; Brock 1957:97, pl. 174, no. 1117, from a tomb in use from Late Protogeometric into Late Orientalizing; cf. also Boardman 1961:64, 91, fig. 39, pl. 31, nos. 415 [probably Archaic] and 417 [thought to be Roman]). Five similar glass-paste beads of Geometric date found in Tomb XVII at Tiryns are compared to Mycenaean antecedents (Verdelis 1963:24, Beil. 3; for Mycenaean antecedents see further Dietz 1984:59, fig. 63 [second row, second from right]). A few "cylindrical" glass beads of Late Protogeometric or Subprotogeometric I date from Lefkandi may be compared, although they are not identical to **T10-6** (Popham, Sackett, and Themelis 1979–80: pl. 178, T tomb 22, no. 31a; Popham, Touloupa, and Sackett 1982a:222, pl. 21, no. 23), so too four cylindrical beads from Kos (L. Morricone 1978:347, fig. 755), and various types of beads, including glass, from Vitsa Zagoriou (Vokotopoulou 1986:315–317, pl. 110) and Thasos, including beads of glass and dentalium (Koukouli-Chrysanthaki 1992:412–414, fig. 102).

AMBER

A solitary amber bead, **T75-4** (**fig. 131d**; **pl. 475**), was found inside the ash-urn **T75-1.** Although difficult to date precisely, it may be assigned to the later part of the period of use of the cemetery. The identification of **T75-4** as amber was verified by the Torone conservator Patricia Johnston (for a useful summary of amber in the Greek World, including the later Classical and Roman literary sources, see Ahl 1982:394–398; for amber in Bronze Age Greece see Harding and Hughes-Brock 1974; cf. Nilsson 1968:18; Hood, Huxley, and Sandars 1958–59:237–239, 261–262). The bead is small (max. D: 0.015 m), spherical to pear

shaped, with the broader end almost flat, and is perforated vertically (D: 0.001–0.0025 m); the surface is slightly pitted.

That the majority of amber in the Greek world is of Baltic origin seems fairly certain (see Beck in Harding and Hughes-Brock 1974:170–172; Werner in Hood, Huxley, and Sanders 1958–59: 261–262; see further Beck and Sprincz 1983 for the Baltic origin of the amber found at Hallstatt), and a number of combined river/land routes through Europe, as well as seaborne trade via England and southern France, have been proposed for the Bronze Age (Navarro 1925; Spekke 1957: 47–71; Piggot 1965:120, 137–138, fig. 75; Bouzek 1973:171; Harding and Hughes-Brock 1974:152–154; Hawkes 1975:1–13; Ahl 1982:395). For the period after the demise of the Mycenaean way of life, general consensus holds that amber reached Greece via the Adriatic (Ahl 1982:395). Comparatively common in Late Bronze Age contexts, its occurrence in Early Iron Age Greece is much reduced, although a number of sites have yielded small quantities of amber in twelfth- and eleventh-century B.C. contexts (Elis, Kephallenia, and Knossos are listed in Desborough 1972:74, 91, 90, 97, 115; and in Harding and Hughes-Brock 1974: 159–167; the Submycenaean bead from Salamis first published by Wide 1910:31, fig. 30, and originally described as bone was later shown to be of amber), as well as contexts of the ninth century B.C. (Coldstream 1977:79 [Eleusis Grave A]; 100 [Teke Tholos]; Desborough 1952:128 [Kardiani], for which see Levi 1925–26:215; Coldstream 1977:45; also Popham, Sackett, and Themelis 1979–80:223 [SPG II]). There is, as far as I know, no verified published report of amber in Bronze Age Macedonia, whereas during the Early Iron Age it has been noted at Tsaousitsa, Aivasil, and Poteidaia (Casson 1923–25:24; Vickers 1977:31, fig. 5, no. 3; for amber in the Archaic Graves at Sindos see Vokotopoulou et al. 1985:90–91, no. 136; 267, no. 434), and Desborough (1976:35) has suggested that the amber found at Lefkandi may have come via Macedonia or inland Thessaly. The necklace of beads from Vergina thought at first to be of amber has been diagnosed as sardion (Andronikos 1969:254, fig. 89; Radt 1974: pl. 40, no. 40; Coldstream 1977:45). Small quantities of amber have also been published from Early Iron Age Thasos (Koukouli-Chrysanthaki 1992:412–414, fig. 101).

NOTES

1. Heurtley 1939:101, 108. For **T46-3**, **55**, and **92**, see specifically Casson 1923–25:21, fig. 10; Heurtley 1939:213, fig. 83m; 231, fig. 104c, f, i; Wardle 1980: pl. 22, fig. E (cf. Andronikos 1969:260, pl. 116ζ]). For **T51-5** and **91**, see Heurtley 1939:203, fig. 67l–n; 213, fig. 83o; 231, fig. 104d. For **56**, cf. Heurtley 1939:231, fig. 104e; Wardle 1980: pl. 22, fig. e (top right); also Vokotopoulou 1969b: pl. 255γ; Andronikos et al. 1988:169, no. 87 (two examples from Early Iron Age Dion).
2. For Bronze Age biconical examples, chiefly of clay or steatite, see Furumark 1972b:89, fig. 2, type a2, with references (cf. Perdrizet 1908:8, fig. 25; Wace 1957:208; Iakovides 1969–70, vol. 2:280, fig. 123, type 1; S. Immerwahr 1971: pl. 77, nos. XIV.13, VII.35b, XXIII.13; Dietz 1984: 59–60, fig. 63 (various examples). For Early Bronze Age examples see especially Bernabò-Brea 1964: pls. 82g–i, 84n, q, r, 169. For the same type in bronze see Kilian 1975a: pl. 75, nos. 35–52. During Protogeometric the type in clay occurs at a number of sites; see, among others, Heurtley and Skeat 1930–31:39, fig. 16, nos. 33–35; Brock 1957: pl. 173d; Wells 1983b: 226, fig. 170, no. 509, although at Athens and Lefkandi the preferred type is either conical or pear shaped (cf. Kraiker and Kübler 1939: pl. 74; Kübler 1943: various examples pls. 32–33; Popham, Sackett, and Themelis 1979–80:83, pl. 71t), or otherwise of spherical or biconical form with incised decoration, see below and esp. Barber 1991:303–310. For a biconical type from Lefkandi see Popham, Sackett, and Coulton 1993: pl. 34, no. 34, although the majority are conical. Biconical spindlewhorls, beads, or buttons are standard, and very common, in Protohistoric Thasos: see Koukouli-Chrysanthaki 1992:408–410, pl. 355, nos. 1–7. For later biconical examples in clay see, among others, Cambitoglou et al. 1981:74–75, nos. 191–7 (Zagora); and cf. those from the Geometric settlement at Ypsile on Andros: Televantou 1993:205, pl. 9; see also Blinkenberg 1931: pl. 14, nos. 377, 373; Deonna 1938:270, figs. 310, 312;

Davidson 1952:172, 175, pl. 77, no. 1213; Boardman 1967:235, fig. 156, nos. 511–512 (five examples dating from period I through V/VI).

3. Boardman 1960a:146–148 cites examples in Blegen, Caskey, and Rawson 1953:32–33 and Goldman 1956:328–344. At Troy the type is common from Settlement I through VIIB: see Blegen et al. 1950: figs. 222, 366–368; 1958: figs. 221–222, 257; Blegen, Caskey, and Rawson 1951: figs. 151–153, 236–237; also Balfanz 1995; at Tarsus they range in date from Early Bronze Age I to Late Bronze Age II; see also Osten 1937a:198–204, figs. 199–203 (cf. Boehlau and Schefold 1942: pl. 1, nos. 16–18, 10–11, 25, which are later).
4. To the list of Macedonian examples cited in Sourvinou-Inwood 1975:170–171, nn. 54–57, add the following Late Bronze Age examples: Wardle 1980:253, pl. 22(e); cf. Wardle 1987:320, fig. 3, pl. 51c (Early Iron Age); Hochstetter 1987: pl. 18, nos. 1–11; pl. 36, nos. 1–8; the examples published by Rey 1917–19: pl. 21, nos. 1–5 come from Perivolaki, Sedes, and Gona. With regard to chronology, Hochstetter (1987: 85), notes "Die verzierten Wirtel verteilen sich auf die Schichten 15 bis 4, also den Zeitraum, in dem Wirtel allgemein am häufigsten vorkommen (Abb. 14), doch ist eine gewisse Konzentration auf die spätbronze- bis beginnend eisenzeitlichen Schichten 15 bis 11 festzustellen."
5. I am grateful to Dr. Jill Carington Smith for bringing these to my attention; their identification as Early Iron Age is hers and the general subject is well treated in her unpublished Ph.D. dissertation (Carington Smith 1975); see also Barber 1991:79–125; 299–303; for further discussion of the context of the two Torone examples see Papadopoulos 1989a.
6. In addition to those noted see Popham, Sackett, and Themelis 1979–80: pl. 248, nos. 2, 5–8; Popham, Touloupa, and Sackett 1982a:238, fig. 8, no. 36, 39; pl. 16, nos. 44, 52; pl. 21, no. 17; Brock 1957:97, pls. 75, 167, no. 1098; Müller-Karpe 1959: pl. 1, F1 (Pantalica); 1962: 86, fig. 4, no. 7; 88, fig. 6, no. 7; 108, fig. 26, no. 3; Catling 1964:240–247, pl. 42, fig. 22, esp. nos. 28, 34, 37, 39; Benson 1972:126, pl. 36, no. B1272; Kilian 1975a:25–26, pl. 2, no. 70 (compared to Blinkenberg type II, 19); Doumas and Marangou 1978: 198, no. 50; Arachoviti 1994:134, fig. 12 (B.E. 8653). For the related type in Anatolia see Caner 1983: pl. 1, no. 5. For Macedonia see Heurtley 1939:240, fig. 112k; Andronikos 1969: 230–233.
7. Blinkenberg 1926:15–23; cf. Popham, Sackett, and Themelis 1979–80: pl. 238h, k, l; pl. 247, no. 3; Catling 1964: fig. 22, nos. 3034; Sapouna-Sakellarakis 1978: pl. 8, no. 237; Caner 1983: pl. 2, no. 12; cf. the iron fibula: Andronikos 1969:232, fig. 73; Radt 1974: pl. 38, no. 25. For fibulae at Koukos see Carington Smith and Vokotopoulou 1988:368, nos. 3–4; cf. also those from Thasos: Koukouli-Chrysanthaki 1992:415–416, fig. 106, pl. 357, nos. 6–13.
8. Higgins 1980:89–91 (examples from Athens, Argos, Homolion, Agrinion); cf. Popham, Sackett, and Themelis 1979–80:220 (gold); Kraiker and Kübler 1939: 85, fig. 4 (left); Kübler 1943: pl. 39; Doumas and Marangou 1978:213, no. 74 (Skyros), with reference to *Iliad* XVII.52; Kilian 1975a: pl. 70, nos. 33–41 (Thessaly); Philipp 1981: pl. 42, nos. 547–556 (Olympia); Koukouli-Chrysanthaki 1992:409, 411, fig. 97, pl. 355, esp. nos. 8–12 (Thasos); cf. Vokotopoulou 1986: pl. 111 (Vitsa).
9. If the temperature required to reduce a cadaver to the state normally encountered in the Torone cremations is to be fixed in the vicinity of 900°C (see Papadopoulos 1989a and chapter 4), this would leave no conspicuous trace on an iron object, which would require a much higher temperature to melt and be subsequently misshaped. The observation that the iron blades found in the ash-urns were unaffected by fire is based on their bone handles, which display no signs of having been burned. The melting point of pure iron is 1525°C (see Hodges 1964:97; cf. Davies 1939:253–255).
10. The earlier list in Snodgrass 1964:144, 148, added to in Snodgrass 1971:274–275, is now supplemented by the material from Lefkandi. A fuller, but still not complete, list is provided by Avila 1983a:146–147, app. 5, which is especially useful for the previously unpublished examples from Mycenae, Thermon, and Sparta. See also Desborough 1952:133; Béquignon 1937:52 (Tombs 85–86, six iron arrowheads).
11. For earlier examples of mending holes see, among others, Tsountas 1908: pl. 17, no. 1; Wace

and Thompson 1912:17; Forsdyke 1925: 37, fig. 41, no. A203(4); Weinberg 1937:495; Walker Kosmopoulos 1948: pls. Ia, IVc; and esp. Vitelli 1993:40, n. 1; 211, n. 11. For the Bronze Age see above; see further Atkinson et al. 1904: pl. 40, no. 21; Hansen 1937:544; Broneer 1939:401, fig. 83; Holmberg 1944:131; Blegen, Caskey, and Rawson 1953: fig. 297, inv. 36.6; Iakovides 1969–70, vol. 2:64–65, 373; Chavane 1975:18, pl. 5, no. 23; Philippaki 1975:237, pl. 218a–b.

12. Heurtley 1939:141, no. 15 (= frontispiece, pl. VI); 141, fig. 10a; 145, fig. 12c; 140, fig. 8c (all Late Neolithic from Servia); 159, fig. 28b (Neolithic from Kritsana); 102, 215, fig. 86i, f, g (Late Bronze Age, preserving rivets); Wardle 1980:245, fig. 9, no. 1 (Late Bronze Age); Hänsel 1979a:187, fig. 14, no. 10; Hochstetter 1984: pl. 45, no. 6, pl. 49, no. 2; pl. 265, no. 2; also the Early Iron Age pithos from Vergina: Snodgrass 1971:74, fig. 33a–b.
13. Protogeometric examples include Kraiker and Kübler 1939: pl. 63, inv. 532; Popham, Sackett, and Themelis 1979–80: pl. 16, nos. 184, 192; pl. 17, no. 219; pl. 23, no. 545; pl. 26, no. 705; pl. 279, no. 1061; pl. 280, no. 1139; pl. 282D (T pyre 4), all preserving mending holes (some Subprotogeometric); see further Popham, Touloupa, and Sackett 1982a: pl. 32h (T pyre 11.4); Wells 1983a:80, 72, fig. 49, no. 410; 47, fig. 19, no. 101; and the lead clamp 101, fig. 83, no. 740; Heurtley and Skeat 1930–31: pl. 11, no. 149; 34, fig. 14 (Marmariani); Choremis 1973: pl. 35g, 66, no. 622 (Messenia); Andreiomenou 1980: pl. 127b (Boiotia); McDonald, Coulson, and Rosser 1983:311, 303, fig. 5-60-62. The forthcoming publication of the Early Iron material from the area of the later Athenian Agora will provide many more examples. It would be tedious to list Geometric examples: see, among others, Evangelides 1912:133 (Mycenae); Zapheiropoulou 1969: pl. 400γ (right), from Donousa.
14. Holmberg 1944:127. For similar "celts" worn as amulets or prophylactic pendents see A. B. Cook 1914–40, vol. 2:506–510, esp. figs. 384–387. Size would suggest that some are less likely to be whetstones; for example, several of the stones published in Tsountas 1898: pl. 8, nos. 61, 64–65 are probably too small for use as whetstones and are more likely pendants, beads, or amulets.
15. The following list, which is by no means exhaustive, illustrates the geographical range and chronological span of the type:
    Attika: Smithson 1974:359, pl. 76d (22), no. I 18:1–22 (described as a small sandstone plaque of unknown use); the fact that this example was found near the feet of the deceased would seem to preclude its use as a pendant.
    Peloponnese: Karo 1930–33:110, pl. 102, no. 512; 162–163, fig. 79, no. 930; Valmin 1938:343, pl. 25, nos. 67–68; Persson 1942:48, no. 15; 46, fig. 49, no. 2; Holmberg 1944:126, fig. 118, no. 9; Davidson 1952:195, pl. 89, no. 1481; Verdelis 1963:43, Beil. 19, 4, Gr. XXV:2 (Tiryns); Blegen et al. 1973:161, fig. 232, no. 2 (CM2102); McDonald, Coulson, and Rosser 1983: pls. 5.43, 5.45.
    Central Greece and Euboia: Goldman 1931:200, fig. 270, no. 5; Kilian 1975a: pl. 94, no. 34 (Pherai); 1983:143, fig. 12, nos. 34–36 (Philia, Thessaly); Popham, Sackett, and Themelis 1979–80: 85, pl. 67i, no. 11; Popham, Touloupa, and Sackett 1982a:229, pl. 26, no. 11 (schist?); Batziou-Eustathiou 1994:223, fig. 22 (found in association with the Late Bronze Age kiln at Velestino, Pherai).
    Crete: Evely in Popham and Sackett 1984:226, n. 14.
    Aegean Islands: Tsountas 1898: pl. 8, nos. 64–65, among others; Blinkenberg 1931:99, pl. 10, no. 189; Lamb 1936:192, pl. 26, nos. 30.27, 32.25, 29.6, 31.42; Boardman 1967:236, fig. 159, nos. 527–528; Bernabò-Brea 1976: pl. 258, no. 4; Renfrew 1985:344, fig. 8.12, no. 2881.
    Asia Minor: Blegen et al. 1958:14–15 (table 3), fig. 220; 150 (table 12), fig. 254, nos. 33.132, 37.298; Boehlau and Schefold 1942: pls. 1, 22.

8

Early Iron Age Torone: Between archaeology and history

FROM PREHISTORY INTO HISTORY

The limitations inherent in reaching conclusions of an historical nature, both in a general sense and more specifically to Torone, have already been touched on. The Early Iron Age cemetery at Torone has furnished evidence of burial customs (chapter 4); pottery, including potters' marks (chapters 5 and 6); the handful of small finds other than pots (chapter 7); and the organic remains recovered from tombs (appendices B–D). Among similar bodies of material at other sites in the Greek world, it has been the pottery and, to a lesser extent, the evidence of burial customs that have traditionally provided students of the Early Iron Age the primary source of information on more general social and economic conditions existing at the time of its production. But the limitations are many (cf. Desborough 1972:288–293), and it is imperative that the discerned features and vicissitudes of ceramic history not be confused with those of political, economic, and social history (Starr 1963; 1974; Tritsch 1973:236; see further Ferrill and Kelly 1979; A. Graham 1986; Papadopoulos 1996a; 1997b). But rather than begin with pottery, I want first to look at the organic debris from the cemetery in order to determine, at the very *minimum*, certain patterns of exploitation of the natural resources of the region. These resources, which reflect internal patterns of subsistence and exploitation specific to a site in southern Sithonia, provide something of a base from which more general statements about the settlement and its external relations can be made.

Historians have drawn attention to the wealth of Torone in the Classical period, and it is clear from the evidence of the Athenian tribute lists that Torone must have been a prosperous city in the later part of the fifth century B.C. (Meritt, Wade-Gery, and McGregor 1939–53). The wealth of the city must have depended in part on agricultural produce, for which the larger part of the southern region of Sithonia may have been exploited, as well as its trading activities (Zahrnt 1971:248). Rather than begin in the familiar landscape of the Classical period and, from there, navigate back in time with the aid of literary testimonia, I want to begin in the prehistoric landscape of the Early Iron Age cemetery at Torone, then move forward from prehistory into history. My aim is to exploit both the material record contemporary with the period of use of the cemetery, as it is preserved, as well as the textual evidence of Classical authors writing several hundred years later.

SOFT THINGS THAT OFTEN DEFY THE ARCHAEOLOGICAL RECORD

Among the charred floral remains found in the cremation tombs of the Early Iron Age cemetery (see appendix D), one of the most significant was the domesticated grape (*Vitis vinifera* or *Vitis* sp.) found in the water-sieved pyre debris in the tomb pit of Tomb 109. While this is to date the earliest direct evidence for grape seeds in situ at Torone, the prehistory of the domestication of the grape in the north Aegean can be traced back to the Early Bronze Age with the publication of the floral remains from Sitagroi in eastern Macedonia (Renfrew, Gimbutas, and Elster 1986:138, 441). The more recent publication of the palaeobotanical remains and evidence for plant husbandry at prehistoric Dimitra in the Serres basin in north Greece (Grammenos 1997) suggests that domestic grape seeds were present in the Neolithic levels, indicating that the vine was being domesticated in this

area of the north Aegean by the Late Neolithic period (J. Renfrew 1997:223; see further Papadopoulos and Paspalas 1999:182).

In Classical Torone the grape was boldly alluded to in the very emblem the city chose for its coinage. The earliest Toronean tetradrachm obverse types—perhaps dating to the first decade of the fifth century rather than the late sixth century B.C.—show an amphora, with or without vine tendrils entwined round its neck or handles, and associated bunches of grapes (Papadopoulos and Paspalas 1999:167, figs. 9–13). The device would have advertised the wine-producing capacity of the city or the superiority of its vintage. The earliest issues (Kraay group B: 500–490 B.C.) were originally struck on the Thrako-Macedonian standard (Kraay 1954:12–14, nos. 13–16, pls. 2, 5; 1976:135; Price and Waggoner 1975:47–48, nos. 221–223, pl. 12), and slightly later on the Attic-Euboian standard (Kraay group A: 490–480 B.C.: Kraay 1954:10–12, nos. 1–12, pls. 2, 3–4; Price and Waggoner 1975:47–48, nos. 224–228). The other common device on Torone coins was the oinochoe or wine-pouring vessel, first minted ca. 480 B.C. and continuing at least down to ca. 420 and possibly into the fourth century B.C.; but whether adorned with bunch of grapes or plain, the viticultural associations of the oinochoe and amphora are clear enough (Papadopoulos and Paspalas 1999:169, figs. 14–17). An alternative fifth-century silver issue has a similar appellation as it depicts a crouching silen about to drink from a largish vessel, identified as an oinochoe or hydria (Gaebler 1935:115, no. 8, pl. 22, 16; Price 1974:42, pls. 6–7, no. 35; Papadopoulos and Paspalas 1999:169, fig. 18).

Although the harvesting of grapes at Torone is not explicitly mentioned by ancient authorities, it is at least implied in Herodotos: in book 7.122, the southern tip of Sithonia is referred to as Ampelos (vine) and Herodotos states that the region belonged to Torone. The viticultural complexities of the region are also alluded to in the *semata* struck on the coins of other Chalkidic states, not least of which is the well-known emblem of Mende depicting Dionysos on his ass (Noe 1926; E. Robinson 1949; Jenkins 1970:65–66; Price and Waggoner 1975:45; Kraay 1976:134, 362; Michaux 1981; Price 1987). The whole question of Toronean together with Mendean wine production has been recently reviewed (Papadopoulos and Paspalas 1999), and it is clear the economy of Classical Torone relied heavily on wine. It is no coincidence that the region immediately to the north of Torone continues to this day to be famous for its grape, with the wine of the Porto Karas label—which was only reintroduced in the 1970s—widely exported throughout Greece, Europe, and North America (Papadopoulos and Paspalas 1999:182–183).

Other prominent flora in the Early Iron Age cemetery include the broad bean (*Vicia faba*) and the lentil (*Lens culinaris*). Although the latter is not specifically mentioned with regard to ancient Torone in any of our extant written testimonia, Theophrastos (*Hist. pl.* 4.8; Athenaios 3.72d) mentions that a plant near Torone produces a perfect bean and refers to it as a local delicacy. A similar account is found in Pliny the Elder (*HN* 18.30.122), who refers to the "Egyptian bean," which, in addition to Egypt, is found in Syria, Cilicia, and Torone. However impressive the local bean may have been in Theophrastos's day, beans and other legumes are well attested among the burned remnants of the funeral ritual deposited in some of the Early Iron Age cremation tombs on Terrace V (see appendix D).

The only cereal recovered from the Early Iron Age cemetery was barley (*Hordeum vulgare*). Barley was used for a variety of purposes, including bread making (although often considered inferior to wheat), as well as for beer, porridge, soups, and as animal fodder (appendix D). As Zohary and Hopf (1988:62) state, barley played an important role in the Greek Neolithic and Bronze Age when it was the prevailing cereal. The importance of barley continues into later periods in the north Aegean, and a number of fourth- or early third-century B.C. inscriptions found in Chalkidike provide important insights, often through toponyms, on the natural resources of the region and some of the economic activities that took place there. The most systematic account of this evidence is by the late Vokotopoulou (1990a), who was able to show the importance of vines (including the sale of a vineyard) as well as apple trees, sheep grazing, barley fields, and, perhaps most significantly, the exploitation of metal (for mining see below). Both barley and grapes are attested in the Early Iron

Age cemetery, and although there is to date no evidence for Early Iron Age apples, the cemetery at Torone has provided at least two examples of *Prunus spinosa*, a member of the plum family, that was probably collected from the wild (appendix D), but was burned—whether as fuel or, together with the other flora, as food—as part of the funerary ritual associated with Tomb 108.

Perhaps the most basic and essential commodity in the ritual of cremation in the Early Iron Age cemetery was timber. Unfortunately, none of the burned wood recovered from those tombs where the remains of the pyre were deposited into the tomb pit has been analyzed to establish the species of tree(s) used for cremation. Moreover, the number of tombs yielding any quantity of burned wood was small indeed. Despite this and the fact that (as already stressed in chapter 4), timber supply and cremation do not necessarily go together—the rite of cremation is rare in many well-forested regions, while it is common in some areas where timber sources were limited—the importance of timber should not be overlooked, especially as in the Classical period the region of Torone was noted for its timber. The most eloquent testimony is provided by the lead letter published by Henry (1991; Cambitoglou, Papadopoulos, and Tudor Jones 2001: 765–771). The *lamella*, found in the Isthmus at Torone in 1976 and dating to the third quarter of the fourth century B.C., represents one of only eleven known examples of Greek private letters written on lead sheets (Henry 1991:65–66, n. 2; cf. Jordan 1980). It records a commercial transaction involving the purchase of a large quantity—some seven talents—of wood. The economic importance of Macedonian, and Chalkidic, timber cannot be underestimated, particularly shipbuilding timber, which was in great demand. When addressing the Spartans in 383 B.C., the Akanthian envoy Kleigenes stated that the region of Olynthos possessed ship timber and had revenues from many ports and trading places (Xenophon, *Hell.* 5.2.16). In an early fourth-century B.C. treaty between the Chalkidian League and the Macedonian king Amyntas (Tod 1962:31–33, no. 111), it is stipulated that the League may export any timber (and pitch) it does not require for its own needs, except fir; if fir was to be exported, then Amyntas's permission must be obtained. The latter provision no doubt reflects Amyntas's desire to control the strategically important fir export trade, as fir was the timber most suited to trireme construction (Meiggs 1982:118–119). On the basis of this treaty, Gold (1974:8–9) has argued that the Chalkidians may have acted as exporters for the Macedonians. The evidence of the Torone lead letter is here worth bearing in mind, as a certain [...]tos (the first part of his name does not survive), unable to buy wood in M[ende?], writes to Tegeas to dispatch, with some urgency, seven talents of timber. Unfortunately, the part of the inscription that appears to refer to the type(s) of timber (lines 4–5) is illegible. The combined evidence of this letter and the testimony of Kleigenes recorded by Xenophon bears witness to the extensive timber resources within the Chalkidike in the Classical period. It is worth adding that today native and reforested areas not distant from Torone are capable of supporting extensive stands of trees, especially pine (Meiggs [1982:118–119] notes that pine was valued in antiquity for the construction of merchant ships as it was a heavier and more durable timber than fir).

The literary evidence for Chalkidic timber, such as it is, dates to the fourth century B.C.; earlier direct literary testimony for the exploitation and trade of local timber is unavailable. The economic value of timber, however, extends well beyond its use in shipbuilding, and a steady and assured supply would have been crucial to any city in ancient—prehistoric and historic—Greece (Henry 1991:70). The importance of firewood in the ancient economy is stressed by a number of scholars (Meiggs 1982:203–206; Douglas 1991: 411–420; Henry 1991:69–70). Basic fuel for heating and cooking played its role, but judging from the frequent entries for charcoal and timber for burning in the accounts of the statue of Athena Promachos (Henry 1991:69, n. 14), and of the same commodities in the accounts of the statues of Hephaistos and Athena in Athens (Henry 1991:69, n. 15), wood was an important item in the process of smelting. In Demosthenes' speech against Meidias (21.167), Meidias brought back from Styros various materials, including timber, for his silver mines; Henry (1991:69) has noted that this wood may have been used either for Meidias's furnaces or perhaps as pit-props for his mines. Henry (1991:69–70) further emphasizes

the need for adequate supplies of wood for religious sacrifices and cites the records of the *epistatai* of the finances of the gods on Delos, which record substantial quantities of wood purchased for this purpose. In the late fourth century B.C. such amounts could exceed one hundred talents per year, and even greater amounts were involved for the years after 250 B.C. (cf. Meiggs 1982:450; Pritchett 1956:296–297; cf. 1953:265).

In addition to timber and flora there are a number of direct literary references, as well as evidence of a more indirect nature that provide insight into economic activities at the site. For example, some fifth-century B.C. Toronean coins bear on their reverse either a goat or its foreparts (Gaebler 1935:115, nos. 7–8, 10, pls. 22, 13–16; Papadopoulos and Paspalas 1999:169, fig. 18). Although literary evidence for the goat at Torone is lacking, direct evidence for its exploitation is abundant by way of numerous animal bone remains encountered in the successive periods of occupation at the site.[1] The small quantity of animal bone recovered from the Early Iron Age tombs on Terrace V shows that caprovines account for more than 50 percent of the entire sample (appendix B). Goat herding in Sithonia continues to be an important economic activity. The exploitation of cattle at Torone is also well attested by physical remains (see appendix B, Tomb 18) and Toronean cattle is referred to, albeit briefly, by Aristotle (*Hist. an.* 3.21.523a). A native of Chalkidike, Aristotle would have had firsthand knowledge, if not actual experience, of the local herds. Cattle raising, like goat herding, continues to this day in southern Sithonia, particularly in the marshier areas around Torone and Sykia (cf. Rackham 1990:104).

Aristotle also refers to the local sea urchins (*Hist. an.* 4.5.530b) and sponges (*Hist. an.* 5.16. 548b) of Torone, comments echoed by Pliny the Elder (*HN* 9.51.100; 9.69.149). Although there is no evidence for the exploitation, ancient or modern, of the sponge in the immediate vicinity of the site, the sea urchin is well attested in several Early Iron Age contexts associated with tombs (see appendix C). As for other creatures of the sea, the Early Iron Age cemetery produced, in addition to rock urchin, a large variety of mollusks (both edible and as items of personal ornament), a crab (cf. *Cancer pagrus*), and tuna, together with at least two other unidentifiable fish species (appendix C). Indeed, fishing appears to be an important activity at the site from the earliest stages of its occupation. Although the physical remains of wild species are generally rare in comparison to those of domesticated mammals, bird and fish bones are quite frequent, and it would appear that the Toronean diet was in no small measure supplemented by fishing, the collection of marine mollusks, and the hunting of game.[2] With regard to fishing at the site, two pieces of information are here worth noting. The first is Athenaios's (*Deipnosophistai* 7.310a–c) reference, quoting Archestratos of Gela, to the tasty slices of dog shark (*kyon karcharias*) that were available at Torone. The second is the fact that today Kophos (or Porto Kouphos) is used as the base for seasonal commercial fishing of tuna. Numerous deep-sea commercial trawlers begin exploratory fishing expeditions from Kophos in September, with the season fully under way in November and December. Although it remains to be seen to what extent tuna was exploited at the site during the earliest prehistoric levels, the antiquity of seasonal tuna fishing in the Aegean can be traced back to the Neolithic period at Franchthi Cave (Jacobsen 1976:86; 1981:307) and Saliagos (Renfrew, Greenwood, and Whitehead 1968:118–121). In the stage 4 deposits at Franchthi, tuna vertebrae account for at least 95 percent of the fish bone, and at Saliagos *Scombriodae* (tunny and albacore) account for 97 percent of the identified fish bone (cf. Bintliff 1977). At least one tuna bone (*Thunnus thynnus*) was encountered in the Early Iron Age cemetery, in a context associated with Tomb 49 (see appendix C), and I wonder to what extent Athenaios's "dog shark" might refer to tuna rather than any other species of large fish.

Although not referred to in the literary sources, apart from an indirect reference to one of the varieties of Mendean wine known as *melichroos* or honied (Papadopoulos and Paspalas 1999:175), the production of honey at the site is well attested through numerous fragments of terracotta beehives, including the complete specimen from Classical Structure 3 (Cambitoglou, Papadopoulos, and Tudor Jones 2001: fig. 32). The occurrence of terracotta beehive fragments, particularly in Classical and Late Roman deposits at Torone, is noteworthy. A detailed account of beehives and beekeeping

in the Classical period is provided by Jones, Graham, and Sackett (1973:397–414) and, more recently, by Lüdorf (1998–99; cf. Rotroff 2001) and Anderson-Stojanovič and Jones (2002). Although archaeologically visible terracotta beehives do not appear to be earlier than the fifth century B.C., the existence of beekeeping is well attested in Egypt considerably earlier (Forbes 1957:82–83), and some scholars have argued that the characteristic Athenian Early Iron Age model "granaries" were in reality beehives (e.g., Cherici 1991; see also Morris and Papadopoulos 2004). The possibility of beekeeping in Early Iron Age Chalkidike in archaeologically invisible beehives, such as baskets or even logs, is worth bearing in mind, as is the fact that beekeeping is still a thriving industry in Sithonia—and elsewhere in Chalkidike. It is worth adding that the main type of beehive in use in Chalkidike today is a wooden box that would not survive well archaeologically.

These few commodities—"soft things" as Osborne (1998) calls them—may seem paltry in comparison to the much better documented exploitation of natural resources in the Mycenaean period and again in post-Geometric times, but their importance cannot be underestimated for an era that has traditionally been referred to as a Dark Age (Snodgrass 1971; Desborough 1972). Together with the exploitation of metal ores (see below) these commodities establish, at the very least, the underpinnings of the Toronean economy in the Early Iron Age.

INDESTRUCTIBLE THINGS THAT OFTEN SKEW THE ARCHAEOLOGICAL RECORD

Any attempt to characterize Early Iron Age Torone on the basis of "hard things"—pottery and other small finds deposited in tombs—with any precision remains a difficult task, but perhaps one way to gain some insight of the nature of the site is to set out what it is *not*. When comparing the evidence from Torone with that of other contemporary settlement and cemetery sites one aspect appears to emerge fairly clearly: although certain features may be paralleled elsewhere, the character of Torone in the Early Iron Age is by and large unique, or rather, different. We are certainly not dealing with a Lefkandi, nor any known center in its related region; neither the manner of burial nor the style of the pottery—especially when considering the relationship between local wheelmade and handmade wares—can be matched anywhere in coastal Thessaly, Euboia, the Cyclades, or Skyros. By the same token Torone is no Vergina, which is characterized by significantly different tomb types with individuals richly laid out with bronze ornaments, weapons, and predominantly handmade pottery; and at Vergina, as elsewhere in Macedonia, inhumation is the rule. Moreover, Torone is unlike any of the settlements in central and western Macedonia, and indeed the contrast between it and the recently excavated settlements at Assiros and Kastanas is as marked as the contrast between Torone and the many mounds in Chalkidike excavated earlier in the twentieth century by Heurtley and his collaborators, if the character of the pottery and other small finds is anything to go by. The contrast, too, between Torone and eastern Macedonia and Thrake (including Thasos), as well as Epiros, is similarly noteworthy.

Traditionally, comparisons and contrasts between sites in the Aegean have largely been on the basis of hard things; the lack of comparative floral material, for example, from other contemporary sites in the north Aegean is noted in appendix D. As for the "indestructible" material from the cemetery, I summarized in chapter 5 the chronological development of the local pottery and its external influences. The salient characteristics of this development seem to be that in the earlier part of the period of use of the cemetery, and indeed from its very beginnings, a strong Attic influence is apparent. This is seen both in the presence of direct Attic imports (stylistically Submycenaean and earlier Protogeometric) and in the appearance or style of the local wheelmade pottery, which so closely follows trends and innovations current in Athens, particularly in the details of the neck- and belly-handled amphorai, the latter as rare a shape in the north Aegean as it is in Thessaly and Euboia. Coupled with these central Greek features is a very strong local Macedonian element witnessed in the handmade pottery, which retains its traditional and, up to a point, independent character right throughout the period of use of the cemetery.

In terms of ceramic history this earlier period is one of innovation and experimentation. During the later part of the period of the Terrace V cemetery, Attic influences as well as Attic imports decrease noticeably, and although there is a steady increase in the quantity of imports primarily from the *koine* comprising Euboia, Thessaly, the northern Cyclades, and Skyros, the local potters settle down to an attitude in which they were far less willing to accept and adopt innovations or to follow trends current elsewhere. So although Torone maintained external links evidenced by imports, the local style of pottery becomes much more inward looking and the dark-ground system of decoration—the harbinger of the later Protogeometric style in central and southern Greece—is never adopted at Torone. This is true right through the period of use of the cemetery, and as discussed in more detail in chapter 5, the Early Iron Age cemetery on Terrace V appears to have gone out of use sometime during the course of the first half of the ninth century B.C. None of the imported pottery deposited in tombs can be dated much beyond ca. 850 B.C., and there is nothing inherent in the local style to suggest a date significantly later. A feature of the very latest tombs worth drawing attention to is the paucity of the pendent semicircle skyphos, represented to date by two only examples (**T77-3**, **T82-2**), one locally manufactured and one imported. The hallmark of the regional *koine* comprising Euboia, Thessaly, and the northern Cyclades during the latest stages of Late Protogeometric and in the course of Subprotogeometric, and the hallmark of Euboio-Cycladic trade in the eastern Mediterranean (Descoeudres and Kearsley 1983:42), as well as being a common, although never very numerous, class of vessel at a number of contemporary Macedonian sites, its evident paucity at Torone is of interest both as a potential chronological indicator (that is, that the majority of tombs are earlier) or as a potential indicator of the low level of influence exerted by its home region.

The evidence of the local ceramic tradition and pottery imports, when coupled with the evidence of burial custom, provides a glimpse of at least one aspect of life in Early Iron Age Torone. The very fact that pottery imports from central and southern Greece and imports from other parts of Macedonia were finding their way to Torone at all is of some importance in itself. The local pottery itself attests a thriving industry, with the local craftsmen well versed in matters of pyrotechnology (Papadopoulos 1989a). Moreover, the ceramic influences were not one-way; there is growing evidence for Toronean, Chalkidic, or central Macedonian imports and influences in other parts of the Greek world, and it would appear likely that a quantity of Toronean—or north Aegean—pottery was finding its way to centers further south. The clearest evidence for this is the wide distribution of north Aegean neck-handled amphorai, tracked by R. Catling (1996; 1998a), that were distributed throughout various parts of the Greek world and as far afield as north Syria (Courbin 1993). Catling cites the occurrence of north Aegean amphorai at a number of sites in Euboia, Phokis, Thessaly, Skyros, south-central Macedonia, the Chalkidike, and the Troad (Catling 1996:126; 1998a; cf. Lenz et al. 1998). The Toronean examples that Catling cites are all produced locally at Torone, and they are different in both fabric and details of shape and decoration from many of the examples found at sites such as Troy, Kalapodi, Elateia, Agnanti, Lefkandi, Kastanas, Mende, Sane, Assiros, Pherai, Lesbos (Pyrrha), Marmariani, Skyros, Poseidi, Iolkos, Nea Anchialos, Thasos, and Giannitsa (Archontiko). To what extent the amphorai listed by Catling from these sites were produced at a single site or a smaller group of sites remains to be determined. A number of these amphorai, such as many of those from Troy, must have been produced locally in the Troad, but others, like the Torone examples, are clearly local Chalkidic products (see appendix E). It may well be that there was a *koine* of north Aegean Early Iron Age amphorai produced at a number of sites, a situation not unlike that of the Classical period when wine transport amphorai of similar typology but of different fabrics were produced and exported by a number of north Aegean sites from central Macedonia and Chalkidike to Thasos and beyond (see Papadopoulos and Paspalas 1999).

The distinctive north Aegean Early Iron Age amphorai were not the only northern products to have traveled. A handmade jug with cutaway neck from one of the tombs excavated by Stavropoullos on Skyros has already been noted as a possible

Toronean export (chapter 5; see Dawkins 1904–05:79, fig. 3b; Wace and Thompson 1912:209, fig. 144b; Hansen 1933:119, fig. 53; Desborough 1952:165–166; 1980:55, n. 7); in details of shape and fabric, and especially the distinctive burnishing, the vessel is very similar to Torone counterparts, which differ slightly from examples of the shape from other parts of Macedonia. A number of handmade jugs encountered in tombs at Lefkandi differ on various points from jugs of Macedonia and Torone, and a Thessalian origin has been suggested as a possibility (Popham, Touloupa, and Sackett 1982a:235); however, Lefkandi has produced two wheelmade vessels, both from the Toumba cemetery, which in details of shape and in manner of decoration are close to Toronean. The first is a belly-handled amphora, T14.1 (Popham, Sackett, and Themelis 1979–80:175–176, 350, pls. 175, 260a); the published account of the vessel by Desborough is worth quoting in full:

> The pale yellow clay indicates that it was of neither local nor Attic manufacture, and this has been confirmed by analysis. No positive source can, however, be suggested. It must surely have been made somewhere within the Attic sphere of influence, for in both shape and decoration it follows the Attic LPG style closely. It may also be noted that it was used at Lefkandi as a cremation urn, in the Athenian manner. (Desborough in Popham, Sackett, and Themelis 1979–80: 350)

The second vessel, T24.1, is described as a "pedestalled bowl" (Popham, Sackett, and Themelis 1979–80:181, 353, pl. 181); it is very like the Toronean lekanides (Type 1), especially the spouted **T51-3**. The vessel has a tall foot, two ribbon handles, and a small spout; it is dated to Subprotogeometric II, but the dating evidence as presented is unclear. The fabric contains, as the excavators describe, "small white grits and micaceous flecks," while the slip is "cream buff, thin brown to near black paint inside, pale orange outside. Both slip and paint flaking" (Popham, Sackett, and Themelis 1979–80:181), features all consistent with Toronean.

Jones (1986:628–631) verifies both T14.1 and T24.1 as imports to Lefkandi, but he also confirms that neither vessel matches chemically any of the Toronean clusters (appendix E). I was able to inspect the amphora T14.1 in the storeroom of the Eretria museum in 1984, and although in terms of shape and certain elements of decoration the vessel is close to Toronean, the clay is not the same, particularly as it lacks the normal quantity of mica. In fabric and feel it is not unlike some Attic vessels. Although unlikely to be Toronean, the similarity with the Toronean belly-handled amphorai is worth noting. As for T24.1, I was not able to inspect it in the flesh; Desborough (in Popham, Sackett, and Themelis 1979–80:353) stated: "I know of no similar vase." Although the fabric does not match chemically any of the Torone clusters, the general features of this pot find their closest parallels in the Chalkidike, especially at Aphytis on Pallene, which has produced a number of vessels, mainly of the eighth century B.C. and including a lekanis, that are very close to Toronean but not identical in terms of fabric and feel. Elsewhere in the Aegean the possibility of Macedonian imports, stylistically related but not identical to Toronean, have been noted at Tsikalario on Naxos (Papadopoulou 1965: pl. 655α–β; Schachermeyr 1980: pl. 65d) and a number from the Middle Protogeometric levels associated with the Toumba building at Lefkandi (Catling and Lemos 1991:65, 94–95; Popham, Sackett, and Coulton 1993:97–101). The latter are of interest as they are, on the whole, earlier than the Euboian imports to Torone. Are we to surmise Toronean mercantile acumen from this observation, even Toronean or Chalkidic expansion towards Euboia? Can we even suggest a Macedonian "colony" or "precolony" on nearby Naxos, at Tsikalario? Furthermore, the relative quantity of Euboian imported pottery found in Crete (Liddy 1988; Coldstream 1990; 1991; Coldstream and Catling 1996) is not so very different from the small quantity found at Torone. Are we to conclude from this evidence that Crete, more particularly Knossos, was also colonized by Euboians?

Such rhetorical questions bring to the fore some of the pitfalls of a view that focuses on only one aspect of material culture—indestructible pots—to the neglect of other information (Papadopoulos 1996a:158). *Ceramics do not equal history.* In so many cases in the Early Iron Age Aegean, pottery represents the only surviving evidence, and on

account of its indestructibility it has often assumed an exaggerated importance. Pottery alone can be a misleading and inadequate indicator of social change, and the vicissitudes of ceramic history should never be confused with social, political, or economic developments. Moreover, the common assumption that an Athenian or Euboian or Toronean pot can *only* have been carried by an Athenian or Euboian or Toronean, respectively, does not always stand up to closer scrutiny (Morris and Papadopoulos 1998).

The focus thus far has been largely on wheelmade painted pottery, but at Torone a large portion of the ceramic repertoire consists of handmade burnished pottery. That Torone enjoyed some form of contact with other Macedonian sites throughout the period of use of the cemetery is attested not only by imports of handmade pottery from other Macedonian and Chalkidic sites, but also by parallel developments in handmade pottery. One may postulate that the appearance of wheelmade pottery of a Protogeometric style at sites of inland central and western Macedonia may well have been the result of contact with coastal sites such as Torone. In this respect the material from Vergina on the Haliakmon and Kastanas on the Axios is revealing when compared quantitatively, as the proportion of wheelmade to handmade pottery is significantly lower than is the case at Torone (see chapter 5; see further Andronikos 1969:168–182; Desborough 1972: 217; Hochstetter 1984:12, fig. 1). Some verification of the role played by coastal Macedonian sites for the transmission of pottery of a southern Greek style to more remote inland regions is suggested by the results of clay analysis of a sample of sherds from Assiros, which indicated that the pieces designated as "provincial" on the basis of visual criteria (implying a source in Macedonia other than Assiros) may have been manufactured at a coastal site in Chalkidike. Of related interest is the theory put forward by Sourvinou-Inwood (1975:172) that the Attic Submycenaean handmade pyxides and amphoriskoi, as well as associated objects such as incised beads and spindlewhorls, would bear witness to the fact that at some stage during the later part of Submycenaean Attika came in some sort of contact with the north Greek cultural environment, which she refers to as an "Early Iron Age Macedonian loose *koine*." At the time of writing (1975), her hypothesis lacked the support of sufficient examples in Macedonia, especially of the pyxis shape in clay. Although the quantity of such material in Macedonia has not greatly increased since the publication of her article, the evidence from Torone, Kastanas, and Assiros, where further examples of the pyxis shape and incised beads have come to light, would now tend to support her arguments for contact between Attika and Macedonia during the course of the later twelfth and the eleventh centuries B.C. And it is worth adding that Desborough (1976:35) has suggested that the amber found at Lefkandi may have come via Macedonia or inland Thessaly.

So far the emphasis has been on pottery. In terms of other "hard things" from the cemetery that have survived, the evident paucity of finds other than pottery is a feature the implications of which are difficult to evaluate; it must remain uncertain whether this represents a true reflection of the material prosperity of the inhabitants or, simply, that they did not feel the need or desire to furnish their dead more richly with such goods (chapter 4). In any case, the few nonceramic objects in tombs are interesting for the range of materials represented; amber and glass compound/ faience, although few in quantity, were finding their way to the north Aegean. Of the metal objects, lead must have been worked locally, at least in part, as it was commonly employed to mend broken pots. The situation with objects of bronze and iron remains less certain, but whether these were produced locally or imported, their existence would argue either for a fairly well-developed metalworking industry, or for a fairly well-developed economic system of exchange with other centers.

This general paucity of *kterismata* seems to go hand in hand with another feature of the cemetery, namely the evident lack of *significant* distinction between graves. So although different tomb types existed side by side, there was little difference in the quantity or quality of offerings whether the tomb was that of an infant, adult male, or female, and it was not possible to determine the age or sex of individuals on evidence other than that of the human remains themselves (appendix A). This was common to all tombs and even some of the comparatively richer tombs—for instance, Tombs 7

and 104, both evidently of adult females—were not all that different from the poorest. There was certainly no instance of an individual, or group of individuals, blatantly singled out as with the "Hero"—or "Heroine"—and "Warrior" at Lefkandi (Popham, Touloupa, and Sackett 1982b; the role of military leaders in the period between the twelfth and eighth centuries B.C. is stressed by Sarkady 1975:115–116). Moreover, there was nothing at Early Iron Age Torone approaching the quantity of grave goods found in the tomb of the rich Athenian lady and a few similarly richly furnished tombs in the Athenian Kerameikos (Smithson 1968; Liston and Papadopoulos 2002; 2004).

To translate these observed features from cemetery material as reflecting a situation in the community at large must remain a tenuous proposition, as there is every likelihood of unexcavated contemporary graves other than those on Terrace V. But perhaps more revealing are the burials themselves, for although they were never lavishly furnished, cremation, the primary method of disposing of the dead, is a process that requires care, time, and a certain amount of expense and expertise (Kurtz and Boardman 1971:195); whatever the origins or reasons for the practice of the rite at Torone (see chapter 4), there is nothing hasty about the tombs and the rituals associated with them. The combined evidence of these features not only presupposes but demands a certain level of economic stability: these are all features of Early Iron Age Torone that remain constant throughout the period of use of the cemetery, and there is no hint whatever of any disturbances or of unsettled conditions at any given time.

Although there are to date no tombs at Torone earlier than those of the Early Iron Age cemetery on Terrace V, the earliest stylistically dated tombs at Torone already foreshadow most of the essential elements that are to remain constant for the ensuing two centuries or more of the period of use of the cemetery. Cremation is already a fully fledged rite, although inhumation in this earlier period was more common than it was to be later on; a small quantity of bronze and terracotta objects were deposited into these tombs or worn by the deceased. Most of the shapes of the local handmade repertoire are well established; with them are wheelmade and painted pots that stylistically are close to Attic Submycenaean. The transition to a true Protogeometric style as defined by Desborough (1948) follows soon after—again, very much along the lines of the Attic model. Moreover, the earliest Submycenaean and Protogeometric tombs contained a few Attic imports and, chronologically, their appearance establishes that the transition from Submycenaean to Early Protogeometric at Torone followed close on the heels of that in Athens. Influences from other southern and central Greek centers cannot yet be detected; this may be a matter of pure chance, but if the conclusions reached by the collaborators of Lefkandi are any indication (Popham, Sackett, and Themelis 1979–80:355–358), then we may reasonably preclude any major influence from that quarter, while in the light of current knowledge influences from other areas also seem unlikely.

If one is seeking further links with Athens, then the similarities in burial custom (notably urn cremations) provide an interesting indicator. The evidence of burial custom is considered more fully in chapter 4; the important points seem to be first, the very existence of 118 cremation tombs in a cemetery where 134 tombs have been excavated and in a part of the Greek mainland where cremation is exceedingly rare is in itself exceptional. Second, although cremation is practiced at a number of sites during the course of the Early Iron Age, the system itself differs from region to region—urn cremations placed in pits in Athens, open pyres serving as tombs at Lefkandi and Medeon, while in Crete the cremated remains were placed in a receptacle (not always a clay pot) that was subsequently placed in a multiple tomb (Desborough 1972:268–277). Against such a backdrop the similarities of the Toronean cremations with those of Athens are marked, and the only departures from the strict Attic system are that the Toroneans could use a variety of pot shapes as ash-urn whereas the Athenians normally preferred amphorai, and that the Athenian trench-and-hole, a Protogeometric development in Athens replacing the earlier Submycenaean circular pit, was never adopted at Torone (see discussion in chapter 4). The few exceptional cases of urn cremations at Lefkandi led both the excavators and Desborough to the conclusion that these burials may indicate Athenian immigrants (Desborough 1972: 196, 271; Popham, Sackett, and Themelis 1979–

80:210). This is a conclusion to which Coldstream (1995:401) has recently returned; he suggests, on the basis of burial customs, that several of the graves in the Toumba cemetery at Lefkandi "seem to be those of Athenian residents." One is tempted to ask a similar question for Torone: does the combined evidence of burial custom, Attic imports, and Attic influences on the locally produced wheelmade pottery of Torone indicate Athenian immigrants, and how does this evidence relate to the traditions of the Ionian Migration?

Before answering these questions, it is important to address another closely related issue. During the later part of the period of use of the cemetery, beginning at a time roughly contemporary with Lefkandian Middle Protogeometric, the Athenian influences so readily seen in the earlier period decrease rather noticeably; in their place imported pottery from the *koine* comprising Euboia, Thessaly, the northern Cyclades, and Skyros becomes conspicuous. As has been noted, the wheelmade pottery of Torone now settles down to a more inward-looking style, with the local potters far less willing to adopt innovations and trends current elsewhere. But that Euboian and Thessalo-Cyladic imports were exerting some influence on the local style is best seen in the case of the vertical-handled amphoriskos (chapter 5). The fact that Attic links are no longer as conspicuous as before may appear to be consistent with the evidence for migration in the earlier period, but also seems to reflect the internal situation in Athens during the course of the Protogeometric period where, as Desborough (1972:158) noted, "a substantial leap forward had been taken, but the impetus was not followed through." More important, however, the later Protogeometric imports from Euboia and its related region bear witness to the growing prosperity of this area, notably Euboia, and attest the thriving and progressive nature of settlements like Lefkandi whose trading activities during the ninth century B.C. were far-flung (Desborough 1972: 198–199; 1976; Popham 1981; Lemos 1992). Consequently, an additional question might be: does the evidence of Euboian pottery imports and Euboian influence (for which see Popham 1994; Snodgrass 1994a) point to the arrival of Euboians in Chalkidike, and how does this evidence relate to the traditions of Euboian colonization of Chalkidike?

FROM HISTORY INTO PREHISTORY: TRADITIONS OF MIGRATIONS AND COLONIZATION

Migrations, colonizations, and even invasions have dominated modern views of the myth-historical landscape of Early Iron Age Greece. Although J. M. Cook (1962:24; cf. Boardman 1980:25) distinguished between immigration and colonization, the difference between the two is rarely clear-cut. Both migration and colonization—like invasion—involve contact between different peoples that lead to transformations brought about by the exchange of goods and ideas, as well as a broad array of episodes of encounter (Lyons and Papadopoulos 2002). In this section I want to review the traditions of migrations and colonization critically, in an attempt to reintroduce the archaeological evidence that has often been neglected or misinterpreted.

In reviewing the "archaeological" evidence for Euboian presence in the north Aegean, Snodgrass (1994a), following my earlier conclusions (Papadopoulos 1987), linked the material record with the traditions for the Ionian Migration in no uncertain terms:

> We are not dealing, as in the case of the early Euboian appearances in the Levant, with a mere dispersion of pottery. These are durable settlements, planted on a continental coast, with many intrusive features alongside an undoubted indigenous element. The natural comparison is with the Ionian Migration, with which there must have been, at least in the case of Mende, a substantial chronological overlap. While Athenians and others, as tradition recalled, led the way there, in the Chalkidike it was the Euboians who evidently came to prevail. The evidence for this view is to be found in the imported pottery from all three sites; in the architectural evidence of the circular platforms at Mende and perhaps in the leg of the figurine from the same site; in many features of the Early Iron Age cemetery at Torone; in the architecture and especially in the burial-practices at Koukos. It seems very likely that emigrant Euboians were settling on this

> coast for generations before they began their documented western ventures. The historical destiny of Torone and Mende as city-states recalls that of their respective traditional foundresses, Chalkis and Eretria, just as the apparent demise of Koukos, and the probable loss of its ancient name, echoes the fate of Lefkandi. (Snodgrass 1994a:91)

A closer look at all the archaeological evidence Snodgrass musters for Euboian presence in the Chalkidike undermines his neatly constructed scenario for early Euboian activity in the region (see Papadopoulos 1996a:161–163) to such an extent that we are left chasing literary phantoms (cf. Papadopoulos 1996a; 1997b; 1999). The accounts of the Ionian Migration are based primarily on the later testimony of Strabo (14.632–633), Pausanias (7.2–4), and Herodotos (1.142–148; and cf. Thucydides 1.2, 12). These accounts have been often scrutinized by scholars of Greek history and culture, and although much of the tradition may well represent later fabrication, the sources are more than clear on one point: the central role of Athens in this movement, even though the "ranks were swelled" by peoples from other parts of Greece (see esp. J. M. Cook 1961: ch. 38, 10–18; 1962:23–25; M. Sakellariou 1958:1–18, 305–330; Webster 1958:144–158; Finley 1981a:72–75; Emlyn-Jones 1980:11–18, 25, 63–66; Desborough 1972:323, 341, 354–355; Bérard 1960:38–46). General consensus, on the evidence of the literary accounts, would place the migration in the course of the eleventh century B.C. (notably Cook 1961; 1962; Sakellariou 1958; Webster 1958), although some scholars prefer a later date (see Dunbabin 1957:18, n. 2). From an archaeological point of view two pieces of evidence are traditionally considered: first, the situation in Athens at the end of the Bronze Age, where some form of continuity into the Early Iron Age may be traced (Broneer 1939:417–418; 1956; cf. Wace 1956:135; Desborough 1972:19–20; Boardman 1980:24); second, and more important, the pattern of settlement in western Asia Minor during Submycenaean and Early Protogeometric, whither the "Ionian migrated" (Desborough 1972:179–184; Dunbabin 1957:18; cf. Cassola 1957:1–7, 137–147]; Akurgal 1962:369–370; 1983; Bittel 1983). Miletos especially (Hommel 1959–60), along with Asarlik (Paton 1887), and Çömlekçi (Boysal 1969:29ff, pls. 34–36), have yielded some Submycenaean and Protogeometric pottery stylistically linked with Athens. Dirmil has produced a number of vessels very much Attic in style, dating to Late Protogeometric (Bass 1963; Desborough 1972:180–181); while at Old Smyrna (see Cook 1958–59) Protogeometric pottery, evidently Attic-inspired in the main, was introduced, presumably by immigrants, alongside the native monochrome ware (cf. Desborough 1972:183). Added to this are specific stylistic similarities between Toronean wheelmade pottery and that of the west coast of Asia Minor that are noted in chapter 5, and one may also draw attention to the practice of cremation in that region (Desborough 1972:180). Furthermore, there is an uncanny resemblance between what J. M. Cook (1962:25) describes as "the nameless settlements on little peninsulas that jut out from the rugged Ionic coast-line" and the small promontory of Lekythos at Torone. Many scholars have pointed to stylistic links between Attic Submycenaean and Protogeometric ceramics and the pottery from some of the Cyclades with regard to the proposed route of the migration (see Desborough 1952:128–129; 1972:79; cf. Schilardi 1983). There is, of course, a geographical difference between the Cyclades and Asia Minor on the one hand and Torone in the north Aegean on the other, but whatever the exact nature of the relationship between Torone and Athens, one aspect that has often been raised is that the later stages of the period when pottery of the Submycenaean style was being produced were marked, as Desborough (1972:79) points out, by considerable activity for the Aegean-facing districts.

The apparent agreement between the archaeological evidence—essentially the ceramic similarities between Athens and the places where, according to the tradition, the Ionians migrated—and the later accounts of Strabo, Pausanias, and Herodotos all but clinched the historical validity of the Ionian Migration for many scholars. Added to this, was the undeniable "fact" that the spread of the Ionian dialect was a virtual blueprint for both the literary migration and the spread of Athenian-style Protogeometric pottery. A closer look at the dialect, however, raises a number of concerns that

potentially undermine the historical validity of the Ionian Migration and, if anything, show that the adoption of the Ionian alphabet—like the accounts of the migration itself—was a product of later historical circumstances and not evidence of an Early Iron Age movement of peoples. The problem, in part, is in the very name of the site.

The name *Torone* has been used for the site throughout most of its known history and has survived into the present (Casson 1926a:45; Papadopoulos 1996a).[3] Two variant spellings are known: Τορώνη and Τερώνη (or Τερόνη). The former is the most common and is used always in the literary and in most epigraphic sources; the latter is known only from the Archaic and Classical coinage of the city (normally abbreviated TE or TEPO, see below).[4] As for the namesake of the site, both Lykophron (*Alex.* 115–116) and Nonnos (*Dion.* 21.122) state that Torone was the wife of Proteus. Stephanos Byzantios gives a variant in which Torone was either the daughter—not wife—of Proteus, or else the daughter of Poseidon by Phoinike (Meinechos ed., 629.10–13; reference to Torone's namesake also appears in Dionysios Periegetes: see Berhardy ed., 1974:344–345). It is worth commenting that, in whichever mythological version, Torone has a distinctly non-Greek heritage: a mother by the name of Phoinike and a father, or husband, of Egyptian descent.

The local alphabet or script—and therefore the dialect—of Torone was largely identified on the basis of a number of gravestones of Toroneans buried in Athens in the course of the fifth century B.C. (see especially Jeffery 1990:362–363, n. 1; 369, nos. 7–8; cf. Zahrnt 1971:20). The lettering of these inscriptions was in East Ionic script which, as Jeffery suggested, probably represents the local script of Torone, even though some recently published material from Chalkidike, including a proxeny decree for a Mendean found at Delphi, is in Euboic script (see Johnston in Jeffery 1990:478–481, no. 3a; see also Bettolini 1983; Knoepfler 1990). More recent epigraphical evidence, particularly on the coins of Torone, has tended to complicate the question of the local dialect of Torone. The numismatic evidence is discussed at greater length by Hardwick (1998), who points out that the ethnic TE—referring to Terone—appears on many coins of the fifth and fourth centuries B.C. and that the first appearance of the form TEPO is found on a tetradrachm of the earliest issue (Price and Waggoner 1975:47, no. 223). A fuller form, TEPΩNAON, appears on the reverse of a silver fraction of ca. 400 B.C. (Imhoof-Blumer 1883:92–93, no. 120). A group of tetradrachms of ca. 480 B.C. bears the legend HE; Kraay originally thought the HE to be the ethnic of the state of Herakleia (1954:14–15, nos. 17–18; cf. Price and Waggoner 1975:48–49, nos. 229–230). The appearance, however, of ZIΓ and ΠO or ΠΘ on Torone coins dated to 480–460 B.C. (Fried 1987:4, pls. 14–15) shows that HE is more likely a magistrate's name and that the ethnic TE (and its variants) was replaced by such names at this time. More important, the use of O for Ω and of the aspirate H suggests that the Ionic alphabet, used later in the fifth century at Torone, was not adopted until sometime after ca. 460 B.C. Hardwick (1998) suggests that the local form of the city's name in the earlier fifth century was spelled TEPONE (it should be noted that there is no direct evidence for this form with the final epsilon), and that with the introduction of the Ionic alphabet later in the century it was TEPΩNH; by the late fifth century the inhabitants referred to themselves as TEPΩNAOI. This form of the ethnic differs from that found in Attic authors such as Thucydides, of Ionian authors such as Herodotos, and on the funerary inscriptions of Toroneans buried in Athens, which use the East Ionic alphabet. In these contexts the name of the city is Τορώνη and the inhabitants are called Τορωναῖοι. In the Athenian tribute lists, the name appears as Τοροναῖοι from 454/3 to 429/8 B.C., before the introduction of the Ionic alphabet (Meritt, Wade-Gery, and McGregor 1939–53:426–427). These variant forms can be explained by linguistic changes. The change of ε to ο is on account of assimilation of vowels due to the following ω (Buck 1955:43–44, sec. 46.1; Bechtel 1921:1.252). A close parallel for the change in the name of Torone is the name of the Boiotian hero Τροφώνιος from Τρεφώνιος (Hardwick 1998). A similar example is'Ορχόμενος from 'Ερχόμενος; as at Torone, the coinage of Boiotian Orchomenos gives the ethnic with E (Hardwick 1998; for the ethnic on the coins of Boiotian Orchomenos, see Bechtel 1921:1.252). The variation between α and αι is because the ι in diphthongs is omitted before vowels consequent on its

consonantal pronunciation with the following vowel (Buck 1955:32, sec. 31).

The ethnic TE together with the magistrates' names on the coins of Torone raise serious problems about the dialect of the city in the Archaic period and earlier. Although the different forms of the ethnic can be explained by straightforward linguistic changes, the appearance of O for Ω and the aspirate H shows that a local script was in use *before* its replacement by the Ionic alphabet (Jeffery 1990:480). The only Archaic inscriptions on stone from the excavations at Torone are a couple of single-letter mason marks on two poros limestone geison blocks of the Temple of Athena dating to the sixth century B.C. (for a preliminary note on the discovery of various architectural members of the temple see Cambitoglou and Papadopoulos 1994): one is *vau* (*digamma*), the other an aspirate, H. Although important in themselves, the mason marks are of limited value; it should also be noted that the marks need not necessarily have been inscribed by a Toronean.

However tempting it may be to believe in the stories of the Ionian Migration, they are—no matter how much one tries to fit the archaeological evidence within a scenario already predetermined and defined by written sources—only stories. And ultimately the Ionian Migration shares a similar fate with the *Einwanderung der Dorier*. The Dorian Migration, or Invasion—although still staunchly upheld in certain quarters (e.g., Eder 1998)—has dissolved into a scholarly mirage (see Schnapp-Gourbeillon 1979; 1986; Coulson 1990:14–15; Papadopoulos 1996b; Hall 1997:4–16; for the lack of evidence of an invasion or incursion in Late Bronze and Early Iron Age Macedonia see, most recently, Wardle 1996). In the quest for archaeological material that fits with the textual sources—whether for the Dorian Invasion or the Ionian Migration—there is a methodological concern that contributes to the current schism between history and prehistory. By insisting on the primacy of the testimony of later authors in order to determine the ethnic origins of, or influences on, a colonial or historical setting several centuries earlier, social, political, and economic realities of the historic era are allowed to infiltrate and thus define the prehistoric past. The resulting problems, well treated by Lightfoot (1995), include the continued practice of using historical records as direct historic analogues, as well as the privileging of written documents over archaeological material—the tyranny of the text. A related problem is the implementation of different research agendas and strategies whose results are not comparable in prehistoric and historic contexts. Much of the blame rests with archaeologists, as they all too often accept at face value the historical text, sometimes tailoring archaeological results to accord with the literary evidence. The question, however, is not whether historical documents should be used by students of the Early Iron Age Mediterranean, but rather *how* these sources should be employed most effectively in archaeological research.

The case for the Ionian Migration and the Chalkidike shares much in common with the traditions for Euboian colonization of the Chalkidike. Modern scholarship has focused much attention on the early history of the cities of Chalkidike, particularly the origins and ethnicity of its inhabitants. Torone itself has been seen traditionally as the earliest of the Euboian colonies in Chalkidike, founded in the eighth century B.C. (Cambitoglou 1975:104–105). The Euboian complexities of the foundation of Torone are still hotly debated (see most recently Papadopoulos 1996a; Hornblower 1997) and many modern scholars (e.g., Boardman 1980:229) maintain that Chalkidike derives its name from Euboian Chalkis. This view is largely based on the testimony of Diodoros Siculus (12.68.6), who explicitly states that Torone was a colony of Chalkis in Euboia. According to Strabo (7, fr. 11; see also 10.1.8) the same Euboian Chalkidians settled about thirty towns—a highly unlikely figure given the dearth of Early Iron Age remains—in Chalkidike with the Sithones. If this evidence is taken at face value, particularly in the light of the supposed or presumed Euboian "colonies" in the eastern and western Mediterranean, especially in southern Italy (see Bats and d'Agostino 1998), the Euboian Chalkidians were not only capable mariners and founders of a multitude of colonies, but the island of Euboia, and more specifically the town of Chalkis, must have been, in the Early Iron Age, one of the most overcrowded and overpopulated regions of the ancient and modern world. This is in contrast with the view presented some two decades ago in which Snodgrass

(1983:167–169) went to great lengths to argue, using the evidence from the Early Iron Age cemeteries at Lefkandi, for a population at the site of not much more than fifty souls!

Earlier writers are, however, more ambiguous. In the often-cited passage, Thucydides (4.110.1; for further discussion of this passage, see Hammond 1995; Papadopoulos 1996a) simply refers to "Chalkidic Torone" (Τορώνη τὴν Χαλκιδικήν); it is not immediately clear if he is referring to the colonial origins of the city or that it was populated by a people whom he knew as Chalkidians. The latter is echoed by Herodotos (7.185; 8.127) who refers to a Χαλκιδικὸν γένος. Indeed, it seems clear that Diodoros misinterpreted what Thucydides said at 4.110.1, by taking Τορώνη τὴν Χαλκιδικήν to mean "Torone, colony of Chalkis," which is not what Thucydides actually said (Harrison 1912:93, 166). The same may well be true of Ephoros, who, like Diodoros, may have misinterpreted Thucydides. The fact that the Thucydidean Τορώνη τὴν Χαλκιδικήν has given rise to no fewer than four alternative possible meanings (see Hornblower 1997; Papadopoulos 1999:379), and almost a century of learned disagreement amongst Classical philologists, is ample proof of the problem at hand.

On the basis of Thucydides' and Herodotos's testimony, Harrison, as early as 1912, argued that the Chalkidike was inhabited not by Euboian colonists but by a local Greek tribe, the Chalkidians. Harrison placed much emphasis on Herodotos's *Chalkidikon genos* and also drew attention to the fact that the sources specifically stating that Chalkis founded colonies in the area were late. This view was initially met with mixed reaction: West (1914:24; 1918:7–11), having found the idea interesting in 1914, disagreed with it in 1918; Kahrstedt (1936:416–417, n. 3) appears to have agreed with Harrison, but the opposing view was strongly set out by Bradeen (1952:379–380), who argued that the Euboians colonized the Chalkidike in the eighth century B.C. Bradeen's view has found, in more recent years, a large number of adherents, beginning with Gold and Knoepfler. The former, who discusses the topic at some length, favors the arguments for Euboian colonization and provides an interesting analysis of the testimony of Stephanos Byzantios (Gold 1974:111–112). Gold notes that Stephanos at first implies that Torone was founded before the Trojan War, because Proteus's or Poseidon's daughter was called Torone, but then adds that another Torone also was established after Troy. Gold suggests this passage may indicate the Greeks *resettled* an earlier native site. More recently Knoepfler (1990) has drawn attention to the correspondence of names given to months in the Euboian and Olynthian calendars and sees in this evidence further proof of Euboian colonization. Knoepfler also alludes to the idiosyncratic numbering system used in deeds of sale from Chalkidike, which is similar to the Etrusco-Latin, and concludes that its origin can only be explained by Euboian colonization (even though the local script and dialect of Torone at this time appears to be East Ionic, not Euboian).[5] The pro-Euboian cause was strongly argued even more recently by Popham (1994) and Snodgrass (1994a; cf. 1994b). In their respective standard reference works, both Hammond (1972:426) and A. Graham (1982:83–162) accept the colonies in Chalkidike assigned to Chalkis as Euboian foundations, and, indeed, the Euboian origin of the Thracian Chalkidians is taken for granted in most handbooks dealing with Greek colonization.

Despite this general consensus, an important piece of evidence pertaining to the problem of Euboian Chalkis and Chalkidike had been generally overlooked, or its full significance minimized: namely the internal evidence of Thucydides. A close look at Thucydides' text brings to light a fundamental distinction between "Chalkidic Torone" and several other cities in Chalkidike, in that the word for colony—*apoikia*—is *never* used by Thucydides when referring to Torone. In this there is an important difference between Torone and Mende: the latter is specifically referred to as a colony (*apoikia*) of Eretria in Thucydides 4.123.1. Thucydides' terminology is both coherent and consistent; if Torone was a true colony of Chalkis, then we might have expected Thucydides to have used the word *apoikia*. Without the word for colony, a straightforward "*apoikia*-metropolis" relationship, which is such an enduring aspect of Greek colonial discourse (A. Graham 1964), did not exist between Torone and Chalkis, and it is worth stressing that there is no known *oikistes*, which is perhaps the reason why Thucydides does not refer to the towns of Sithonia, and principally Torone, as colonies. The

lack of a named *oikist* for Torone led Hornblower (1997:184) to suggest that settlers from Euboia in general, and Chalkis in particular, came to Chalkidike by a process that is described as "more like drift than like oikist-organized 'colonization.'" Here it is important to stress that the word *apoikia* does not always mean the same as the English word colony in all contexts (Osborne 1998:252).

As for Mende, Thucydides states that it is a colony of Eretria, not Chalkis. If for a moment we overlook the later and problematic testimony of Strabo and follow Thucydides in his use of *apoikia* to denote a colonized city, then it is Eretria and Andros, not to mention Corinth, that emerge as preeminent in the Chalkidike. This evidence begins to undermine the etymology of Chalkidike as deriving from Euboian Chalkis, although the opposing view is set forward by Hornblower. The latter, offering a completely new reading of certain parts of Thucydides, reviews the various meanings of "Chalkidic Torone" in Thucydides 4.110.1 canvassed in previous scholarship (Hornblower 1997: 178). By rejecting the geographical and political meanings of the passage, Hornblower (1997:177) cogently argues in favor of some translation of "Chalkidic" that implies either colonial descent from Euboian Chalkis or ethnic affiliation to a local and non-Euboian "Chalkidic genos." Hornblower argues that Thucydides in the fifth century, and perhaps Ephoros in the fourth, did think in terms of colonial descent from Euboian Chalkis. By neglecting altogether the archaeological evidence, however, Hornblower focuses on the testimony of Thucydides and assumes the priority of the fifth-century B.C. version as set out by the Athenian historian. Although offering analogies for the propagandistic behavior of Hellenes "surrounded as they were by non-Greek neighbors," Hornblower's (1997:177, 183–185) account, whatever its attractions or shortcomings, reflects fifth-century B.C. realities; it offers no evidence for the Early Iron Age (see Papadopoulos 1996a; 1999).[6]

The strongest challenge to the generally accepted view has come from Zahrnt (1971:12–27) in his seminal study of Olynthos and the Chalkidians. Denying any link with Euboian Chalkis, Zahrnt considered the population of Chalkidike, including that of Torone, to be a native Greek tribe, Ionian in origin, that had settled parts of the peninsula at the end of the Mycenaean period. Although strongly contested by Knoepfler (1990:100), Zahrnt's view was picked up by Bakhuizen (1976:14; reviewed critically by Knoepfler 1980: 190–191; 1981:163), who also concluded that the Thracian Chalkidians were a native Greek tribe. Zahrnt, unlike his predecessors and more recent commentators such as Knoepfler, attempted to review the archaeological evidence pertaining to Chalkidic colonization, not just the historical and linguistic. At the time of writing, however, he was hampered by the lack of any major excavations of the supposed Euboian colonies in Chalkidike. Whatever the vicissitudes of Euboian expansion and Euboian involvement in northern Greece—no one has seriously questioned, for example, the role of Eretria in the colonization of Mende and Dikaia—the excavations at Torone have revealed a far more complex, if not always conclusive, situation. It is clear, first of all, that the site was inhabited at least as early as the Final Neolithic or Early Bronze Age and enjoyed strong links with central and southern Greece during the Middle Bronze Age and early Mycenaean era (Cambitoglou and Papadopoulos 1993). Second, the Early Iron Age pottery and other small finds presented in this volume have established the existence of a thriving settlement at Torone predating the supposed era of colonization by several centuries and indicating strong links with the Aegean in general, not just Euboia. Third, the small quantity of Late Geometric material presented in this volume and the Late Geometric and early Archaic pottery more fully treated in *Torone* I (Cambitoglou, Papadopoulos, and Tudor Jones 2001), now supplemented by material from the more recent excavations, shows that Torone maintained links with cities like Athens and Corinth well before the period of the Peloponnesian War, and appears to have enjoyed particularly close links with the cities of East Greece, including those of Ionia and Aiolis, if the imported pottery and other small finds are anything to go by (see Papadopoulos 1996a). In short, there is to date no firm archaeological evidence for Euboian colonization in the eighth century B.C. or earlier, and abundant evidence of central and southern Greek presence at the site from at least the Middle Bronze Age on. Another aspect of the material record that has been overlooked is the fact

that Euboian pottery in particular, as well as other ceramic imports, is found in ever increasing quantities at a number of sites in Macedonia, particularly Nea Anchialos (Sindos) (e.g., Tiverios 1990: 329, fig. 7; 332, fig. 16; 1991; 1992; 1993; 1996; Tiverios, Kathariou, and Lachanidou 1994; Tiverios et al. 1995; 1997; cf. Tiverios 1988), that were never part of any recorded Euboian activity. At the same time there is very little material evidence of Euboian occupation of the supposed Euboian colonies. With the exception of Nea Anchialos, and perhaps also Karabournaki (Tiverios 1987), those Macedonian sites that have yielded significant evidence of Early Iron Age date, including material specifically of the ninth and eighth centuries B.C., do not display any major signs of contact with the Euboian sphere (see Casson 1919–21; 1923–25; see also 1926b; Heurtley 1939:103–108, 112–113, 125–127; Hänsel 1979a; 1979b; Wardle 1980:253–265).

As for the Ionian and Aiolian complexities of Chalkidike, these were reviewed by Vokotopoulou (1990b; for the chronology of the Aiolian migration see J. M. Cook 1961: ch. 38, 4–9; 1973:92–103, esp. 101). The great increase in trade between Chalkidike and East Greece she sees as being related to the political unification of the northeast Aegean after the expansion of the Persian domination of the region. Vokotopoulou also draws attention to the close link in material culture between Lemnos and parts of Chalkidike. This she explains may have been the result of the emigration of Lemnian Pelasgians to Chalkidike, following the occupation of the island by Miltiades in 513 B.C. In Book 6.140, Herodotos states that the Pelasgians from Hephaistia willingly, and those of Myrina by force of arms, left Lemnos; Herodotos, however, does not state where they emigrated. Vokotopoulou (1990b:86; cf. Di Vita 1977), following the excavators of Lemnos, suggests they moved to Sithonia. This conclusion is based on the testimony of Thucydides (4.109), where is it stated that the peninsula of Akte was inhabited by mixed foreign races speaking both Greek and their own native dialects, the majority being Pelasgians of the Tyrrhenian race that once lived in Lemnos and Athens.[7] If we accept that the Tyrsenoi (Tyrrhenians) who once lived in Lemnos and in Athens settled parts of the Chalkidike, as Thucydides tells us, then we have a plausible alternative source of transmission to the Chalkidike of the Etrusco-Latin numbering system via Lemnos. Such an explanation is far more convincing than the labored arguments for the transmission of this numbering system through the agency of Euboian colonization, as set out by Knoepfler (1990:115; for the opposing view see Papadopoulos 1996a:169–170). The unquestionable affinity between the Etruscan language and early texts from Lemnos dating from before the Athenian conquest is an avenue worth further consideration, and one not requiring the straightjacket of Euboian colonization (for the affinity between the Etruscan and Lemnian languages see, among others, Kern 1913:7, pl. 1, no. 1; Bernabò-Brea 1961; Rix 1968; Heurgon 1980; Penney 1988:725–726). Moreover, the archaeological record suggests a strong link between Torone and Lemnos that can be traced back to the Early Bronze Age and indeed, the physical proximity of Lemnos and Chalkidike is well echoed in Sophokles fragment 708 [776], where Athos casts its shadow over Lemnos at sunset (Nauck 1889: fr. 708; Pearson 1917:26–27, fr. 776).

As for the connection between Chalkidike and East Greece more generally, it is clear that by the later Geometric period, if not earlier (and certainly during the Archaic period), the incidence of East Greek imported material at Mende, Torone, and elsewhere in the Chalkidike is a feature largely unknown to scholars working in southern and central Greece. I have argued elsewhere that various threads of evidence combine to indicate that parts of Chalkidike were in closer cultural and commercial contact with the cities of the west coast of Asia Minor than they were with Chalkis, Eretria, and other *poleis* of lower mainland Greece (Papadopoulos 1996a:163). The most detailed discussion of the ceramic evidence pertaining to this problem is in Paspalas's (1995) doctoral dissertation, which establishes the strong link between Torone and various cities of western Anatolia (East Greek imported pottery is also plentiful at Karabournaki [Despoina Tsiafakis, personal communication]; see Tiverios 1987; Tiverios, Manakidou, and Tsiafakis 1998, with references to earlier reports). Documentary verification for a commercial link between the Chalkidike and East Greece is offered by a fourth-century B.C. inscription from Samos

honoring a certain Gyges of Torone, the son of Menetheos (Schede 1919: no. 6; *SEG* I:361). This Gyges appears to have been an enterprising merchant who brought grain, 3000 *medimnoi* to be exact, to Samos at a time of shortage and was accordingly offered Samian citizenship (Shipley 1987:170, 204). The fact that this Gyges has a Lydian name may offer further evidence for the close connection between Chalkidike and Anatolia (Herodotos 1.8–15; 3.122; 5.121).

As for the calendar of Torone, an important fourth-century B.C. document is the inscription found by chance at Torone in 1964, the only *major* inscription on stone thus far recovered from the site (Thessaloniki museum inv. 4396; *SEG* XXIV:574; Karamanole-Siganidou 1966:151–157, pl. 54). The text, on a schist slab, records the details of a house sale (for similar deeds of sale elsewhere in Chalkidike see *SEG* XXXVII:542, 568, 572, with references; D. Robinson 1928; 1930:101; 1931a; Robinson and Graham 1938; Hennig 1987; Hatzopoulos 1988; Vokotopoulou 1990a). The stone is dated by Hennig (1987:154–155) to ca. 350 B.C. rather than the first decades of the fourth century (the earlier date was proposed by Karamanole-Siganidou 1966; the inscription is further discussed in *SEG* XXXVII:588); Hatzopoulos (1988:36, 67) dates the inscription to 353/352 B.C. In his discussion of the stone, Hennig (1987:154–155; *SEG* XXXVII:588) points out the extremely low price (112 drachmai; for real estate prices see Ducrey and Knoepfler 1988:212–213) for the house and suspects a more complex transaction lurking under the surface involving, among others, Poseidippos, the brothers Diodoros and Philonichos, and Aristokles, in addition to a list of witnesses. The ἱερεὺς Εὐφραντίδης Ἀριστοτίμο in lines 2–4 of the text was shown by Hatzopoulos (1988) to have been a federal priest. As already noted, the same inscription also records the existence of the month *Artemisiôn*, the only month name thus far verified for Torone. In two recent articles, Knoepfler (1989; 1990) has drawn attention to the correspondence of names given to months in the Euboian and Olynthian calendars and sees in this evidence further proof of Euboian colonization of the Chalkidike. Although Knoepfler reconstructs far better than any of his predecessors both the Euboian and Olynthian calendars, his assertion that "[t]he safest clues for the determination of any Greek population's precise origin are provided by its calendar" (Knoepfler 1990:100–101) does not always stand up to closer scrutiny. I have argued elsewhere that despite other problems in Knoepfler's assertion of the preeminence of the Euboian calendar in the Chalkidike, it is clear that the adoption by the Olynthians of a calendar similar to that found in Euboia may well have happened after the "era of colonization," nor can it be maintained that what was current at Olynthos in the fourth century B.C. extends to the entire Chalkidike (Papadopoulos 1996a:167–169; 1999). Moreover, the adoption of any standard calendar system by the Classical period may have been the result of any number of social, economic, or political reasons—not to mention straightforward processes of acculturation—that do not require colonization as an explanation (Papadopoulos 1996a:169). A classic case in point is the existence of the Ionian month of *Demetriôn* at Kassandreia; it shows that the later city on the site of the former Corinthian colony of Poteidaia could change its calendar from a presumably Doric one to Ionian for reasons of straightforward political expediency (Papadopoulos 1996a:169; 1999:380). Since *Demetriôn* is Ionian, Poteidaia a Doric foundation, and Kassandreia Macedonian, would it not be reasonable to conclude, using Knoepfler's own argument, that the newly founded Kassandreia should have either a Doric or a Macedonian calendar? The adoption of a calendrical system in this case clearly reflects fourth-century B.C. realities, *not* colonial or ethnic origins.

There is one other aspect of the calendar that is worth discussing. Knoepfler's (1990:112) own insistence that the calendar was created in the Dark Ages *at the very latest*, and thus before the commonly agreed period of "Euboian" colonization, permits an alternative scenario, one in which the calendar may have traveled from Chalkidike to Chalkis. Why could the north Aegean Chalkidians not have migrated from their settlements in Chalkidike to found new towns in Euboia such as Chalkis, bringing with them the pendent semicircle skyphos (Papadopoulos 1998a) and the calendar, in addition to other items. Is it possible that, linguistically, Chalkis derives its name from Chalkidike, or from the original Bronze Age word

that the Greeks borrowed in order to give a name to bronze (see below)? Archaeologically, the evidence is intriguing: Chalkidic settlements such as Torone enjoy a prehistory that goes back at least to the final Neolithic, a venerable antiquity when compared with recent settlements such as Euboian Chalkis, which, as most Euboian scholars concur, was probably founded in the Protogeometric period (Bakhuizen 1985:94).

It appears that the more one tries to focus archaeologically on Euboians in the north Aegean, the hazier they become. A closer look at the archaeological evidence (see Papadopoulos 1996a) undermines rather than bolsters the case for Euboians. New discoveries in the north Aegean, particularly in Chalkidike, may in the future furnish hard evidence for early Euboian activity in the area, but the evidence as it stands does not support Popham's (1994) and Snodgrass's (1994a) claims of Euboian primacy. If one focuses only on the archaeological evidence in hand, the problem of Euboian primacy is often exacerbated by the fact that what are often claimed to be Euboian imports to Chalkidian sites—such as some of the misidentified pottery from Torone (see Popham 1994) or some of the pottery from Mende—turn out to be, on closer inspection, nothing of the sort (Papadopoulos 1996a:161–162). Indeed, in a recent volume dedicated to Euboia and Euboian influence in Chalkidike and the "West" (Bats and d'Agostino 1998), it is striking how very little Euboian material there really is.[8] Moreover, in looking more closely at the archaeological evidence, it is clear there are significant links between Chalkidike and central and southern Greece at various times in the Bronze Age, and that the pattern seen in the Early Iron Age had a long prehistory. Such a prehistory goes well beyond Zahrnt's original suggestion that the population of Chalkidike was a native Greek tribe, Ionian in origin, which had settled parts of the peninsula at the end of the Mycenaean period (Zahrnt 1971:12–27; cf. Harrison 1912:93; Jeffery 1990:393). More recently, Zahrnt (1997:421, n. 4) has had something of a *vorläufiger Widerruf*, in that Hatzopoulos's (1988; 1991; Hatzopoulos and Loukopoulou 1992) arguments have provisionally persuaded him to change his mind about the colonization of the Chalkidike. Zahrnt's most recent suggestion (Pernille Flensted-Jensen, personal communication) is that the Chalkidike constitutes *eine Besonderheit*, in that Sithonia was settled from Euboia *before* the emergence of *poleis* in Euboia. If so, then the origin of the name Chalkidike from Chalkis-in-Euboia becomes all the more problematic.

If the tradition for Euboian colonization—like the traditions of the Ionian Migration or the Dorian Invasion—dissolves into a mirage, best seen as a propagandistic creation of the historical era, then how are we to explain the contacts Torone enjoyed with sites in central and southern Greece in the Early Iron Age, such as Athens and those of Euboia, together with those of the eastern Aegean? And how are we best to place the settlement and cemetery of Torone within the broader cultural sphere of the Aegean Early Iron Age? The answer, I believe, lies in the commodity that made Torone a focus of interest for any enterprising Bronze or Early Iron Age player in the Mediterranean world system, a commodity that was to give its name to the very region.

THE MISSING COMMODITY: HOW METAL GAVE ITS NAME TO CHALKIDIKE

The whole question of the exploitation of metal in the Chalkidike has, historically, not received the attention it deserves, despite the fact that the location of mines in Macedonia was discussed by Casson (1926a:57–97) in the earlier twentieth century, followed by Davies' more thorough accounts in the 1930s (see Davies 1932a; 1932b; 1935:291ff; 1939; see also Forbes 1964). More recently, Gale (1979:15) lists various districts in Macedonia and Thrake as one of the four main centers of lead and silver attested by ancient authors. The others listed by Gale (1979: figs. 1–3) are Laurion in Attika, and the islands of Siphnos and Thasos. Within the *chora* of Torone, as defined by Zahrnt (1971:132–133, 136–137, map V, 247–251), there are two disused mines within five kilometers of the modern village of Sykia, and therefore the ancient settlement at Koukos (IGME 1978 map; see further Wagner et al. 1986:166–186; Pernicka 1987:655, fig. 23; cf. Wagner and Weisgerber 1985). According to the 1978 IGME map (cf. **fig. 3**), these are the only outcrops in the Sithonia subpeninsula, one

yielding galena/copper, the other galena/iron pyrites (see also E. French 1993:54; Nixon 1992–93: 184–185). Other mines are known in mainland eastern Chalkidike, two immediately north of the modern village of Metangitsion and several further north, near modern Stratonion and Olympias (see **fig. 3**; Wagner et al. 1986; Pernicka 1987:190; Olympias or Olympiada is now equated with the ancient Stageira: see Sismanidis 1990:375–378; 1991:320–325; 1992; 1993; 1994; 1995; 1997; Kiourtzoglou, Vavelidis, and Sismanidis 1999). The latter are rich in both copper and lead/silver ores (cf. Stos-Gale and Macdonald 1991; Pernicka 1987).

Unfortunately, there is to date no independent archaeological evidence for the exploitation of these ores in antiquity (Stos-Gale and Macdonald 1991:267, 272, 280; Wagner et al. 1986), although extensive Byzantine and post-Byzantine exploitation is proven (Stos-Gale and Macdonald 1991: 267–268; cf. Matschke 1991–92). Despite this, the lead ores in particular of the Chalkidike, high in silver content, have a lead isotope composition distinct from similar ores from other parts of the Aegean (Stos-Gale and Macdonald 1991:272; Pernicka et al. 1983). It has even been suggested that six of the fourteen silver objects from the Shaft Graves at Mycenae analyzed by the Oxford Laboratory reveal lead isotope data consistent with Chalkidike (Stos-Gale and Macdonald 1991:273–279; three of the fourteen objects analyzed by Oxford were also analyzed by Pernicka et al. 1983: table 1, fig. 2). The six objects assigned to the Chalkidike are all from Grave Circle A (see Stos-Gale and Macdonald 1991:285–287, nos. 151, 479, 481, 605, 863, 867, with references to Karo 1930–31). If the evidence presented by the Oxford Laboratory is correct, and the case as stated by the authors is by no means clear-cut (Stos-Gale and Macdonald 1991:272), then the historical ramifications for the Chalkidike are significant. The evidence would suggest that part of the Chalkidike was exploited for metals, with southern Greek involvement, as early as the period of transition from the Middle to the Late Bronze Age, if not already in the Middle Bronze Age or earlier. The early Mycenaean pottery (Late Helladic I–II) found at Torone (Cambitoglou and Papadopoulos 1993), may well be direct evidence of this early contact, some seven centuries before the era of colonization, which is generally assumed to be the time that this region was hellenized. It is even possible that the establishment of the settlement on the Lekythos at Torone in the Final Neolithic/Early Bronze Age period was the result of a fundamental economic shift from agrarian subsistence to the exploitation of mineral resources. The archaeological evidence is still too meager to be conclusive, both with regard to the source of the Shaft Grave silver and the fact that early Mycenaean pottery in the north Aegean is to date known only from Torone. Nevertheless, it is clear there was some form of Mycenaean interest in Chalkidike.

It is here that the recent excavations by Carington Smith and Vokotopoulou at the hilltop site of Koukos at Sykia, located close to the two mines mentioned above, provide important information. These excavations, thus far published only in preliminary reports, have uncovered part of the settlement, along with the remains of a fortification wall running along the northern edge of the summit and partly down the west side (Carington Smith and Vokotopoulou 1988), as well as a cemetery. To begin with, the Early Iron Age cemetery at Koukos has important connections with that at Torone; although roughly contemporary, the earliest tombs of the Terrace V cemetery at Torone appear to predate those of Koukos. On the basis of the preliminary reports published to date, there is, stylistically, nothing at Sykia as early as the Final Mycenaean/Submycenaean material of Torone. By the end of the 1989 season a total of seventy-eight tombs, all cremations, were cleared at Koukos. Of these, forty-one are inurned cremations in cists, fourteen inurned cremations in shallow pits, and twenty-three pithos cremations (Carington Smith and Vokotopoulou 1989:427–431, with fig. 2). In addition, an oval *peribolos* was uncovered in the northeast corner of the cemetery, approximately 6.0 m long, below which, and within the area it enclosed, was a smaller oval structure (1.40 m × 0.90 m) of heavily burned stones, thought to be the main pyre area of the cemetery. The tombs yielded many Early Iron Age wheelmade and handmade pots, very similar to those of Torone. The close similarities in mortuary practices between Torone and Sykia are briefly discussed in chapter 4. Other finds in the cemetery at Koukos include bronze

bracelets and fibulae, fragmentary iron knives and a spearhead, a silver earring, a gold hair coil, terracotta "spindlewhorls," as well as beads of bronze, silver, gold, faience, and glass, some of which are thought to be Phoenician.

Tests in the settlement at Koukos have uncovered six partially preserved building phases, most of which date to the Early Iron Age, tentatively assigned to the period from the end of the tenth to the end of the eighth century B.C.; the fortification wall has been assigned to the same period (Carington Smith and Vokotopoulou 1988; 1989). As the excavators note, the chronology of the site must await the final study of the material excavated to date, and a later date may be assigned to some of the later phases at the site. The excavation of the settlement has also brought to light part of a large Early Iron Age building with internal walls and doorways stratified on top of an earlier apsidal structure (Carington Smith and Vokotopoulou 1989:426, fig. 1). The most recent investigation of this building brought to light sherds and a number of stone tools associated with the building, the overall extent of which has not been determined (Carington Smith and Vokotopoulou 1990; French 1993:54). Immediately outside the north wall of the building an Early Iron Age pithos, complete with stone lid, was found in situ set against a deep hollow in the bedrock. In its vicinity were many fragments of a soapstone mold and small lumps of burned clay. The mold itself is two sided: one side was used for casting blades, one of which included a tang or handle; the other side preserved matrices for three roughly pointed rods (Carington Smith and Vokotopoulou 1992:497–499, 502, pl. 6; French 1993:54, fig. 37, with a description of the mold by Carington Smith; for molds and metalworking at Assiros see Wardle and Wardle 1999); there were also nodules of melted bronze (Carington Smith and Vokotopoulou 1990:447; Nixon 1992–93:184–185; French 1993:54). In view of this evidence, many of the numerous stone pounders or grinders associated with the building, as well as those scattered throughout the settlement, have been seen as possibly connected with metalworking.

Although not fully published, the material from Koukos provides direct evidence for metalworking in the region. It is worth noting here the supposed Phoenician origin of some of the small finds from the Koukos cemetery, not only for the early date of the imports but also because of the Phoenician involvement in the mines of nearby Thasos, as well as those on the mainland opposite the island. In book 6.47 Herodotos states that he himself saw these mines and that much the most remarkable were the mines discovered by the Phoenicians who came with Thasos, the son of Phoenix, to colonize the island, which has since borne his name (for Phoenician exploitation of Aegean ores see especially S. P. Morris 1992a:143–149). The Thrakian *peraia* opposite Thasos, as well as the island itself, are among the largest sources of gold, iron, and other precious metals in the Aegean (see Wagner et al. 1979; 1981; Unger and Schütz 1980; 1982; Koukouli-Chrysanthaki 1982; Photos, Koukouli-Chrysanthaki, and Gialoglou 1986; Photos 1987; Samsaris 1987; Wagner and Weisgerber 1988; for the mine on the akropolis of the ancient city of Thasos see Muller 1979; Muller and Kozelji 1988).

Arguably the most important piece of evidence for metal exploitation of the Chalkidike is the very name of the region (cf. S. P. Morris 1992a:143; Papadopoulos 1996a). It has generally been assumed that Chalkidike derives its name from Chalkis in Euboia (Boardman 1980:229; for ancient authors see, for example, Polybios 9.28.2; Strabo 7, F11; 10.1.8; see also Bakhuizen 1976:14, n. 37); both Chalkis and Chalkidike derive their names from χαλκός, or χαλκ- (Bakhuizen 1976:58–64; cf. Bakhuizen 1981). It should be further noted that there is a noun χαλκίς, with a stem χαλκιδ-, with a variety of applications to birds, fish, and lizards, and under which the proper noun Chalkis is usually placed (*LSJ* s.v. χαλκίς). Although I have argued elsewhere (Papadopoulos 1996a) that Chalkidike derives its name from χαλκός, the possibility that it derives from *chalkis* as in its application to birds, fish, or lizards should not be overlooked. While in principle there is nothing against the association of Chalkidike with *chalkos*, it is rather more difficult to see why χαλκός should have yielded a form χαλκιδ-, as Hornblower (1997) has pointed out. It may be enough simply to leave it at that and accept that, for whatever reason, there was a northern tribe called Chalkidians who gave their name to the area. Nevertheless, the association of the top-

onym Chalkidike with the word *chalkos* has much to commend it, particularly in view of the archaeological record.

In addressing the evidence pertaining to the etymology of Chalkis, Bakhuizen (1976; see also Mele 1981) pointed out that although iron deposits are numerous in central Euboia and northeast Boiotia, copper deposits are not. On the basis of this evidence Bakhuizen (1976:58–64, esp. 63, n. 75) rejected the etymology of Chalkis as "the brazen town." Here Bakhuizen argued himself into circles by seeking copper in the region of Chalkis but finding only iron (σίδηρος). He concluded that the toponym Chalkis and the word *chalkos* (as in copper) may have been derived from the root *chalk*-, but that this pre-Greek word had the possible meaning of "something conspicuous which catches the eye" (Bakhuizen 1976:58–64). It has to be stressed, however, that the Greeks used the word χαλκός in the general sense of metal fairly often, in addition to the fact that the word was used for both copper and bronze (*LSJ* s.v. χαλκός; Forbes 1950:372). Chalkis itself was probably founded in the Protogeometric period at a time when iron was first exploited to any great extent (Bakhuizen 1985:94). The fact that there are rich iron deposits in central Euboia, and even richer deposits of copper and silver, along with iron, in the Chalkidike, would support the association of the etymology of both toponyms with the word for metal (χαλκός). Whatever the etymology of Euboian Chalkis, a number of scholars, particularly Zahrnt and Bakhuizen (see above), have argued cogently that the names of the Thrakian Chalkidians and the Chalkidike were not derived from Chalkis-in-Euboia. In light of this information, the simplest solution to the problem of the name of Chalkidike, and of the *Chalkidikon genos*, is that it ultimately derives from *chalkos*—or some variant of the word—and alludes to the rich metal deposits of the region. Moreover, this name was applied to the area during the Bronze Age and has no connection whatsoever with settlers from Euboian Chalkis.

An opposing view to this scenario was set out by Hornblower (1997, with rejoinder in Papadopoulos 1999). Hornblower rightly points out that my suggestion that Chalkidike derived its name from *chalkos* or *chalk*-, and that the name ultimately refers to the rich metal deposits of Chalkidike—which are a fact—and not a colonial connection with Chalkis-in-Euboia, involves serious linguistic difficulties. Although the latter are not his prime concern, the difficulties essentially rest on the fact that if Χαλκιδική is directly derived from χαλκός, then there is a problem with the -ιδ- (Hornblower 1997:185, n. 1, citing Sir Kenneth Dover). This is true. Indeed, it may have been wiser to be more circumspect; to allude to the *possible* connection with χαλκός, but noting other possibilities and other meanings for χαλκίς, such as the unknown bird, the migratory fish (whether pilchard or sardine), the poisonous lizard, as well as the Spartan female slave (*LSJ* s.v. χαλκίς), not to mention "the penny prostitute" (χαλκιδῖτις). Indeed, the possibilities are numerous; for example, χαλκιδεύομαι means to be parsimonious, and χαλκιδίζω has many alleged meanings (parsimony, imitate the Chalkidians, even shine like bronze). My argument, however, stressed first of all that χαλκός is a non-Greek word (Hester 1965: sec. d; Bakhuizen 1976:58–64; Renfrew 1998:244) and, second, that the name Χαλκιδική—or a version of it—was applied to the region in the Bronze Age (Papadopoulos 1996a). It is well known that Greek borrowings from an earlier indigenous Aegean language, or else from another language, may have involved borrowings at different times and different places that gave rise to different forms. This is a widely attested phenomenon, especially in the case of loan words for technical terms, and I would very much welcome a "word excavation" of χαλκός and metallurgy of the sort undertaken by Barber for cloth and its manufacture (Barber 1991:260–282). From such a perspective it would be wrong to insist that a particular word—in this case *Chalkidike*—can derive *only* from a particular source that makes sense in the Classical period. Moreover, words can travel great distances, often being manipulated and molded by those who use them in very different contexts. This is not the place to embark on a lengthy linguistic exegesis, but one example, worth citing, is how another great metal source, Kholkis, was mutated, via Iranian and Celtic, to ultimately enter the English language as *Excalibur*, as the argument of Littleton and Malcor (1994) makes possible. But do we need to go this far? The fact is that if I wanted to say "containing copper" or "containing bronze" in Classical

Greek—as in "the *region* containing copper"—I would say χαλκῖτις or χαλκῖδος (λίθος χαλκῖτις means "copper ore"). Bearing in mind that the word for "bronze" in Linear B is *ka-ko* (Ventris and Chadwick 1973: 351),[9] then is *Chalkidike* so far removed from χαλκός that we can only invoke χαλκίς in order to explain it, and if χαλκίς it must be, then does χαλκίς refer to a Euboian town, or to the bird, fish, or lizard? The fact remains that both χαλκίς and χαλκός derive from χαλκ-, and that the stem χαλκ- is indelibly linked with the Bronze Age word for metal.

Although I continue to believe that the association of the name Chalkidike with the rich metal deposits of the peninsula is both elegant and attractive, it is clear the linguistic evidence by itself is not conclusive. If we turn to the archaeological evidence we can go one step further by suggesting that Early Iron Age Koukos and Torone were not settlements isolated from one another, but rather settlements populated by the same social, political, and economic group and very closely linked (the two settlements are only about five kilometers apart). If such a scenario is permissible, then the settlement at Koukos (which has furnished direct evidence of metalworking), located close to the mines of Sykia (see **fig. 3**), was the center where the ore was extracted and worked, and Torone, with its prominent harbor (see chapter 1), was the center from where the commodity was distributed. This might also explain why the ancient name of Koukos/Sykia has not survived into the present, as it was subsumed into the *chora* of historic Torone. Such a scenario explains, better than the labored and in many ways flawed arguments for Euboian colonization, the important archaeological discoveries at Koukos and Torone.

CODA: ARCHAEOLOGY AND HISTORY

In the 1960s and 1970s Starr (1962:77–106, esp. 96; 1974) warned against Atheno-centrism in early Greek history, which had been lionized by Desborough (1952; 1972). In recent years, Atheno-centrism has been overrun by Euboio-centrism (e.g., Popham 1981; 1994; Lemos 1992; Snodgrass 1994a; various papers in Bats and d'Agostino 1998). I noted in chapter 4 how remarkable it is that to this day regions such as north Euboia, Boiotia, and Thessaly are regarded as "early Greek," whereas "cultures" immediately to the north of a notional line drawn through northern Thessaly are not only regarded as "foreign," but as the very antithesis—the "Other" as Fotiadis (2001) has recently stated—of the "core provinces" further south. Indeed, the Early Iron Age Chalkidike and much of coastal Macedonia and Thrake continue to be seen as veritable New Worlds, there for the taking by enterprising southerners (e.g., Popham 1994; Snodgrass 1994a). The peculiar reputation Macedonia acquired in the discipline of Aegean prehistory that Fotiadis (2001) so cogently speaks of is one that left its legacy on the discipline of historical archaeology.

One of the results of this legacy is the very idea that any influences *must* have come from south to north—a sort of one-way cultural imperialism. I have already enumerated various items and/or influences that moved the other way, from north to south. But such arguments in today's scholarly climate would amount to heresy, as they would upset our myth-historical notions of center and periphery (cf. Rowlands, Larsen, and Kristiansen 1987; Champion 1989; Lightfoot and Martinez 1995). I do not wish, however, to replace one form of cultural imperialism with another, nor do I doubt that there was contact between Euboia and Athens and East Greece and Chalkidike. And it is certainly *not* my intention to deny that migrations or invasions or colonizations ever existed. All I want to do is try to understand the character of this interrelation more clearly.

In any discussion of the movement of commodities, people, and ideas it is important to establish, as far as possible, what the Chalkidike had to offer. I have discussed above a number of commodities—both soft and hard things—based on archaeological evidence, which should be regarded as only one part of a much broader system of exploitation of natural resources. Most of the economic activities attested for the Chalkidike in the Classical and later literary sources can now, thanks to the evidence of the Terrace V cemetery, be traced back to the Early Iron Age—and many of them to the Bronze Age as well—and most continue to this day in modern traditional Sithonia. Included among the activities discussed are timber, wine, goat and cattle herding, fishing, agriculture,

honey production, and, most significantly, the exploitation of metals. Of these, the only resource that is no longer economically viable is timber, although it would appear that any major deforestation of Sithonia may have been relatively recent, occurring in the years during, and immediately after, the Second World War.[10] The two mines in the vicinity of Sykia already mentioned have been in disuse for several decades, although they were active earlier in the twentieth century, and extensive exploitation of mines in Chalkidike in general during the Byzantine and post-Byzantine period is well known (Stos-Gale and MacDonald 1991:272; Matschke 1991–92). Consequently, all the noted activities were part of the modern traditional economy of Sithonia before the 1940s and 1950s, as they were in the Early Iron Age and Classical period. I am not arguing here for an idealized notion of a past-still-present (for which see Fotiadis 1995), but rather for the tracing of patterns in the archaeological record.

Torone in the Early Iron Age, like Torone in the Bronze Age and the Classical period, was defined by its cultural and physical landscape—a prominent cape perched near the southern tip of a long peninsula jutting well south into the Aegean. For any north- or south-bound shipping—whether confined to the Aegean or traveling to and from the Black Sea or the Mediterranean beyond—Torone offered one of the few all-weather anchorages along the entire north Aegean coastline. The critical factor of the location of Torone is the one so eloquently stated by Tritsch (1973:233; cf. Zimmern 1977:24–35, 316–317): "[T]he center of Greece was never really Athens, nor Sparta, nor any state of the mainland. The real center of Greece was the Aegean. Communication by sea was both more characteristic and more natural than movement by land. In this respect Greece is very different from most of the other countries of Europe." From the very beginning of its prehistory Torone was the product—or victim—of the corrupting sea (cf. Horden and Purcell 2000).

Early Iron Age Chalkidike, like so much of proto-historic Greece, has occupied an ambiguous, liminal space where archaeology and history cannot be regarded as two separate endeavors, as was maintained by Binford (1983:20–21) and Clarke (1978:11–12; cf. Isaac 1981; Hodder 1991:189). In the particular case of Early Iron Age Chalkidike, as I have argued here, the methods of history and archaeology were used to different ends in such a way that it represents a classic case of the problem of the implementation of different research agendas, the results of which are not comparable in prehistoric and historic contexts (cf. Lightfoot 1995:211). We must avoid what I have called elsewhere the tyranny of the text (Papadopoulos 1999). The question is not whether later historical documents should be used by students of the Early Iron Age Aegean, but rather *how* these sources should be employed most effectively in archaeological research (Lightfoot 1995:204–205). What is therefore needed, as I have argued above and as Lightfoot (1995:211) recommends, is an integrated approach to prehistory and history, promoting a more sophisticated use of historical documents. Rather than viewing historical sources as analogues for reconstructing the past, they are better used as revelations of the time at which they were recorded, and as additional sources for comparison with archaeological interpretations.

The Early Iron Age cemetery at Torone, together with the ongoing excavations of its prehistoric settlement and Classical and later city, provides something of an archaeological baseline from which a more recent past can be compared to a more remote past. It also adds archaeological flesh to a part of the Greek world and an era too long determined and defined by historical sources that are at least four hundred or five hundred years later. Much more than this, the Early Iron Age cemetery at Torone has provided a wealth of data that can be critically and constructively viewed from multiple angles.

To analyze the Early Iron Age cemetery at Torone against the backdrop of its own internal variations and, from there, to generalize on broader social aspects of the society that produced it, misses much of the texture and complexity of the greater landscape. Such a view not only overlooks the interplay of various settlements within a region, it also overlooks certain crucial natural resources. Analyzing Early Iron Age Torone solely against its regional landscape is to miss the interchange of materials and ideas that flowed from various parts of the Aegean, and to which Torone and other settlements in Sithonia and Chalkidike

contributed. To neglect the developments within the broader area of the Aegean is to neglect those features that gave Torone its specific character. At the same time, the reality of long-distance trade with both the east and west Mediterranean and the subtleties of the continuing processes that have come to be known as "Orientalism" or "Orientalization," not least of which was the adoption by the Greeks of the Phoenician alphabet, demands a broader, Mediterranean perspective that takes into account the complexity of a developing world-system (Sherratt and Sherratt 1993; Horden and Purcell 2000). The perspective adopted in this study, which unapologetically draws on a variety of archaeological perspectives and ideas and insists on presenting the archaeological material in detail, is one that permits several different frames of reference, which allow the material to be viewed from a variety of levels, both internal and external. The versions presented in this volume represent only part of the story.

NOTES

1. The number of identified animal species at Torone, on the basis of the material studied by the late Professor Sandor Bökönyi, is sixty-eight (eight domestic mammals, four domestic birds, nineteen wild animals, thirty-seven wild birds). This includes animal bones of all periods of occupation at the site (Early Bronze Age through post-Byzantine) and incorporates material from later campaigns at the site.
2. In the entire animal bone sample of all periods thus far identified from the site, bird bones account for at least thirty-seven of a total of sixty-eight species. These have been identified by Dénes Jánossy and include many waterfowl, some of them winter visitors from the northern regions of Eurasia, cliff-dwellers such as cormorants, kestrels, rock partridge, rock dove, chaughs, and starlings. Many of these, along with the great bustard, the demoiselle, and common cranes, were surely the victims of Toronean hunters.
3. During the twelfth century A.D. Sithonia came under the control of the monasteries of Mount Athos, during which time the peninsula was normally referred to as Longos. Torone itself came under the jurisdiction of the Monastery of Esfigmenou in A.D. 1346 (see Lefort 1973:140–141), and is referred to in the monastery texts by the coexistent names of Torone (in a variety of spellings), Χειμαδεῖον, and later as τόπος. The former implies a refuge of sorts in winter, the latter may refer to a cemetery.
4. Jeffery 1990:362, 369. For the coinage of Torone see, among others, Babelon 1907:1159–1163; Head 1911:206–207; 1963:106–108; D. Robinson 1931a:8–12, 27, 109–110; 1933b:96–97, pl. 20, nos. 859–876; Robinson and Clement 1938:314–316, pl. 25; Kraay 1954:10–15, pl. 2, no. 5; Seltman 1965:67, pl. 7, no. 7; Kraay and Hirmer 1966: pl. 130, no. 401; Price and Waggoner 1975:14, 21, 47–49; Papadopoulos and Paspalas 1999.
5. Knoepfler 1990:115 (see also 1989). For the numbering system itself see J. Graham 1969; Hatzopoulos 1988. Knoepfler's reasons for attributing the Chalkidian numbering system to the colonization by Chalkis are not fully explained and often difficult to follow. Be that as it may, Knoepfler has clearly overlooked that this numbering system may have come by way of Lemnos rather than Chalkis, which is discussed in further detail in this chapter.
6. Much the same ground was more recently trodden by Mele (1998), who appears to be unaware of Hornblower (1997). Mele begins with Homer in order to show that the region was considered to be outside the "Greek world" and, from there, goes on to the traditions concerning the "colonial foundations," stressing the Greek presence in Chalkidike. The colonial traditions are largely taken at face value, with little critical comment.
7. According to one tradition, Chalkidike was originally inhabited by a branch of the Edonian Thrakians known as the Sithonians (Strabo 7, fr. 10). During the seventh century B.C. the Bottiaioi (for which see Flensted-Jensen 1995) were displaced by the Argead Macedonians from the plain west of the Thermaic Gulf and occupied the northwest portion of the peninsula of Sithonia (see further Edson 1970:21; Hampl 1935b: 120–124; Gude 1933:1–6).
8. According to Morgan (1998:295), the pottery figures for Apulia in the ninth and eighth centuries B.C. are as follows: 2790 Corinthian, twenty-six Euboio-Cycladic, and a mere six Euboian pottery imports. Euboian pottery is similarly outnumbered elsewhere, including Pithekoussai. At the Monte di Vico akropolis at Pithekoussai, local pottery accounts for 81 percent of the total, Corinthian for 16 percent, and Euboian for a

paltry 3 percent (Coldstream 1998:304). Indeed, the overall picture at Pithekoussai is not so straightforward: in addition to a small amount of Euboian and a fair amount of Corinthian, there is a range of East Greek pottery as well as "imports from Italy and from Carthage, the Levant, 'Phoenician' Rhodes, and the Iberian peninsula" (Osborne 1998:258; see also Coldstream 1994b). As I previously argued (Papadopoulos 1996a; 1997b), and as Osborne (1998:258) agrees, the incidence of such pottery does not mean it was carried by people from those cities or regions where it was made; on this see, most recently, Morris and Papadopoulos 1998. As for the north Aegean, there is nothing in Moschonissiotou 1998 on Mende to alter my conclusions in Papadopoulos 1996a; 1997b.

9. As Ventris and Chadwick (1973:351) state: "The identity of the first metal ideogram [in Linear B] is proved by its totaling *to-so-de ka-ko* = τοσσόσδε χαλκός on the Pylos Jn- tablets. . . ." The various uses enumerated by Ventris and Chadwick make it safe to translate the symbol generally as "bronze" rather than "copper" (like χαλκός in Homer, with the possible exception of χαλκός ἐρυθρός, *Iliad* IX:365).
10. At the same time, the past few decades have seen an increase in woodland areas, particularly in central Sithonia, together with a decline in herding. Most of the older local inhabitants of Sykia remember "substantial" forests in Sithonia in the years before the war. According to a number of them, the greatest deforestation occurred during the Greek Civil War. There is undoubtedly a certain idealization in the remembrance of things past: the "good old days." For the pitfalls of equating the countryside with what people have actually said about the landscape see Rackham 1987; 1990 (see also 1975; 1986; 1989). The Greek forestry commission has been replanting forests throughout Sithonia in the past two decades; the result has been a substantial increase in woodland areas. In 1985 a massive brush fire swept through southern Sithonia. Much of the area south of Neos Marmaras was burned, including a large part of the archaeological site of Torone. Within a few years, the blackened hills were terraced and reforested by the government, and a decade later there was virtually no trace of the damage caused by the fire. It should also be noted that in the 1980s Sykia (1981 population about 2500: Papangelos 1981) boasted at least three thriving carpenters' establishments. On the question of deforestation in ancient Greece see Hughes 1983; on the fallacies inherent in modern notions of Greek deforestation see Rackham 1990:93–98.

Concordance I
Inventory and catalogue numbers

Inventory no.	Catalog no.
75.248	84
75.324	92
75.356	91
75.381	87
75.385	86
75.789	88
75.790	90
75.794	89
76.764	85
78.1600	94
78.2427	93
81.01	T19-1
81.04	T1-2
81.07	T41-3
81.08	T38-2
81.09	T38-1
81.10	T18-1
81.11	T39-1
81.12	T1-1
81.43	T46-3
81.49	T44-1
81.162	T46-1
81.173	23
81.231	T6-1
81.244	T48-1
81.247	T52-1
81.269	T56-3
81.310	T37-1
81.355	T69-2
81.360A–D	T41-2
81.362	T28-4
81.364	T96-1
81.365	T50-1
81.366	T44-2
81.367	T64-1
81.368A	T21-1
81.368B	T21-2
81.370	T21-3

Inventory No.	Catalog No.
81.371+81.830	T20-1
81.373	T124-1
81.376A	T51-1
81.376B	T51-2
81.377	T53-1
81.378	T53-2
81.379	T97-1
81.380	T40-1
81.381	3
81.383	T61-1
81.384	T63-1
81.385	T62-1
81.386	32
81.387	T68-2
81.388	T68-1
81.389A+B	T56-1
81.391	T58-1
81.392	T56-2
81.461	T51-5
81.473	T43-1
81.474	T42-1
81.505	T54-2
81.517	T60-2
81.523	T82-2
81.524	T82-4
81.531	T52-2
81.531B	T52-3
81.546	T7-6
81.547	T7-5
81.548	T7-4
81.561	24
81.562	T7-1
81.563	26
81.564A	T51-3
81.564B	T51-4
81.565	T58-2
81.569	T29-1
81.570	T82-1

Inventory No.	Catalog no.
81.581	7
81.602	T31-1
81.603	T22-1
81.604	T23-1
81.605	T36-1
81.606A	36
81.607A	33
81.607B	34
81.607C	35
81.609	T24-1
81.610A+B	T123-2
81.611	8
81.612	T124-3
81.613	T65-1
81.615	T54-1
81.624	T127-1
81.625	28
81.632	T122-2
81.634	T126-1
81.640	T20-2
81.646	T57-1
81.650	T7-8
81.651	T7-7
81.663	T131-1
81.664	T130-1
81.665	30
81.670	T133-1
81.685	T69-1
81.688	T69-3
81.689	T123-1
81.719	T22-2
81.725	T134-1
81.726	T82-5
81.727	T52-5
81.728	T52-4
81.730A+B	T41-1
81.731+81.743A	T67-2
81.732	T111-1
81.733	T67-3
81.734	T7-3
81.735	T7-2
81.736	T28-1
81.737	T124-1

Inventory No.	Catalog no.
81.741	T35-1
81.743	T67-1
81.743A+81.731	T67-2
81.822	T82-3
81.826	T132-1
81.827	T17-1
81.828	T122-1
81.829	T45-1
81.830+81.371	T20-1
81.831	T32-1
81.832	T66-1
81.833	T49-1
81.834	T129-1
81.835A	T128-1
81.835B	T128-2
81.836	T33-1
81.837	T60-1
81.841	T30-1
81.894	T21-4
81.895	T107-1
81.1130A+B	T34-1
81.1131	T34-2
81.1132	T42-2
81.1133	T42-3
81.1134	T59-1
81.1135A–C	T125-1
81.1136	T125-2
81.1137	T125-3
81.1138	T107-2
81.1139	T63-2
81.1140	9
81.1141	10
81.1142	11
81.1143	T24-2
81.1144	T24-3
81.1145	T24-4
81.1146	27
81.1147	29
81.1148	25
81.1149	31
81.1150A+B	T111-2
81.1151	T111-3
81.1152	T111-4

Inventory No.	Catalog no.
81.1153	T22-3
81.1155	T46-2
81.1156	T43-2
81.1157A	T6-2
81.1157B	T128-4
81.1158	T128-3
81.1159	T128-5
81.1162A+B	T123-3
81.1163	T123-4
81.1164	T123-5
81.1198	5
81.1199	6
81.1200	1
81.1201	2
81.1202	4
81.1203	12
81.1204	13
81.1205	15
81.1206	14
81.1207	16
81.1208	17
81.1209	18
81.1210	19
81.1211	20
81.1212	21
81.1213	22
81.1218	T18-2
81.1219	T38-3
81.1220	T124-4
81.1221	T69-4
81.1222	T58-3
81.1223	T56-4
81.1226	T28-3
S81.03	T28-2
S81.05	T48-2
82.03	T115-3
82.04	T115-2
82.08	T115-4
82.15	T115-1
82.24	T99-1
82.26	T99-2
82.27	T99-3
82.28A+82.1088+84.436	T101-8
82.28B+C+84.435A+B	T101-7
82.38	T108-1
82.39	T109-1
82.40	T109-5
82.41	T88-1
82.27	T104-4
82.66	60
82.67A–C	T118-2
82.68	T118-4
82.69	T118-3
82.70	T118-1
82.79	T89-1
82.80A+B	T94-1
82.81	T87-1
82.82	T92-1
82.88	43
82.89A–C	38
82.90	T112-2
82.91	T90-1
82.92	T113-1
82.93	T93-1
82.97	T114-1
82.97B	T114-2
82.98	T112-1
82.119	T119-1
82.143	T116-1
82.144	T117-1
82.149	T95-1
82.152	T80-2
82.153+82.1119+82.1125	T110-1
82.154A+B	T80-1
82.160	T120-1
82.161A–C	T121-1
82.179	T104-2
82.180	T104-1
82.181	T104-8
82.182	T16-1
82.264A	44
82.264B	45
82.265	T13-2
82.266	T13-1
82.267	T103-1
82.268	46

Inventory No.	Catalog no.
82.269	47
82.270	T105-1
82.271A	T104-6
82.271B	T104-5
82.287	T25-1
82.421	82
82.446	62
82.486	T55-1
82.523A–D	T91-1
82.604	KP-1
82.656	T75-4
82.658	83
82.716A	T75-2
82.716B	T75-3
82.717	T75-1
82.810	T114-3
82.985A+B	T76-1
82.988A–C	T115-12
82.989+82.990	T115-13
82.990+82.989	T115-13
82.991	T115-9
82.992	T115-8
82.993	T115-5
82.994	T115-7
82.995	T115-10
82.996	T115-6
82.997	T115-11
82.998	Cf. T117
82.999	T117-12
82.1000	T117-10
82.1001	T117-11
82.1002	T117-13
82.1003	Cf. T117-12
82.1004	T117-3
82.1005	T117-5
82.1006	T117-4
82.1007	T117-2
82.1008	T117-6
82.1009	T117-7
82.1010+82.1015	T117-14
82.1011	T117-9
82.1012+82.1016	T117-15
82.1013	Cf. T117

Inventory No.	Catalog no.
82.1014	Cf. T117
82.1015+82.1010	T117-14
82.1016+82.1012	T117-15
82.1018+82.1019	Cf. T117-2
82.1019+82.1018	Cf. T117-2
82.1020	T117-8
82.1021	Cf. T117
82.1022	Cf. T117-5
82.1023	Cf. T117
82.1024+82.1026	Cf. T117-4
82.1025	Cf. T117-9
82.1026+82.1024	Cf. T117-4
82.1027	Cf. T117
82.1028	T117-19
82.1029	T117-17
82.1030	T117-16
82.1031	T117-18
82.1032	Cf. T117
82.1033A–C	T117-20
82.1034A–F	T104-9
82.1035	T104-10
82.1036	T104-12
82.1037	T104-14
82.1038	T104-13
82.1039	T104-16
82.1040	T104-18
82.1041A–C	T104-19
82.1042	T104-3
82.1078	T105-3
82.1079	T105-4
82.1080	T105-5
82.1081	T105-6
82.1082	T105-7
82.1083A+B	T88-2
82.1084A–C	T88-3
82.1085	T25-4
82.1086	T25-3
82.1087A–C	T95-2
82.1088+82.28A+ 84.436	T101-8
82.1089	T101-14
82.1090	61
82.1091	T118-8
82.1092	T118-9

Inventory No.	Catalog no.
82.1093	T118-7
82.1094	T118-6
82.1095	T118-5
82.1096	T118-10
82.1097	T118-11
82.1098	67
82.1099	66
82.1100	48
82.1101	49
82.1102	52
82.1103	51
82.1104	50
82.1105	54
82.1106	53
82.1107	41
82.1108	40
82.1109	42
82.1110	T108-7
82.1111	T108-3
82.1112	T108-4
82.1113	T108-5
82.1114	T108-6
82.1115	T108-2
82.1116	39
82.1117	T119-2
82.1118	T119-3
82.1119+ 82.153+ 82.1125	T110-1
82.1120	T113-3
82.1121	T113-4
82.1122	T113-5
82.1123	T113-8
82.1124	T113-2
82.1125+82.153+ 82.1119	T110-1
82.1126	T113-6
82.1127	T113-9
82.1128	T113-10
82.1129	T113-7
82.1130	T113-13
82.1131	T113-14
82.1132	T113-15
82.1133	T113-11
82.1134	T113-12
82.1135	T113-16

Inventory No.	Catalog no.
82.1136	T113-17
82.1138	63
82.1139	T109-2
82.1140	T109-3
82.1141	T109-4
82.1142	T112-3
82.1143	T112-4
82.1144	T112-6
82.1145	T112-5
82.1146	T112-7
82.1147	T121-2
82.1148	T103-2
82.1149	T103-3
82.1150	T103-4
82.1151A+B	T103-5
82.1152A–C	T114-4
82.1153	T114-5
82.1154	T114-6
82.1155	T114-7
82.1156	T74-2
82.1157	T73-2
82.1158	T74-1
82.1159	T79-1
82.1160	T73-1
82.1161	T25-2
82.1162	T105-2
82.1163	T104-7
82.1164	T104-11
82.1165	T104-15
82.1166	T104-17
82.1172	37
82.1173	65
82.1174A–D	64
82.1176	T116-2
82.1177	T116-3
82.1178	T116-4
82.1184	KP-4
82.1185	KP-2
82.1186	KP-3
82.1187	KP-14
82.1188	KP-5
82.1189	KP-6
82.1190	KP-8

Inventory No.	Catalog no.
82.1191	KP-9
82.1192	KP-7
82.1193	KP-13
82.1194	KP-12
82.1195	KP-11
82.1196	KP-10
84.04	T10-3
84.05	T10-2
84.22	T10-1
84.22A	T10-1a
84.24	T10-4
84.52	T102-1
84.67	T100-1
84.67A	T100-2
84.111	T10-5
84.123	T101-1
84.124	T101-11
84.125	T10-6
84.132	T27-1
84.133	T27-2
84.143	79
84.146	T47-1
84.146A	T47-2
84.147A	T106-2
84.147B	T106-3
84.148	T98-1
84.149	T47-4
84.150	T47-3
84.151+84.427	T12-1
84.161	T26-3
84.162	T26-1
84.162A	T26-2
84.166	T106-1
84.193	59
84.208	T9-1
84.250	T71-1
84.251	T72-1
84.273	T70-1
84.274	T70-3
84.275	T70-2
84.279	T78-1
84.285	T77-2
84.286	T77-1

Inventory No.	Catalog no.
84.337+84.420	78
84.369	T86-1
84.370	T81-3
84.371	T86-2
84.372	T81-1
84.373	T81-4
84.374	T83-1
84.375	T85-1
84.376	T81-2
84.379	T84-1
84.380	T84-2
84.392	79
84.405	T10-7
84.406	T84-3
84.408	T77-3
84.409	T83-2
84.410	68
84.411	69
84.412A+B	70
84.413	71
84.414	72
84.415A–C	74
84.416	73
84.417	75
84.418	77
84.419	76
84.420+84.337	78
84.421	T11-2
84.422	T11-3
84.423A–C	T102-2
84.424	T102-4
84.425	T102-5
84.426	T102-3
84.427+84.151	T12-1
84.428	81
84.429	T101-2
84.430	T101-3
84.431	T101-4
84.432	T101-5
84.433	T101-6
84.434	T101-9
84.435A+B + 82.28B+C	T101-7
84.436+82.28A+82.1088	T101-8

Inventory No.	Catalog no.
84.437	T101-10
84.438A+B	T101-12
84.439	T101-13
84.440	T98-2
84.441	T84-4
84.442	T101-15
L84.11	55

Inventory No.	Catalog no.
L84.19	56
M84.34	57
M84.53	58
M84.64	T11-1
M84.118	T10-8
M84.146	T102-7
M84.146A	T102-6

Concordance II

Tomb excavation and tomb catalogue numbers

Tomb excavation no.	Tomb catalog no.
Test TR 1 7#12 Skeleton 1	Tomb 3
Test TR 1 S.F.1	Tomb 19
Test TR 1 S.F.3+4	Tomb 1
Test TR 1 S.F.5	Tomb 18
TR 1 3#24 Skeleton 2	Tomb 2
TR 1 6#11, 26 Skeleton 3	Tomb 4
TR 1 S.F.11+12+20+21	Tomb 21
TR 1 S.F.13+17	Tomb 22
TR 1 S.F.14	Tomb 23
TR 1 S.F.18+19	Tomb 20
TR 1 S.F.22	Tomb 24
TR 1 S.F.23	Tomb 17
TR 6 S.F.1+2	Tomb 38
TR 6 S.F.3	Tomb 39
TR 6 S.F.4+5+6	Tomb 41
TR 6 S.F.7	Tomb 40
TR 6 S.F.8	Tomb 45
TR 6 S.F.11+13	Tomb 44
TR 6 S.F.12+15	Tomb 28
TR 6 S.F.14	Tomb 37
TR 6 S.F.16	Tomb 43
TR 6 S.F.18+21	Tomb 46
TR 6 S.F.19	Tomb 42

Tomb excavation no.	Tomb catalog no.
TR 6 S.F.22	Tomb 48
TR 6 S.F.24	Tomb 50
TR 6 S.F.28+30	Tomb 52
TR 6 S.F.29	Tomb 53
TR 6 S.F.31 and TR 6 EBaulk S.F.4	Tomb 54
TR 6 EBaulk S.F.1+2+3	Tomb 51
TR 6 EBaulk S.F.5	Tomb 49
TR 9 S.F.7	Tomb 134
TR 9 S.F.25	Tomb 133
TR 9 S.F.58	Tomb 125
TR 9 S.F.63+64+67	Tomb 124
TR 9 S.F.65+66	Tomb 123
TR 9 S.F.68	Tomb 127
TR 9 S.F.69	Tomb 126
TR 9 S.F.70+71	Tomb 122
TR 9 S.F.72	Tomb 130
TR 9 S.F.73	Tomb 131
TR 9 S.F.74	Tomb 132
TR 9 S.F.77	Tomb 129
TR 9 S.F.78+79	Tomb 128
TR 12 SW Skeleton 1	Tomb 6
TR 12 SW Skeleton 2	Tomb 7
TR 12 SW Skeleton 3	Tomb 8

Tomb excavation no.	Tomb catalog no.
TR 12 S.F.1	Tomb 96
TR 12 S.F.11	Tomb 97
TR 12 S.F.13	Tomb 31
TR 12 S.F.14	Tomb 32
TR 12 S.F.20	Tomb 29
TR 12 S.F.22	Tomb 30
TR 12 S.F.24 Pots 1–5	Tomb 82
TR 12 EBaulk S.F.2	Tomb 36
TR 12 EBaulk S.F.4	Tomb 33
TR 12 EBaulk S.F.5	Tomb 34
TR 12 EBaulk S.F.6	Tomb 35
TR 13 S.F.2	Tomb 59
TR 13 S.F.4	Tomb 66
TR 13 S.F.7+9+12	Tomb 67
TR 13 S.F.8+10	Tomb 69
TR 13 S.F.16+17	Tomb 58
TR 13 S.F.18+19+20	Tomb 56
TR 13 S.F.22	Tomb 57
TR 13 S.F.24	Tomb 63
TR 13 S.F.25+27	Tomb 68
TR 13 S.F.26	Tomb 61
TR 13 S.F.28	Tomb 62
TR 13 S.F.34+35	Tomb 60
TR 13 S.F.36	Tomb 65
TR 13 S.F.39	Tomb 64
TR 13 EBaulk Pots 1+2+3	Tomb 70
TR 22 S.F.17	Tomb 111
TR 22 S.F.18	Tomb 107
TR 22 S.F.24+25+26+27	Tomb 115
TR 22 S.F.31+32+33	Tomb 99
TR 22 S.F.36	Tomb 108
TR 22 S.F.38	Tomb 109
TR 22 S.F.39+40+41+42	Tomb 118
TR 22 S.F.44	Tomb 113
TR 22 S.F.45 and S.F.46	Tomb 112
TR 22 S.F.47	Tomb 114
TR 22 S.F.48	Tomb 110
TR 22 S.F.49	Tomb 119
TR 22 S.F.50	Tomb 117
TR 22 S.F.51	Tomb 116
TR 22 S.F.53	Tomb 120
TR 22 S.F.54	Tomb 121
TR 25 4#32 and 5#41 Skeletons 1 &2	Tomb 16
TR 25 4#909 Skeleton 4	Tomb 14
TR 25 4#902, 908 Skeleton 5	Tomb 13
TR 25 S.F.25+26	Tomb 104
TR 25 S.F.35	Tomb 103
TR 25 S.F.36	Tomb 105
TR 25 NBaulk Burial 1	Tomb 10
TR 25 NBaulk Burial 2	Tomb 9
TR 25 EBaulk Burial 5	Tomb 11
TR 25 EBaulk Burial 6	Tomb 15
TR 25 EBaulk Burial 7	Tomb 12
TR 25 EBaulk Pot 2	Tomb 102
TR 25 EBaulk Pot 3	Tomb 101
TR 25 EBaulk Pot 4	Tomb 100
TR 25 EBaulk Pot 8	Tomb 98
TR 25 EBaulk Pots 9+10	Tomb 106
TR 26 S.F.3	Tomb 88
TR 26 S.F.4	Tomb 94
TR 26 S.F.6	Tomb 89
TR 26 S.F.7	Tomb 87
TR 26 S.F.8	Tomb 92
TR 26 S.F.9	Tomb 90
TR 26 S.F.10	Tomb 93
TR 26 S.F.11	Tomb 91
TR 27 S.F.1+2	Tomb 80
TR 40 3#222–225 Skeletons 1+2	Tomb 5
TR 40 S.F.5	Tomb 95
TR 43 S.F.5	Tomb 25
TR 43 S.F.10	Tomb 55
TR 46 S.F.4	Tomb 76
TR 46 S.F.5+8+9	Tomb 75
TR 46 S.F.11	Tomb 79
TR 46 S.F.12+15	Tomb 73
TR 46 S.F.13+14	Tomb 74
TR 46 EBaulk Pot 1	Tomb 72
TR 46 EBaulk Pot 2	Tomb 71
TR 56 Pots 2+3	Tomb 27
TR 56 Pots 4+5	Tomb 26
TR 56 Pots 6+7+8	Tomb 47
TR 59 Pots 1+2	Tomb 77
TR 59 Pot 3	Tomb 78
TR 60 Pots 1+2+3+4	Tomb 81
TR 60 Pot 5	Tomb 83
TR 60 Pots 6+7	Tomb 86
TR 60 Pot 8	Tomb 85
TR 60 Pots 9+10+11	Tomb 84

List of tombs according to trenches

Test TR 1
Tomb 1
Tomb 3
Tomb 18
Tomb 19

TR 1
Tomb 2
Tomb 4
Tomb 17
Tomb 20
Tomb 21
Tomb 22
Tomb 23
Tomb 24

TR 6
Tomb 28
Tomb 37
Tomb 38
Tomb 39
Tomb 40
Tomb 41
Tomb 42
Tomb 43
Tomb 44
Tomb 45
Tomb 46
Tomb 48
Tomb 50
Tomb 52
Tomb 53
Tomb 54

TR 6 East Baulk
Tomb 49
Tomb 51

TR 9 (and Test TR 9)
Tomb 122
Tomb 123
Tomb 124
Tomb 125
Tomb 126
Tomb 127
Tomb 128
Tomb 129
Tomb 130
Tomb 131
Tomb 132
Tomb 133
Tomb 134

TR 12
Tomb 6
Tomb 7
Tomb 8
Tomb 29
Tomb 30
Tomb 31
Tomb 32
Tomb 82
Tomb 96
Tomb 97

TR 12 East Baulk
Tomb 33
Tomb 34
Tomb 35
Tomb 36

TR 13
Tomb 56
Tomb 57
Tomb 58
Tomb 59
Tomb 60
Tomb 61
Tomb 62
Tomb 63
Tomb 64
Tomb 65
Tomb 66
Tomb 67
Tomb 68
Tomb 69

TR 13 East Baulk
Tomb 70

TR 15
No tombs

TR 22
Tomb 99
Tomb 107
Tomb 108
Tomb 109
Tomb 110
Tomb 111
Tomb 112
Tomb 113
Tomb 114
Tomb 115
Tomb 116
Tomb 117
Tomb 118
Tomb 119
Tomb 120
Tomb 121

TR 22 North Baulk
No tombs

TR 25
Tomb 13
Tomb 14
Tomb 16
Tomb 103
Tomb 104
Tomb 105

TR 25 North Baulk
Tomb 9
Tomb 10

TR 25 East Baulk
Tomb 11
Tomb 12
Tomb 15
Tomb 98
Tomb 100
Tomb 101
Tomb 102
Tomb 106

TR 26
Tomb 87
Tomb 88
Tomb 89
Tomb 90
Tomb 91
Tomb 92
Tomb 93
Tomb 94

TR 26 East Baulk
No tombs

TR 27
Tomb 80

TR 28
No tombs

TR 29
No tombs

TR 40
Tomb 5
Tomb 95

TR 43
Tomb 25
Tomb 55

TR 44
No certain tombs

TR 46
Tomb 73
Tomb 74
Tomb 75
Tomb 76
Tomb 79

TR 46 East Baulk
Tomb 71
Tomb 72

TR 47
No certain tombs

TR 47 North Baulk
No certain tombs

TR 47 East Baulk
No certain tombs

TR 48
No certain tombs

TR 55
No tombs

TR 56
Tomb 26
Tomb 27
Tomb 47

TR 56 East Baulk
No tombs

TR 57
No tombs

TR 57 East Baulk
No tombs

TR 58
No certain tombs

TR 59
Tomb 77
Tomb 78

TR 60
Tomb 81
Tomb 83
Tomb 84
Tomb 85
Tomb 86

Bibliography

Special abbreviations

SEG *Supplementum epigraphicum graecum*
LSJ H. G. Liddell, R. Scott, and H. Stuart Jones, *Greek-English Lexicon*, 9th ed. (Oxford 1940)

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Index

All references are to pages: the suffix "f" refers to figures; the suffix "p" to plates, both of which are in Volume 2.

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This volume publishes the excavation and analysis of the Early Iron Age cemetery at Torone in Chalkidike, in the north Aegean, Greece. Spanning the period between the twelfth or eleventh century down to ca. 850 BC, the cemetery represents one of the few burial grounds of the period in Greece to have been excavated virtually in its entirety (yielding 134 tombs, of which 118 were cremations and 16 inhumations). In addition to full analyses of the material from individual tombs (pottery, objects of metal, terracotta, stone, bone, glass compound, amber), as well as the burial customs and funerary rites, a series of specialist reports present the physical anthropology of the deceased, as well as the retrieved faunal and floral remains. There is also a petrographic and chemical analysis of the pottery, one of the most comprehensive of its type in Greece. In addition to presenting the archaeological data from the cemetery, this volume seeks to (re)construct a picture of a society in a formative era and for a part of the Greek world that until very recently was archaeologically neglected.

Contributors to this volume include Jonathan H. Musgrave (University of Bristol), the late Sandor Bökönyi and Ferenc Gyulai (Hungarian Academy of Sciences), Deborah Ruscillo (Washington University, St. Louis), Kristina Kelertas (UCLA), Richard E. Jones (University of Glasgow), and Ian K. Whitbread (University of Leicester).

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