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Author

Timbrook, Janice

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A Wooden Artifact from Santa Cruz Island

JANICE TIMBROOK

Santa Cruz Island, lying some 30 km. south of Santa Barbara, was occupied by the Chumash and their ancestors for several thousand years, up until about 1815. More recently, the island has been privately owned and it is currently operated as a cattle ranch. A private club allows hunting of feral sheep and pigs, which range over most of the island. A few years ago, one of these hunters found an unusual wooden object in the course of unauthorized hunting for Indian artifacts. The purpose of this paper is to describe the object and to consider archaeological, historical, and ethnographic evidence which can shed light on its possible age and function.¹

Following a discussion of the find, the object itself is described. Comparisons are then drawn between this object and several types of historically and ethnographically known artifacts. It is argued that the object was probably not made and used in historic times. Assuming that Chumash material culture was similar in the late prehistoric era, possible Indian uses are discussed: canoe paddle, talisman, toy, digging implement, and mush stirrer. The evidence indicates that this object probably functioned as a mush stirrer, a conclusion further supported by the fact that paddle-shaped stirring sticks were used by many other California Indian groups.

ARCHAEOLOGICAL CONTEXT

In January, 1976, a businessman named Bill Miller flew to Santa Cruz Island along with several other people for a few days of hunting. The hunt club provides accommoda-



Janice Timbrook, Santa Barbara Museum of Natural History, 2559 Puesta del Sol Road, Santa Barbara, CA 93105.

tions and guides for such trophy seekers. During his pursuit of semi-wild game, Miller noticed evidence of Indian occupation and was inspired by his limited experience with avocational archaeology groups in the Los Angeles area. He began to search for artifacts without the permission or knowledge of the owner of this private property.

While digging out the midden deposit in a rock shelter in Laguna Canyon, Miller noticed a piece of wood projecting from a small pocket in the ceiling of the cave. Curious, he pulled on it and extracted from the crevice a wooden object shaped like a paddle (Fig. 1), about three feet long with a blade at each end.² He continued digging, but among the broken shell and bone found nothing else recognizable as an artifact at that site. At another site about 100 feet to the south, he reported, stone bowls and grinding stones were found. Realizing that the wooden "paddle" might be important, Miller turned it and the stone implements over to the owner of the island, Dr. Carey Stanton, who donated the wooden object to the Santa Barbara Museum of Natural History soon afterward.³

Museum staff made subsequent visits to the site, which was recorded as SCrI-387, and confirmed Miller's report of a lack of conspicuous artifactual remains. The midden consists of *Haliotis* and *Mytilus* shell in a concentration rather sparse in comparison with that at other island sites. Feral sheep bones were scattered on the surface. No excavation was done because it could not be established that the wooden object from the ceiling of the cave was contemporaneous with the midden on its floor. It is most unfortunate that the object was not brought to the attention of a trained archaeologist before being removed from the cave. Since the object was not actually associated with cultural deposits, its archaeological context can only be used to add support to other kinds of evidence in determining its age and function.

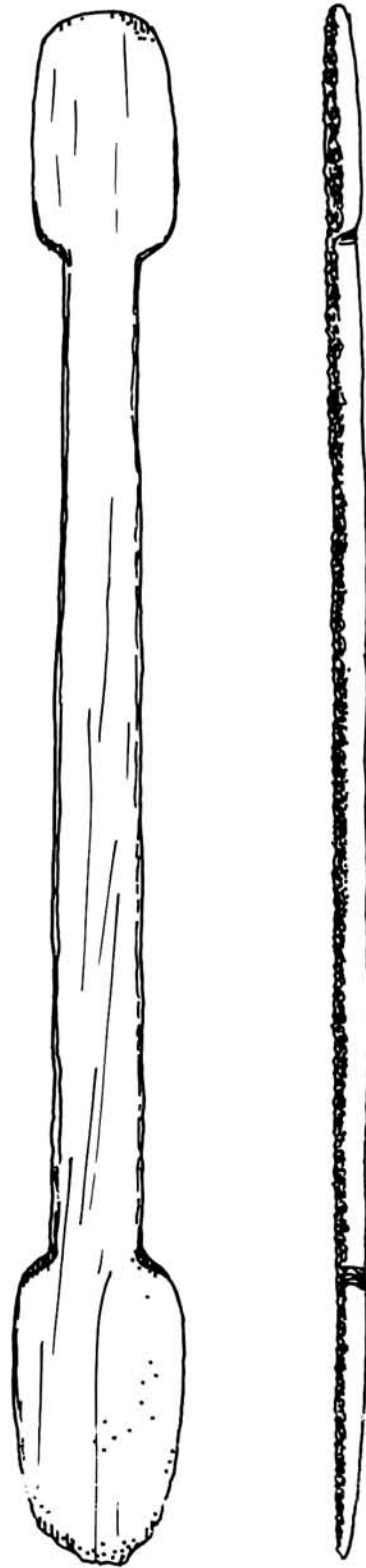


Fig. 1. Wooden artifact from Santa Cruz Island.

Some forty meters to the south of SCrI-387, a stone bead was encountered on the surface of a large midden deposit, probably the same site at which the ground stone implements were found. The bead is of a type difficult to assign to any one chronological period, but is thought to date from Late Period Phase I or AD 1000 to 1500 (King n.d.).

Little previous archaeological work has been done in this drainage system of Santa Cruz Island. Sites along the coastline were located by Rogers (1929:275) and Orr (1959), but these investigators did not go far inland at Laguna. A map on file at the University of California, Santa Barbara, shows numbers in the system of University of California, Berkeley, assigned to eight sites in the vicinity of SCrI-287, but apparently no corresponding records are extant at Santa Barbara, at Berkeley, or at the State Office of Historic Preservation.

There is a sizeable village site near the canyon mouth, which was found by Orr in 1959 to have a "large burial site" and a midden covered by a foot or two of silty alluvium (SBMNH Archaeological Locality Record). More recently, shell beads, bead detritus, some human bone, and possible house floors were found at this village site, according to records on file at University of California, Santa Barbara. No placename is known for this village, and it is thought to have been unoccupied in historic times. No glass, metal, or evidence of historic period activity other than ranching was found in the area by Miller, by museum investigators or by other archaeologists, although the area is not well known. No authorized excavation has been done at Laguna.

Archaeologists have found remains of house poles, canoe planks, and other pieces of wood in many Late Period sites in the Santa Barbara Channel area (Rogers 1929:314-319; Orr 1968:103). Therefore, it is not unlikely that a piece of wood cached above ground in a dry

cave could be fairly well preserved, even from prehistoric times.

DESCRIPTION OF THE OBJECT

The object (Fig. 1) was assigned Museum catalog number NA-CA-SCrI-387-3E-1. It is cut from a single piece of wood, with the grain running lengthwise. The total length is 917 mm. The narrow central portion, or shaft, is 580 mm. long and from 42 to 53 mm. wide. At each end is a wider blade, somewhat oblong in shape with rounded corners and narrowing slightly toward the tip. The two blades are unequal in size: the larger one is 172 mm. long and 100 mm. wide, the smaller 140 mm. long and 90 mm. wide. Though somewhat warped, the object has a fairly uniform thickness of 20 mm. Toward the ends of the blades it becomes noticeably thinner; the large blade is only 5 mm. thick at the tip.

The United States Department of Agriculture's Forest Products Laboratory has identified the wood as Sugar Pine (*Pinus lambertiana*), a commercially important species of lumber tree today in northern California and Oregon. It does not grow on Santa Cruz Island, but could still have been utilized by the island inhabitants in pre-contact times. Driftwood logs of Coast Redwood (*Sequoia sempervirens*) from the Big Sur area washed ashore on Santa Rosa Island, where they were highly prized by Chumash canoe makers (Hudson, Timbrook, and Rempe 1978:47). It is also possible that the object was made in an area where Sugar Pine grows, such as the back country of Santa Barbara or Ventura counties, and then traded as a finished artifact to the island Chumash.

Tool marks are visible on both the blades and shaft. The piece of wood was shaped by whittling on the edges, at least in the final stages of manufacture; there are beveled angles at the edges of the shaft, so much so that it is almost oval in cross section. The broad, flat faces of the object are not smooth; they were

also worked, apparently with an adze or chisel. The tool left broad, shallow gouges, each from 7 to 9 mm. wide and about 1 mm. deep. These run lengthwise, parallel to the wood grain. The pieces thus removed appear in some instances to have been broken off like splinters.

The object's uniform thickness indicates that it was probably made from a board. The adze dressing on the flat surfaces indicates that it was probably not a board of commercial lumber, which would be smooth on both faces. No file marks or saw cuts can be seen. The only manufacturing marks are those which would be left by an adze, chisel, knife, or scraper (Semenov 1964), but whether of metal, stone, or shell has not been determined.

Evidence of wear may be seen in the form of asymmetry at the blade tips, particularly on the larger blade. Originally the end of the blade was probably evenly rounded on both edges, but bits of wood were worn away through use, resulting in a flattening of one edge of the blade tip. The pronounced thinning toward the blade tips is also attributed to use rather than to manufacture. The exposed wood grain at the blade tips is somewhat fuzzy, which would be characteristic of abrasion from use, and perhaps to a lesser degree from weathering. No polishing is apparent, with the exception of a slight shininess on the shaft which could have resulted from handling after the object was retrieved from the cave. A mottled brownish discoloration or staining is visible on both blades and extending some distance up the shaft, farther on the large blade end than on the smaller.

Small cracks in the wood are probably the result of age and drying. On the blades and shaft are tunnels of wood-boring larvae, probably of *Lyctus* sp., Powder Post Beetles, which are cosmopolitan in distribution. The infestation could have occurred in the tree from which the wood came, in the log, or in the finished artifact either before or after it was cached.

A crusty mineral deposit covers one whole

face of the object, obscuring marks from manufacture and use on that face. According to Dr. Robert Gray, Museum Research Associate in Geology, the deposit is composed of small grains of clay and silt, bonded together with a cement of silica which leached out of the surrounding rhyolitic rock. The length of time required to accumulate such a deposit is not known, thus affording no clue to the age of the object.

Dating the object by the radiocarbon method has been rejected due to the amount of material required, the expense, and the likelihood of non-definitive results. Inferences about when the object was made and used, by whom, and for what purpose may be derived from historical and ethnographic evidence.

HISTORICAL EVIDENCE

During the years of Prohibition, Santa Cruz Island was a center for smuggling and manufacturing illegal liquor. Little is known about distilling activity actually conducted on the island, although Dr. Stanton reports finding remains of barrels which may have been part of a still in a well-hidden cave near the coast about 1.3 km. west of SCrI-387. During the 1920's, a still was operated in a ravine off Willow Canyon, about 4 km. to the east (Eaton 1980:225).

Laguna Anchorage was known by commercial fishermen in the early part of this century to be a treacherous landing spot (Eaton 1980:86). This might be a deterrent to bootleggers, since they would not want to risk losing their precious cargo in the surf. The rock shelter itself is quite visible from the canyon bottom; ranch personnel passing by would be likely to discover a still there. Further, if this object were used as a paddle to stir fermenting mash, one would expect to find related artifacts from historic intrusion in the same canyon. As noted above, this is not the case.

While the wear noted on the object would be consistent with use in stirring mash, the

manufacturing marks tend to refute the bootlegging hypothesis. A bootlegger would make a paddle from a piece of commercial lumber, carving only the edges to shape it; he would not need to adze the broad faces of the board. As noted, adze marks are present on the faces of this object.

In the late nineteenth and early twentieth centuries, enterprising fishermen of many nationalities carried on their operations from seasonal camps at several Santa Cruz Island beaches. Abalones were gathered in quantity, shelled, boiled, and dried in camp before being taken to the mainland for sale. After cooking, the abalones were removed from the boiling tanks with a long-handled dipnet (Eaton 1980:101-102). If paddles were used at any stage of this process, they would have been fashioned of commercial lumber, which this object does not appear to be. Laguna was probably never the site of such a fishing camp, due to the dangerous surf landing. No cabin remains or other historical artifacts have been found there.

Manufacture and use of this object by non-Indians during historic times therefore seems unlikely. Ethnographic data offer several possibilities.

ETHNOGRAPHIC EVIDENCE

Chumash woodworking technology is well documented in historical accounts and in John P. Harrington's extensive notes (Hudson 1977). Craft specialists manufactured boards for making plank canoes and other objects. One way was to split boards from a log, but sometimes canoemakers would work a log into a board using an adze, chopping and trimming the wood to an even thickness of about three-fourths inch. Woodworking tools included adzes with Pismo Clam blades mounted in manzanita wood handles, and also flaked stone knives (Hudson, Timbrook, and Rempe 1978:43-44, 67-88, 73). The artifact under examination here is exactly the thickness of a

canoe plank (2 cm.) and thus may have been carved from a board originally made for a canoe. Its manufacture is consistent with Chumash craftsmanship; its use will now be considered.

Though use as a canoe paddle is the first use that comes to mind, Chumash canoe paddles were about 12 feet long. They were made in three pieces, with the concave blades carved separately and attached to the shaft (Hudson, Timbrook, and Rempe 1978:114-119). This paddle, at exactly three feet long, is far too small to have been used with a canoe.

Paddle-shaped effigies are not mentioned by Harrington's Chumash consultants, though other sorts of effigies are. Canoe talismans, for example, were received by dreaming after taking *Datura*. They were carved of wood or soapstone by the dreamer and looked like toys. They brought success in fishing and were buried with the owner, since they would be no good to anyone else (Hudson, Timbrook, and Rempe 1978:96-97, 126).

The object seems too large to have been an *'atishwin*, or charm. It is not an accurate replica of a canoe paddle. It shows signs of use on the blades, which would not be expected of a charm. It was not found in a burial, but casually stuck in the roof of a cave where someone had engaged in the domestic activity of cleaning shellfish.

It is possible that the object may have been a child's toy canoe paddle. Though Harrington (n.d.) does not mention toy canoe paddles specifically, small bows and arrows were used by young Chumash boys. A child might well leave a toy in a rock shelter, and the abrasion on the blades could result from play. However, Chumash toys were usually accurate, functioning replicas of full-sized adult implements; the unequal sized blades of one piece with the shaft would argue against this object being a toy.

The abrasion on the blade ends could have resulted from digging edible bulbs which were an important food for the Chumash. However,

the typical digging stick was of hard wood and pointed on the ends. These soft, flared blades would not be effective for use in hard ground.

The Chumash used wooden paddles to stir cooked mush made from wild seeds. One kind of mush was made from the pits of wild cherries (*Prunus ilicifolia*); it was usually molded into little balls for eating. The plant, the fruit, and the food made from it were all called by the Spanish name *islay*. Harrington's Ventureño, Barbareño and Ineseño Chumash, and Kitanemuk consultants all said that this food was tasty and formed an important part of the diet. The Fox Dance song, in the Santa Rosa Island language, also refers to eating balls of cooked *islay* (Hudson *et al.* 1977:71), so this was probably an important food to the islanders as well. The large-fruited *P. ilicifolia* subsp. *lyonii* grows scattered throughout Laguna Canyon and may have been more common before the introduction of cattle, sheep, and pigs.

While the fruit pulp was sometimes eaten, "the kernel was the really esteemed part of the *islay*" (Harrington n.d.). In its natural state, the pit contains poisonous hydrocyanic acid and is very bitter (Kingsbury 1964:365-368). Therefore, it had to be prepared carefully, a fact mentioned by all the native consultants. Wooden paddles are described in the following accounts of *islay* preparation, summarized from Harrington's unpublished notes (Timbrook, Hoover, and Centeno n.d.; Hudson and Blackburn n.d.).

The washed *islay* pits were first immersed in a basket of hot water for a short time, then dried for a few days. They were shelled by pounding lightly with a rock on a metate or flat stone. After shelling, the kernels could be stored for later use. To cook them, the desired quantity of kernels was boiled in an olla for several hours, changing the water a number of times during cooking to remove the bitterness. When done, the *islay* was stirred and mashed to the consistency of refried beans. Then it was

molded into cakes or balls and eaten with gusto.

Descriptions of the stirring or mashing implement vary somewhat among Harrington's consultants. Candelaria Valenzuela said the *islay* mashing stick was made of Toyon wood and shaped like a ball below. Fernando Librado referred to a paddle for scooping out the mush to be molded in the hands. Juan de Jesús Justo also mentioned an oak wood mush stirrer, which Harrington sketched in two different ways in his notes. One drawing shows it narrow at one end and broadening gradually to four inches at the other; the length is not given. In the other drawing, the mush stirrer is paddle-shaped with a definite blade distinct from the shaft but still of one piece with it.

Luisa Ygnacio gave the most detailed description. The mush stirrer was a yard long with a paddle-like end, she said. Elsewhere she differentiated between the types of stirrers used for acorn mush and for *islay*. The acorn mush stirrer was big and broad, but the *islay* masher was only 2½ feet long. It had the lower end big and paddle shaped, not pestle-shaped. This was used to stir the cooked *islay* and at the same time mash it by pressing.

According to the consultants, the preliminary treatment of the seeds could be done in baskets, but the actual hours-long cooking was done in a steatite olla. Several such smoke-blackened ollas are among Santa Barbara Museum of Natural History collections from Santa Cruz Island. In addition, a fragmentary pine wood "paddle blade" was collected on Santa Cruz Island by Léon de Cessac in the 1870's (84.91.1259, Musée de l'Homme). Heizer's sketches, on file at the Santa Barbara Museum of Natural History, reveal the similarity of this fragment to the wooden object from SCrI-387. The blade is about 165 mm. long, and if complete would be about 87 mm. wide. The shaft thickness is 13 mm., becoming thinner at the blade tip. The sketch indicates

that the blade may be asymmetrically worn at the tip.

The action described in preparing the *islay* mush, stirring and mashing by pressing, would produce exactly the sort of wear seen on both these objects. Pressing would cause thinning on the blade ends. An asymmetrical shape would result from stirring, probably counter-clockwise in this case, with the same edge always in contact with the olla. On the SCrI-387 object, the large blade is worn much more than the smaller one. While Harrington's consultants did not mention double-bladed paddles, it may be conjectured that the unequal blades were designed for use in different sized cooking containers. The discoloration on the blades and outer portions of the shaft could result from mush stirring.

COMPARATIVE DATA

Harrington's Kitanemuk consultant, Eugenia Mendez, described a process of *islay* preparation virtually identical to that of the Chumash. The cooked *islay* was mashed by pressing it with a stick against the sides of the olla. This mashing stick was 2½ feet long, broad for a third of the way up, and the rest was the handle. The mashed *islay* was then pressed with the hands in a wooden ladle to form reddish balls or cakes the size of a biscuit.

Barrett and Gifford (1933:287-288) illustrated four wooden paddles used by the Miwok for stirring acorn mush and other foods while cooking. All are single-bladed and range from 85 to 100 cm. long. The Santa Cruz Island artifact is right in the middle of this size range. Pomo stirring paddles in the National Museum of Natural History are also about the same size, with blade distinct from shaft.

Paddles for stirring mush were used by many other California Indian groups. In southern California, paddles were used by the Serrano, Cahuilla, Cupeño, Luiseño, Diegueño, and sometimes Yuma; these same groups cooked in pots directly over the fire

(Drucker 1937:10, 14, items 159, 379). In the southern Sierra, most groups used looped stirring sticks and cooked in baskets, but stirring paddles were found among the Western Mono (Monache), Yokuts, and Kawaiisu (Driver 1937:69, item 438). Culture element distribution lists by Harrington (1942:12, item 320) show the Costanoan, Salinan, Chumash, Fernandefio, and Gabrielino as groups using paddle food stirrers.

CONCLUSIONS

Based on the characteristics of the object itself, and archaeological, historical, and ethnographic evidence, it is concluded that the wooden object from SCrI-387 (and probably the de Cessac fragment as well) was a stirring paddle used by the indigenous people of Santa Cruz Island for preparing *islay* mush, sometime before the beginning of intensive contact with Europeans. The paddle was stored in a rock shelter not far from a village in a remote area of the island, where it remained for over two centuries before being found again.

NOTES

1. An earlier version of this paper was presented at the Annual Meeting of the Society for California Archaeology in San Luis Obispo, on April 6, 1979.

2. Non-metric measurements occasionally appear in this paper because lengths and distances are cited in the same form in which they were provided by the original source.

3. Bill Miller and Dr. Carey Stanton are to be thanked for making this unusual object available for study. Tony Brown, Lyndal Laughrin, Sam Spaulding, and Ken Wiley aided museum visits to SCrI-387. Steve Craig, Robert L. Hoover, Stephen Horne, and Larry Wilcoxon contributed archaeological and ethnographic information. Travis Hudson and Paula Marie Juelke made additional helpful comments. The assistance of all these people is gratefully acknowledged.

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