respect to “Ethnicity and Intersite Variability” and the “Shasta Complex.” In both cases, the authors seem to suggest that the limitations of a testing program with 1 x 2-m. units were mostly to blame.

Taken together, the concluding remarks seem to indicate that little success was made in meeting the stated research objectives. The authors indicate that the quality and quantity of data actually available from project sites in the canyon were largely responsible. However, this reviewer feels the lack of more demonstrable results can be at least partly traced to the absence of an explicit linkage between research problems, methods, and data. Without specifying how questions would be answered and how the data should pattern archaeologically, one is left concluding, as INFOTEC seems to, that the only solution is more digging. While such a conclusion may be appropriate for a testing contract, the results—of what was, as of 1984, the largest archaeological endeavor ever undertaken in north-central California—seem to be, well, not that exciting.

REFERENCES
Hildebrandt, William R., and John F. Hayes

Raven, Christopher


Reviewed by CHESTER KING
P. O. Box 1324
Topanga, CA 90290

These are the first two of a five-volume series that presents the known ethnographic data concerning the material culture of the Chumash and adjacent groups. The ethnographic notes of John Peabody Harrington represent the largest portion of the data. Other ethnographic sources are also incorporated and photographs of many ethnographic and some archaeological specimens are used to illustrate many artifact types. Most of the ethnographic data presented have previously been available only as unpublished notes. Hudson and Blackburn have carefully organized these notes and incorporated most published references to artifacts used by the Chumash. Many of the numerous photographs of ethnographic specimens in these volumes have not been published and provide important documentation of Chumash material culture.

Although virtually all of the Chumash and neighboring groups to the east were incorpor-
ated into Spanish missions by the 1820s, these volumes demonstrate that Harrington and others were able to gather an extensive body of detailed knowledge concerning the material culture of the Chumash and their neighbors. The degree of ethnographic detail concerning Chumash material culture presented in these volumes was made possible by the persistence of many aspects of pre-mission Chumash culture through the Spanish mission period into the present century. The relative thoroughness of coverage was primarily made possible by Harrington's methodical efforts to gather linguistic data concerning everything in the Chumash environment.

Chumash craftsmen were noted by early Spanish explorers for their manufacturing skills and the quality of their products. The Chumash material culture was more elaborate than that of neighboring groups as a result of the greater development of Chumash economic systems. The Chumash were motivated to both own and produce finely made artifacts.

Hudson and Blackburn have made accessible in a convenient format most of the known ethnographic data concerning the material culture of the Chumash, Kitanemuk, Tataviam, and Gabrielino Indians of southern California. They have organized the data concerning Chumash material culture into categories of artifacts used for food procurement, transportation, food preparation, shelter, clothing, ornamentation, grooming, ceremonies, games, amusements, manufacturing, measuring, and trade. The first two volumes in the series contain data related to the first four of these categories. In Part 1, Food Procurement, 20 types of traps, nets, disguises, and blinds; 15 types of artifacts related to shooting animals; 15 types of fishing tackle; and 7 types of artifacts used to gather plant foods are discussed. In Part 2, Transportation, 8 types of baskets used in transport, 10 types of nets and bags, 9 types of miscellaneous objects used to carry things, 6 types of canoes, and 6 canoe accessories are discussed. In Part 3, Food Preparation, 9 types of storage facilities, 25 tools used to process foods, 13 objects used in cooking, and 26 objects used to serve food are described. In Part 4, Shelter, 6 types of houses or shelter, 5 objects associated with fire-making, and 18 types of home furnishings are described. The native names, unpublished ethnographic descriptions, and published historical references are given for each artifact type described. Some ethnographic references conflict with each other. The authors usually state their opinions when sources conflict or when sources are ambiguous.

These volumes concerning Chumash material culture should be consulted by archaeologists studying Mesolithic sites in the Old World. The Chumash maintained a complex society, relied in large part on fishing, did not use pottery, and used stone instead of metal for their tools. Unlike most Old World Mesolithic cultures, the Chumash culture has been described by ethnographers, European explorers, and colonists as well as by archaeologists. These volumes are important to all archaeologists because of the potential insight which can be gained concerning the functions of artifacts and their social contexts.

Hudson and Blackburn present ethnographic data relevant to knowledge of the material culture of the Chumash prior to Spanish colonization. They do not, however, synthesize all that is known or can be known concerning Chumash material culture. Some of the artifacts that are described were not used at the time of Spanish colonization and some artifacts were used that are not described. Further primary research concerning material culture can be expected to yield new information. Several types of research that will increase our knowledge are: (1) study of archaeological specimens in terms of both contexts and wear patterns; (2) replicative
experiments involving both the manufacture and use of artifacts; and (3) analysis of the writings of the Spanish priests and soldiers who participated in the colonization of California.

In a review of Volume 1 published in a 1983 issue of the Society for California Archaeology Newsletter, I noted a number of errors of attribution and interpretation. Some of the most significant errors involve the misuse of archaeological data. One is the identification of a San Diego County hilltop fortification as a Chumash hunting blind. The choice of artifacts from archaeological collections for illustrations was also frequently made without considering the time period during which the artifacts were used. Stone points, fishhooks, fishhook blanks, manos, metates, mortars, and stone cups that are artifact types used only during the Early and Middle Periods (i.e., pre-A.D. 1150) are illustrated as examples of Chumash artifacts. The time periods during which they were used are not mentioned. Several types of artifacts are described that archaeological and/or ethnographic data indicate were not used by the Chumash or their eastern neighbors at the time of European contact and colonization. These include fishspears, toggle-tipped salmon harpoons, fish arrows, and probably manos and metates.

In conclusion, the thorough presentation of ethnographic data is extremely useful to students of Chumash ethnography and archaeology. The Material Culture of the Chumash Interaction Sphere is a basic source of information concerning Chumash ethnography.