

Two Unusual Fish Vertebra Artifacts from CA-LAN-62, Locus A: Possible Ring-and- Pin Targets

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Abstract

Described here are two centrum-reamed fish vertebrae from CA-LAN-62, Locus A and their spatial and temporal associations. Similar archaeological specimens from coastal Southern California and elsewhere have been interpreted as ornaments but also as target elements of the ring-and-pin game. If, as we believe, the latter hypothesis is likely correct, what would have recommended final disposition of the two artifacts among manifestations of mortuary rites at LAN-62A? Exploring this question requires an ethnology of ring-and-pin with special considerations to the possible imagery/symbology of the game. We conclude that the ring-and-pin game carried sex-based symbology; thus, the game device or any part thereof might have projected life-force communication of the sort embracing resurrection and/or related themes.

He who has extended his inquiries into the varied phenomena of nature learns to despise no fact, however small, and to consider the most apparently insignificant and common occurrences as much in need of explanation as those of a grander and more imposing character.

Alfred Russel Wallace, 1905

Introduction

Among the many unusual artifacts recovered from a Late Prehistoric/Contact Period component of CA-LAN-62, Locus A (Figure 1), there are two modified fish vertebrae, each with a large, carefully crafted hole through the middle of the centrum (Figures 2a, 2b).

The following study describes these two specimens and provides their spatial and temporal context. The data indicate that the reamed-out vertebra type possibly extended into the period of Spanish colonization, or Phase 3 of the Late Period (King 1981:73-74).

An abridged inventory of similar artifacts from the southern third of California is provided here. Consideration is given to the possibility that these large-holed vertebra artifacts connected to the ring-and-pin game. Accordingly, background information is presented regarding ring-and-pin and related play in North America, north of Mexico, especially the varied forms recorded for the California and Great Basin culture areas. This background identifies ring-and-pin symbology. A “Discussion” section, poses the following question: If the LAN-62A holed vertebrae were indeed game targets, what might be the meaning of their discoveries in or near a mortuary setting? Our study closes with a “Summary and Concluding Remarks” section.

Descriptions and Spatial and Temporal Information

LAN-62A rests on an alluvial fan just below the Ballona Escarpment near the Lincoln Gap drainage whose runoff spills into Ballona Creek and thence into the Ballona Wetlands. Large scale excavations

undertaken in 2003 and 2004 by Statistical Research, Inc. revealed a deep, multi-component prehistoric and historic site containing over 600 features and thousands of artifacts of stone, bone, shell, plant materials, glass, copper, iron, and fired clay.

One component of LAN-62A was a mortuary area containing over 300 burials, the greater number of which were densely clustered and in association with large whale bone markers and distinct ritual areas. The majority of the inhumations probably date from about A.D. 1771 through 1830. Many burial-related features, including artifact concentrations, were documented. Large numbers of artifacts not directly tied to individual burials, but likely related to funerary or mourning activities, were cataloged. The two LAN-62A centrum-reamed vertebrae described in this paper were recovered from near and within the main concentration of human burials.

The artifact (Cat. No. 03000855B) of Figure 2a is a worked juvenile Great White shark (*Carcharodon carcharias*) vertebra measuring 23.6 mm in diameter. Its height is 3.7 mm, and the perforation has a maximum diameter of 16.6 mm.

Unaltered juvenile Great White shark centra were studied and compared with this specimen in order to assess modifications. Clearly, the interior of the centrum had been drilled out and polished, exposing the cellular architecture. The internal rim edges exhibit alteration stemming from either grinding or abrading. Traces of red ochre are evident in patches on all surfaces of the centrum, indicating that the object was at one time completely covered with pigment. The rim edges of the internal walls of the centrum are slightly uneven in places and appear shallowly “pocked” under 10x magnification, suggesting the possibility that a pointy object might have produced the marks.

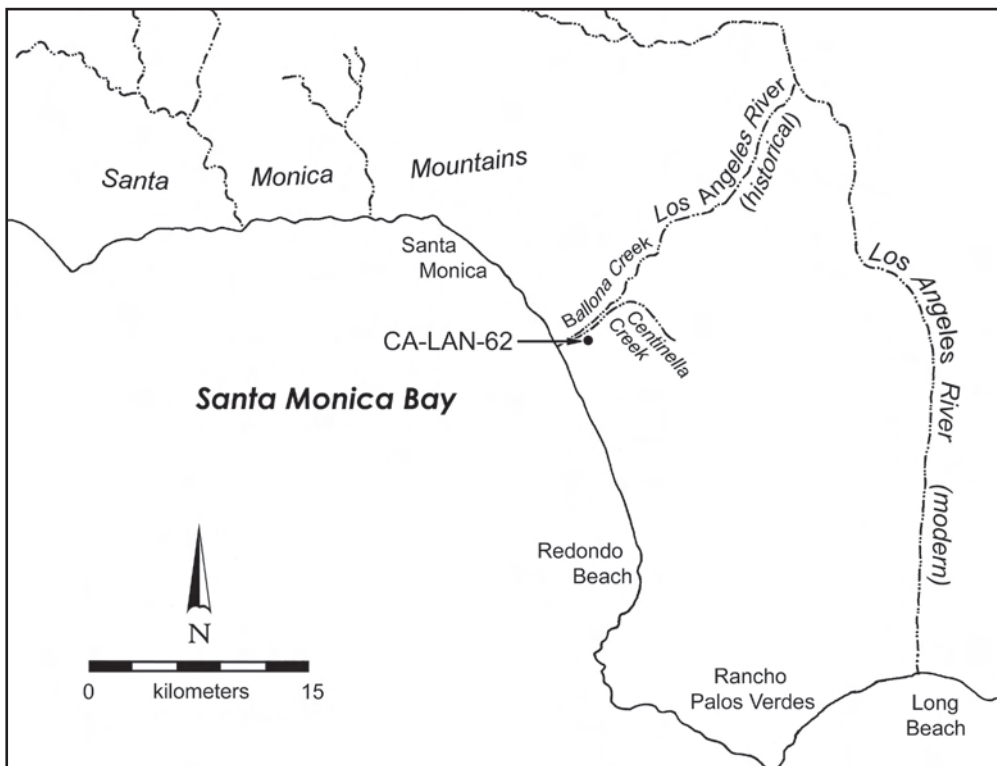


Figure 1. Location map.

Approximately 30 percent of the specimen displays polish, but the remaining 70 percent has suffered weathering and bleaching. This artifact does not appear to have functioned as an ornament or other decoration, but rather the evidence is consistent with a target component of a ring-and-pin game.

The specimen was recovered in a hand-excavated test pit approximately 19 m northwest of the central portion of the burial ground. This item was found in the upper portion of stratum IVA, which has been dated tentatively to ca. 250-600 cal BP. No features were recovered from within this test pit, although several rock clusters lay within five to ten meters in all directions. Radiocarbon samples from the test pit and from surrounding levels indicate fairly consistent dates. The artifact probably falls within the temporal range identified for the most intense use of the site as a burial ground, ca. A.D. 1771-1830.

The artifact (Cat. No. 03003616C) of Figure 2b is a modified shark or ray (subclass, *Elasmobranchii*) vertebra. It measures 14.6 mm in diameter with a height of 2.5 mm. The diameter of the perforation through the centrum is 11.0 mm. The specimen was crafted in much the same manner as the other fish bone ring. However, it lacks any hint of ochre staining. Polish is observed on the rim edges of the internal walls. One rim edge displays evidence of abrasion. We believe that this object might have functioned as a target of the ring-and-pin game.

One burial feature was located within less than a meter of the hand-excavated unit where this worked vertebra was discovered, and another burial feature actually intersected the unit. The location is very close horizontally to the most dense concentration of inhumations within the burial ground. This specimen was found at the level containing the greatest number of burials. On the basis of associated artifact types, these burials appear to date to the Mission Period. One of the two burial features contained

two inhumations with hundreds of glass and shell beads and with “killed” (purposely broken) steatite objects.

Similar worked fish vertebrae from Orange County and Santa Catalina Island are known. These include examples from the Hell site, or CA-ORA-283 (Figure 2c), San Joaquin March area, specifically CA-ORA-119-A (Figure 2d), and Catalina Island (Figure 2e). The latter specimen was originally thought to be a finger ring (Miller 1991:90). Orange County WPA archaeologists noted that fish vertebrae were sometimes carved into “rings” (Anonymous 1937). Another WPA report describes four similar objects from the San Joaquin Home Ranch site (CA-ORA-111), their diameters being 28 mm, 17 mm, 15 mm, and 14 mm (Anonymous 1938:90, 147, 182). Unfortunately, we were unable to locate these specimens for illustration, and the WPA renderings were too crudely executed to warrant reproduction. Clearly, the WPA report writer(s) favored a ring-and-pin interpretation for these artifacts. Rosenthal (1988:68) described seven bored shark centra from Santa Catalina, noting that all were red ochre stained; she interpreted them as beads. Altogether, such objects add up to a very small number of specimens in research reports covering territory occupied historically by the Gabrielino and Juaneño.

Also uncommon are reports of this kind of artifact from the southern San Joaquin Valley. However, Wedel (1941:91, Plate 30f) did document “11 centrally perforated vertebrae with the edge worked down” from a child burial at Buena Vista Lake. He believed they were more likely to have functioned as ring-and-pin targets than as beads.

There is greater mention of this kind of object from Chumash territory. Chester King (1981:227, 372) reported Ronald Olson’s recovery of a supposed burial necklace of 20 centrum reamed-out shark vertebrae from SCRI-83. Some of these “beads”

were inlaid with *Olivella* wall disc beads. The burial dated to King's Phase 4, Middle Period (1981:227). King gave no consideration to the possibility that the reamed shark centra may actually have been parts of a ring-and-pin game, but rather, he thought of them as beads.

Hudson and Blackburn (1985:259, Figure 282-1) illustrated nine fish vertebrae with large perforations that were collected from *muwu* (Wubben Collection). Parenthetically, they stated that María Solares, one of J. P. Harrington's Ineseño Chumash consultants, had never heard of beads fashioned of fish vertebrae (1985:258).

Greenwood and Browne (1969:38) reported four Mako, or bonito shark (*Isurus oxyrinchus*), vertebrae with large ground holes from CA-VEN-3,

the Chumash village of *Shisholop*. While listed first under fish vertebra beads, the two scholars then indicated they were open to the idea that the four might be from a ring-and-pin amusement. They placed the artifacts around King's (1981:293) Late 2 and Late 3 Periods. King in 1981 noted the absence of the type from any Late Period burial lot (King 1981:293). He (King 1981:372, Figure 15, 373, Figure 16) put the temporal range for such artifacts as extending from Phase 4 of the Middle Period through Phase 2b-3 of the Late Period. In 1542, Herrera (1615:113) witnessed Channel Islanders who made beads of fish bone, "which served them as articles of exchange with the people of the continent" (also Burney 1967[1803]:222; see also Wagner 1929:427; Gifford 1940:179), but unfortunately he provided no detail regarding the artifacts' perforations.

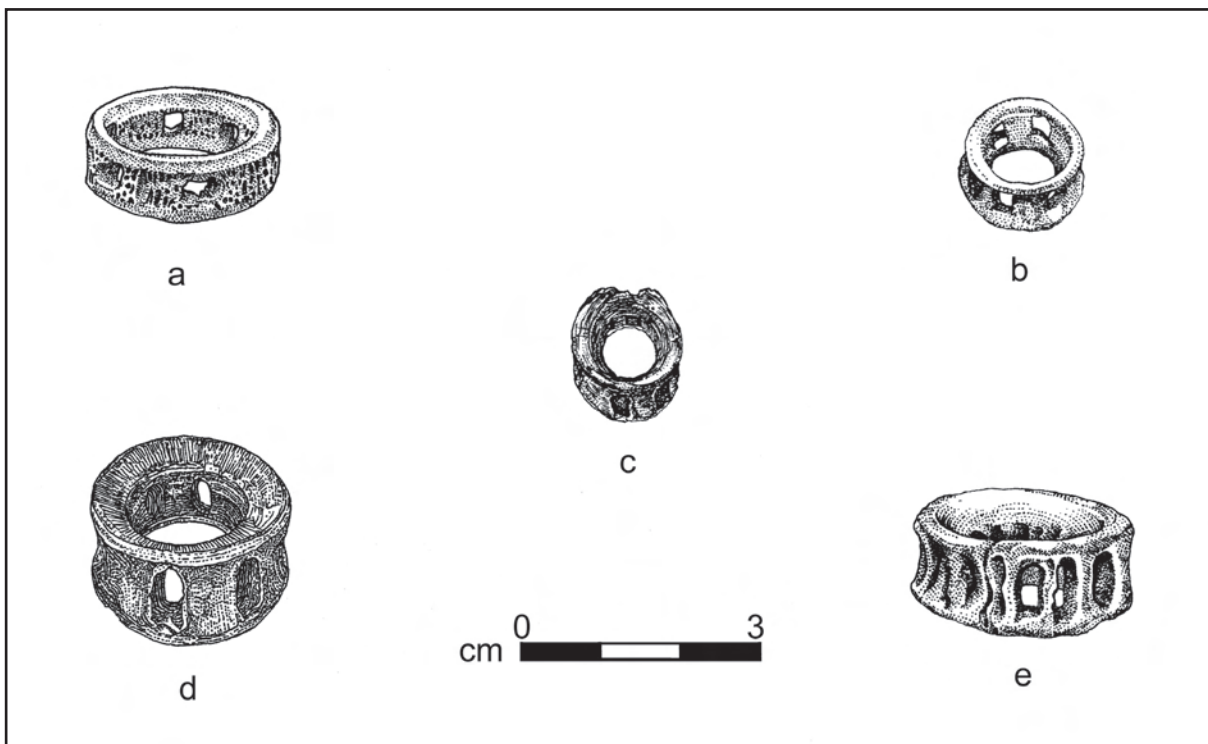


Figure 2. Centrum-reamed fish vertebrae and possible ring-and-pin targets: (a) LAN-62A, from a Great White Shark; (b) LAN-62A, from a shark or ray; (c) ORA-119-A; (d) Heil Site, ORA-283; (e) Santa Catalina Island; size approximate (after Miller 1991:90).

Other evidence for Late Period centrum-reamed fish vertebrae includes at least one specimen from the late Prehistoric Skull Gulch village site on Santa Rosa Island (Orr 1968:203, 207, Figure 69). Orr (1968:194, 205) noted five examples of type CC5 (after Gifford 1940:179, 226) for Cemetery A and one for Cemetery B, but he failed to address exactly how many of these six were of the kind with only the smallest hole for threading and did not provide the count of those that are reamed. Gifford (1940:179, 226) conflated these two sorts of artifacts into his CC5 type. Orr believed these modified vertebrae were beads.

Gifford (1940:226, CC5) illustrated two such reamed-out vertebrae. Many more were listed, all within Chumash territory, both on the mainland (Ventura and Santa Barbara counties) and on Santa Cruz Island (1940:179). Gifford (1940:179) wrote that the “perforated spool-like objects” with large holes “do not suggest beads; possibly for ring-and-pin game.”

Earlier, Heye (1921:112-113) illustrated San Miguel Island worked fish vertebrae, centrally holed, and indicated that such objects might have served as beads or as targets for “toss-and-catch.” The conundrum, then, is whether centrum reamed fish vertebrae were targets for ring-and-pin or were beads. Perhaps the morphology served both functions.

Background

Ring-and-Pin: General Discussion

The objective of ring-and-pin play is to catch a target or targets held on a tether that normally ties to a pin element. The pointed end of the pin effects the capture when it penetrates into a hole in a target or when it impales a target. Commonly, the initial conditions of the “tossing play” activity are the pin held more or less at the horizontal with the target(s) vertically suspended downward. Normally, the target or chain(s) of targets are then swung forward and upwards, and the pin

(“bodkin,” “needle,” “awl,” “pointed stick”), or occasionally multiple pins, are thrust along the tether(s) (e.g., string/cord, buckskin thong, etc.) to engage the target(s). This game/amusement is a test of dexterity, one involving hand-eye coordination.

In his classic study of North American games/amusements, Stewart Culin devoted 35 pages of text and line drawings to ring-and-pin, which is occasionally referred to by the generic term “cup and ball.” Many of the notes to follow are abstracted from Culin (1907:527-561).

Culin (1907:527) recognized that the widespread distribution of ring-and-pin was similar to that of the hoop and pole game. He recognized that ring-and-pin was a kind of scaled down version of hoop and pole (see also Culin 1903). Culin’s treatment of ring-and-pin pointed up the great variability in form and materials in regard to the target elements, which may differ by numbers between devices both within ethnic groups as well as from one tribe to another.

Throughout North America, north of the Mexican border, the majority of target types were not ring-shaped. Those that were rings included artifacts fashioned of twigs, gourd shell, pumpkin rind, acorn cups, rawhide, and vertebrae (mostly fish, rarely snake). Targets that were not ring-like included small animal skulls, bone and ivory copies of animal skulls and animal effigies, post cranial bones of a variety of animals, shaped and holed animal horn, cervid and bovid hooves, cervid dew claws, and astragalus bones.

The single most reported ring-and-pin game from North America was possibly of that kind using cervid phalanges. For some devices these forefoot and hind foot bones were only moderately modified. More often, the phalangeal bones were crafted into “cups” or “cones,” and these elements formed an imbricated grouping when stacked together. As an aside, one sometimes sees reference to “cup and pin.”

Soft material targets, holed for penetration, included objects such as the following: strings of beads, looped strings, carved wooden cones and disks, animal hides, acorn cups, and reed tubes. Targets not fashioned of hard animal parts and which were meant to be either impaled or caught by their attachment loop included bundled twigs, bundled leaves, bundled hair, balls of tule, and balls of rushes (Culin 1907).

Commonly, a special element was fastened at the furthest end of the tether to prevent targets from slipping off. Terminal appendages included, for instance, tails of small animals, tufts of fur, rolls of rabbit skin, pieces of flannel, buttons, etc. Dixon (1907:446) reported that for the Shasta, the end salmon vertebra, the twelfth one, was tied transversely to keep the other eleven from slipping off the string. Loops of sinew/string and loops of string beads served the purpose and were sometimes themselves counted as targets. If the dangle was a flap of holed buckskin, it, too, became a target.

Less variability is seen in the play devices' pointed elements. The vast majority of ring-and-pin games employed a single bodkin; it was in the California culture area that one was most likely to encounter multiple pins, or needles, for a single game. Their materials included sticks, fashioned wood, and bone, and for contact times there are references to "iron needles" and "wire." Porcupine quills were rare. One might speculate that in California, bone basketry awls may have provided the pin element. It was extremely rare for a target not to be tethered to a pin.

Cross-culturally, participation in ring-and-pin play varied considerably by age and sex among different ethnic groups. For instance, for some peoples, ring-and-pin behavior was significantly a solitary amusement for sub-adults. For other groups it might be predominantly a women's gambling game, or elsewhere, men, women, and children all connected with ring-and-pin from solitary play to social levels of play. In places it was used for gambling with losers forfeiting material wealth, or

the behavior might straddle amusement and gaming categories as when a loser's fate was merely a whap of the winner's fingers to the loser's forehead or a rap against wrist or knuckles. Southern Paiute losers might endure only a joking epithet. Perusal of Culin (1907:527-561) offers a beginning appreciation for a remarkable diversity of rules for scoring.

For some peoples, ring-and-pin connected with supernatural beliefs, as when taboos directed scheduling of play, when it served divinatory purposes (Culin 1903:61), or when the device and its application connected with magical powers involving cause-and-effect. Further, morphology and kinetics allowed for an easy sexualization of ring-and-pin. Little wonder then that it could be a "lover's game" (Penobscot), a "love game" (Cheyenne) (Culin 1907:529, 541-542), also a "courting" or "matrimonial" game (Assiniboin) (Culin 1907:555; also Dorsey 1901:16; and Culin 1903:62), "match-making game" (Culin 1903:62), or a game symbolizing "the desire for a partner" (Hupa) (Culin 1907:543). Among the Zuni, a phallic significance was attached to ring-and-pin (Culin 1907:529). Consider that the closely related hoop and pole game might likewise be sexualized (Koerper 2006a:103-104).

Culin (1903) was very interested in the questions of the interrelationships of Indian games in the same locale and of the shared origins of Indian games, those of chance as well as those of dexterity. Addressing such issues required study of the origins of games in "magical ceremonies." He explained his methodology, writing:

Back of each game we find a ceremony in which the game was a significant part. The ceremony has commonly disappeared, and the game survives as an amusement, but often with traditions and observances that serve to connect it with its original purpose. It follows that a correct understanding of the origin and final significance of our Indian games

can be obtained only through a more or less perfect knowledge of the rituals and symbolism of the various tribes. Fortunately there remain certain tribes in which games occupy their original place in the religious life of the people, or a middle stage in which they are practiced both as a rite and as an amusement. [Culin 1907:60-61]

Culin's (1903:61-62) demonstration of the proffered methodology drew significantly on observations concerning a particular category of game, "shooting at a moving target" (i.e., hoop-and-pole) and a subclass of this category, "of which it is a miniature and solitaire form," that is, ring-and-pin. For Culin (1907:420), hoop and pole "consists essentially in throwing a spear, or shooting or throwing an arrow at a hoop or ring, the counts being determined by the way in which the darts fall with reference to the target." Parenthetically, Culin devoted 141 pages (pp. 420-561) to hoop and pole and ring-and-pin in the "Games of Skill" volume of his classic *Games of the North American Indians*.

The scholar noted that offerings at the shrine of the Zuni war god, *Ahaiuta* (also the patron of games) were miniature representations of various gaming implements and that at Hopi altars erected in kivas for the annual ritual gatherings the most salient and important artifacts were objects used in game play. These include the "miniature ring and dart of the hoop-and-pole game" (Culin 1903:61). Various game devices were employed for divination at the altars.

Culin (1903:61-62; 1907:432-433) also identified gaming imagery in ceremonial costumes. For instance, at the bottom end of Zuni and Hopi masks sat the ring for hoop and pole. The ring-shaped mouth of Hopi masks is derived from the gaming ring.

Culin was very clear about the sex-based symbology embedded especially in hoop and pole but in other

games as well. He noted that historically recorded games reflected in varying degrees the original games' connections to magico-religious practice. When games survived in what he believed to be their original form, they might be associated with fertility/increase themed ritual behavior. The basic subtext was indicated when Culin wrote:

The idea of the dual principles of nature – the masculine and the feminine – is everywhere conspicuous in their symbolism. The arrow, in general, is regarded as masculine. The common female symbol is the netted wheel or one of its many derivatives. [Culin 1903:62]

These words are preface to varied examples of homeopathic magic in which hoop and pole is played to effect control of a particular crucial food resource, whether through biological increase of flora or fauna or success in procurement activities. Culin (1903:62) listed first the "elk game" of the Oglala Dakota culture, a game which seems to straddle the line between hoop and pole and ring-and-pin. Meeker (1901:26-27) reported that a hand held stick was used to catch a ring that had been thrown into the air and also that playing the game brought good fortune to elk hunters. This is clearly an example of imitative magic. Meeker (1901:25) further reported that the more conventional Oglala hoop and pole game was called the "buffalo game." Playing the game, an activity named "shooting the buffalo," guaranteed success in hunting the animal. Pawnee played hoop and pole "to make buffalo" (Culin 1903:62). Dorsey (1904a:343) observed that the game was "one of a number of ways for the magic production of a buffalo common to the Plains tribes ..."

According to an account of the origins of hoop and pole among the Skidi Pawnee, two young buffalo bulls were transformed into the poles; the poles then represented these young bulls (Dorsey 1904a:344). This symbology was maintained especially when

the fore ends of the poles were carved with a kind of knob which was said to represent the masculine organ (Culin 1907:468). In the origins tale documented by Dorsey (1904a:344), it was a buffalo cow that turned into the ring. Rings were also constructed of the skin of the vulva of the buffalo cow. Parenthetically, the pole used by Caddo tribes also represented the buffalo, and at the fore end a “projecting curved head” stood for the penis. There is an Arikara story in which two buffalo bulls turned into poles and a cow turned into a ring; this imagery plays out in a young man’s hunting dreams (Dorsey 1904c:189; see also Parks 1996:166). Parenthetically, in a Wichita story involving hoop and pole gambling, there is a thematic element apparently regarded as so obscene in sexual imagery that Dorsey (1904b:196; see also Culin 1907:471) gave detail only in Latin. It is about how the boy made rings from cow vulvae.

Among the Columbia River Wasco, a game ring was shot at with arrows on the occasion of the beginning of the first run of salmon. This was said to insure a good run of the fish (Culin 1903:62, 1907:422, 472). This behavior seems to have been part of a rite of intensification. Culin (1903:62) also noted that hoop and pole play was believed by Hopi to foster fertilization and successful raising of maize.

The above notes indicate the ease with which sexualizations derived from games in which a round target is penetrated by a shaft. At least some such sexualizations clearly played into fertility/fecundity themes.

Ring-and-Pin: California and the Great Basin

Ring-and-pin, while broadly distributed in California and the Great Basin, was either absent or more likely unremembered in more than a few places when ethnographers arrived to investigate. Occasionally subsumed under the generic label “cup and ball,” ring-and-pin embraced a variety of play devices in California and the Great Basin, the majority of whose types

possess targets not characterized as rings or as being even ring-like.

Kroeber (1925:846-847) recognized that much of the variance in target components reflected the nature of readily available materials suitable for this kind of artifact. Accordingly, for convenience of organization, the following background discussion of ring-and-pin will break into the two categories, vegetal targets (see Figure 3) versus bone targets (see Figures 4-7), each of which is then separated, respectively, by specific kinds of floral parts and by specific kinds of faunal parts.

The nature of the pins does not figure into this basic organizational scheme. With rare exception, pins were made of wood or less often of bone. One such exception was the porcupine quill pin of the Klamath game (Culin 1907:551; Spier 1930:83) (Figure 3a). A single pin was the norm for ring-and-pin devices in California and the Great Basin (Figures 3, 4a, 5b, 6, 7a), yet there are multi-pronged (2 to 6 pins) examples. The best documented are those of the Pomo (e.g., Culin 1907:550; Gifford and Kroeber 1937:146; Barrett 1952:347, Plate 60-1, 60-2) (Figure 4b). A single forked stick with two sharpened points was also reported for the Pomo (specifically Kalekau), Lasik, Yuki (Essene 1942:25; also Gifford 1965:66) and Sinkyone (Kroeber 1925:147, Figure 14) (Figure 5a). Aikens (1970:95, Figure 58d) reported a ring-and-pin specimen having two bone prongs (Figure 7b) discovered in Shoshone territory at Hogup Cave, Utah.

When the targets were elliptical to roundish balls of bundled vegetal material (Figure 3a), they were often fashioned of the pith, bark, stalks, and/or rushes from the genus *Scirpus* (Sedge Family - Cyperaceae) (Dorsey 1901:21-22; Culin 1907:550-551, 553-554; Loud and Harrington 1929:92; Spier 1930:83; Klimek 1935:Table 3; Stewart 1941:397; Voegelin 1942:98; Strong 1969:162; Fowler and Liljeblad 1986:454, Figure 18a). Groups mentioned as having tule balls

include the Achomawi, Modoc, Klamath, Western Mono, Washo, Owens Valley Paiute, Northern Paiute, and Serrano.

The best documented Far West archaeological targets and possible targets made of plant parts are those from Lovelock Cave, Nevada, historically the territory of the Northern Paiute. Some of these were made of bundles of leaves of *Scirpus latifolia*, or Soft-Flag (Cat-tail Family - Typhaceae). The bundled “reed” targets of Pyramid Lake Paiutes (Northern Paiute) noted by Culin (1907:554) were possibly of *S. latifolia*.

Ball targets were made of “brush” (Steward 1941:303; Steward 1941:397) by Northern Paiute, Western Shoshone, and Washo. “Grass” balls were noted for the Hupa (Culin 1907:543).

Vegetal targets with holes to be penetrated with the sharp point of a pin included those made of cane by Southern Paiute (Steward 1941:303), and those made of pine cone rings from Northern Paiute territory (Steward 1941:397) and from Western Shoshone territory (Steward 1941:303). The Barrel cactus provided target material for some Western Shoshone (Steward

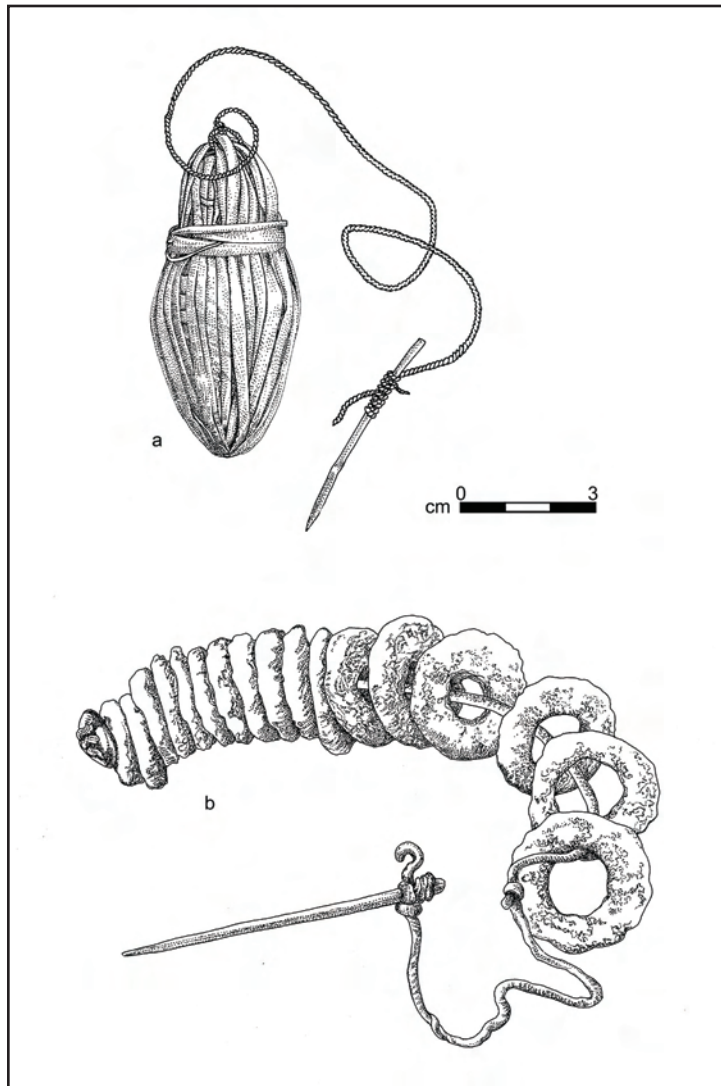


Figure 3. Vegetal ring-and-pin games: (a) Klamath ring-and-pin game. Tule ball target and porcupine quill pin. Field Columbian Museum: Cat. No. 61712 (after Dorsey 1901:Plate opposite p.14); (b) Mohave pumpkin-rind ring-and-pin. Peabody Museum of American Archaeology and Ethnology, Cat. No. 10086, size approximate (after Culin 1907:560, Figure 744).

1941:303). Culin (1907:554) illustrated a reed target made by the “Ute” Indians (actually probably Southern Paiute) around St. George, Utah.

Several inland southern California tribes employed the dried rinds of squashes (genus *Cucurbita*) to fashion ring targets (Figure 3b). These included the Chemehuevi, Mohave, Yuma (Cocopa), Desert Cahuilla, Mountain Cahuilla, and Tipai (Culin 1907:560; Kroeber 1925:741; Forde 1931:133; Drucker 1937:23; Driver 1941:127; Kelly and Fowler 1986:381, Figure 9m, 383; Gendar 1995:90). The Las Vegas Southern

Paiute peoples also used the dried rinds to make rings. The Baja California Akaw’ala (Paipai) had squash rind rings, as did the Cocopa and Pima (Southwest) (Driver 1941:127). In 1902, Kroeber collected a Mohave ring-and-pin game which now resides with the Hearst Museum at UC Berkeley (Cat. No. 1-1755). Its 20 rings, hollowed in the center and graduating in size, are squash stems.

Kroeber (1925:741) wrote that Mohave women played this game competitively, scoring each target caught as a single point, save for the last ring which

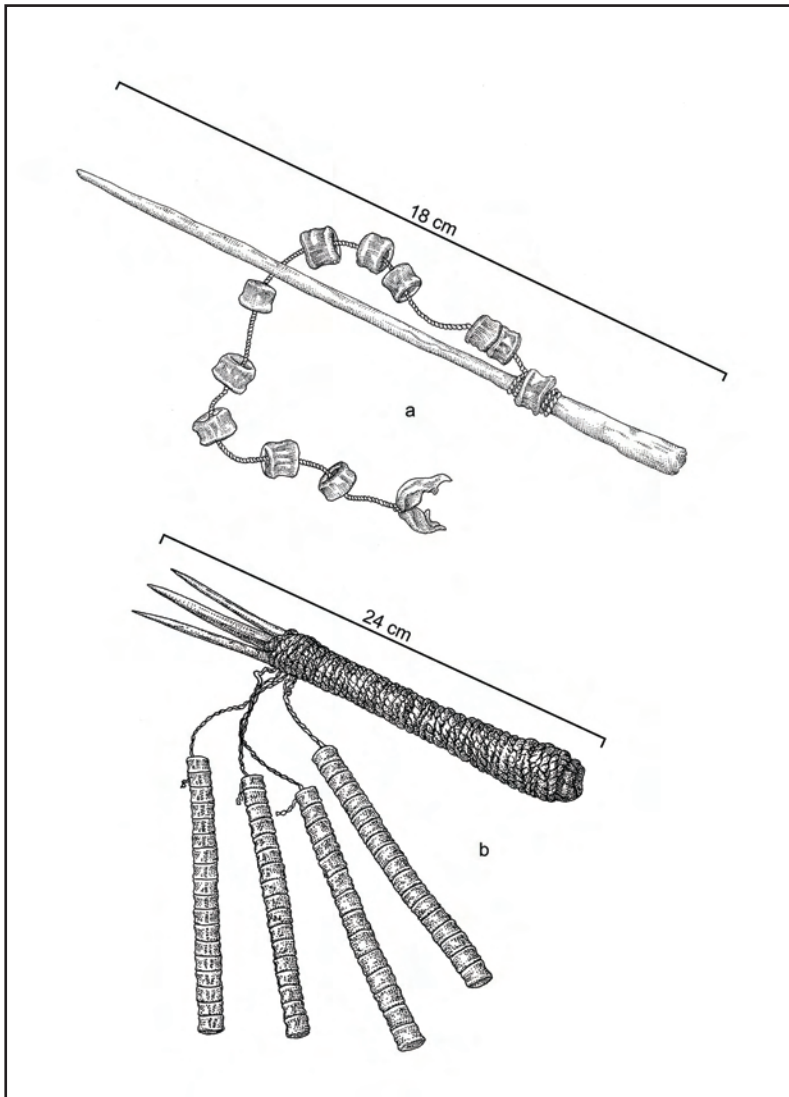


Figure 4. Fish vertebrae ring-and-pin games: (a) Shasta; Hearst Museum, University of California, Berkeley: I-14532 (after Silver 1978:219, Figure 7); (b) Pomo, agglutinated target elements; Brooklyn Museum 06.331, 7932 (after Fane et al. 1991:208, Figure 215).

counted ten points. If no rings were caught, play passed to the other of the pair of competitors. At final tally, “victors were considered to have won the anuses of their opponents.” Had Kroeber intended a play on words when he described the rings as “butts of the pumpkin rinds”?

In coastal southern California, hollowed out acorn cups served as target rings for at least the Luiseño (Sparkman 1908:212; Drucker 1937:23) and the Ventureño Chumash (Harrington 1942:26; Hudson and Blackburn 1986:386). The Western Mono employed

an acorn shell tied through its apex to a small bone (Gayton 1948b:268, Figure 5e, 269).

Orr (1943:18) described a game in which Chumash tossed a small wooden hoop into the air to be caught with a spear-like stick. He mentioned no string attaching to the stick or ring. However, Hudson and Timbrook (1997:3, 5) wrote of *shpalutspuq*, a Chumash “ring-and-stick” game that utilized a one inch diameter ring connected by a 15 inch string to a 9 inch long stick.

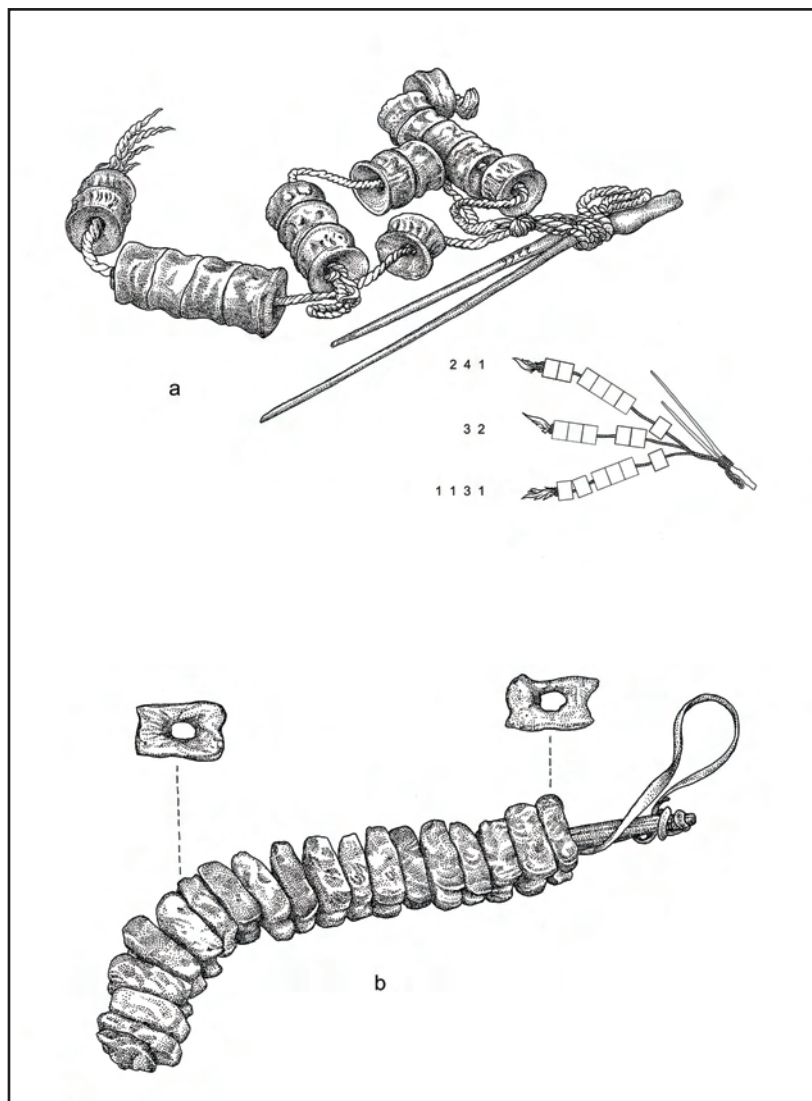


Figure 5. Ring-and-pin games with bone targets: (a) Sinkyone, forked stick and salmon vertebrae targets; Hearst Museum, University of California, Berkeley: I-2266. Total length of forked branch is 13.2 cm. Model indicates which vertebrae are agglutinated; (b) Wailaki, holed deer astragalus targets, leather thong; Hearst Museum, University of California, Berkeley: I-725. Wooden pin is 21.2 cm long. Longest target is 3.7 cm long.

For the California culture area, the great majority of bone targets were centrum-reamed fish vertebrae (Goddard 1903:Plate 19; Hudson 1906a:87; Culin 1907:542-543, 550, 553; Dixon 1907:446, 1910:302; Kroeber 1925:147, Figure 14; DuBois 1935:44; Klimek 1935:Table 3; Nomland 1935:164, 1938:108; Driver 1939:339; Voegelin 1942:98; Essene 1942:25; Holt 1946:315; Barrett 1952:Plate 60-1 and 60-2; Gifford 1965:66; Elsasser 1978:201-202; Silver 1978:219, Figure 7; Fane et al. 1991:178, 215). When species identifications were volunteered, with few exceptions, these artifacts were said to be salmon bones (Figures 4, 5a). There is at least one reference to ring vertebrae crafted from the sucker fish (Culin 1907:550). Ring-and-pin devices made with fish vertebrae are well documented for the northwestern part of California, well north of the San Francisco Bay area. Tribes referenced include Pomo, Kalekau (Northern Pomo), Cato, Coast Yuki, Yuki, Wailaki, Huchnom, Lassik, Mattole, Sinkyone, Bear River Nongatl, Northern Wintu (Wintu), Chilula, Hupa, Karok, Yurok, Tolowa, Chimariko, Wiyot, and Shasta. Often two or more salmon vertebrae were coalesced into a single target element (see Figures 4b, 5a). Interestingly, with the Coast Yuki, who used as many as four strings of salmon vertebrae, each string was from a different species of fish (Gifford 1965:66).

In California, when mammal bones were the material employed for ring-and-pin targets, deer received mention above all other species. Only since contact had the Lassik fashioned rings from deer femora (Essene 1942:25). This study encountered no citation for phalangeal elements being used in California or the Great Basin, and at times cervid osteological elements were unspecified as in DuBois' (1935:44) work regarding the Wintu. However, the Wintu were reported by Voegelin (1942:98) as having worked deer "carpals" into targets. Most probably, "carpals" is a confusion with tarsals, and if so, the elements were likely to have been astragali. Wailaki and probably other Southern

Athabascans bored astragalus bones for that purpose (see Elsasser 1978:201-202).

There are two Wailaki ring-and-pin games curated at the Hearst Museum, UC Berkeley, one having 18 astragalus bones, the other 19. The first (Cat. No. 1-725) with 18 targets strung on a buckskin thong, attached to a 212 mm long wooden pin; it is illustrated in Figure 5b (see also Elsasser 1978:202, Figure 8). A silver metal button is tied at the end of the thong to prevent the astragali from slipping off the tether. Each of the tarsal bones is highly modified, ground on all four sides and at both ends. The perforations are biconically drilled. With the other Wailaki specimen (Cat. No. 1-717), each astragalus is modified only with a perforation. They, too, are on a buckskin thong which is attached to a wooden pin.

As previously stated, Kroeber (1925:846-847) observed that materials readily available in the environment helped direct the choice of material for targets. He pointed out that the fishing tribes of northwest California crafted salmon vertebrae into target rings. He also pointed out that toward the headwaters of the Eel River, streams were smaller, and so hunting replaced fishing. Ergo, the Wailaki chose deer astragali for their targets. Against the examples of these two Wailaki artifacts, Gifford (1940:179, 226-CC1) interpreted holed astragali, one deer and the other elk, both from the Emeryville Shellmound site, as ring-and-pin targets. Schenck (1926:214, Plate 43MB), who mistakenly believed both of these astragali to be from deer, was cautious about assuming a game function and offered the cautionary note that "they might have been used as catches on the ends of cords or for other practical purposes."

In the Great Basin culture area, mammal bone targets were usually rabbit skulls (Culin 1907:554; Lowie 1924:257; Drucker 1937:23, 1941:127; Driver 1941:127; Stewart 1941:248, 303, 345, 1943:325; Stewart 1942:285; Kelly 1964:115; Kelly and Fowler

1978:383; Wallace and Wallace 1979:33). The ethnic units mentioned in conjunction with this artifact type include Western Shoshone (Gosiute Shoshone), Southern (Shivwits) Paiute (including Chemehuevi), Ute, and the Walapai (Southwest culture area). The choice of a rabbit skull (Figure 6) is obvious when one considers the many holes which might offer different scoring opportunities. To illustrate, Steward (1941:345) described Ash Meadow Southern Paiute ring-and-pin play in which all large holes scored one point but tooth sockets and orifices in the cheek bones scored 10 points. A small hole at either side of the

palate won the game. With this complexity of scoring, it is not surprising to learn that in order to keep track of points Ash Meadows people employed a board with holes into which pegs were moved (Steward 1941:345).

Kelly (1964:115) gave a very detailed point system for scoring: 2 points for nose, ear, and eye apertures; 5 points for tooth sockets; 10 points for the small hole below the ear opening; and an automatic win for getting the pin into the tiny hole on either side of the nasal aperture. Kelly (1964:115) also cited scores

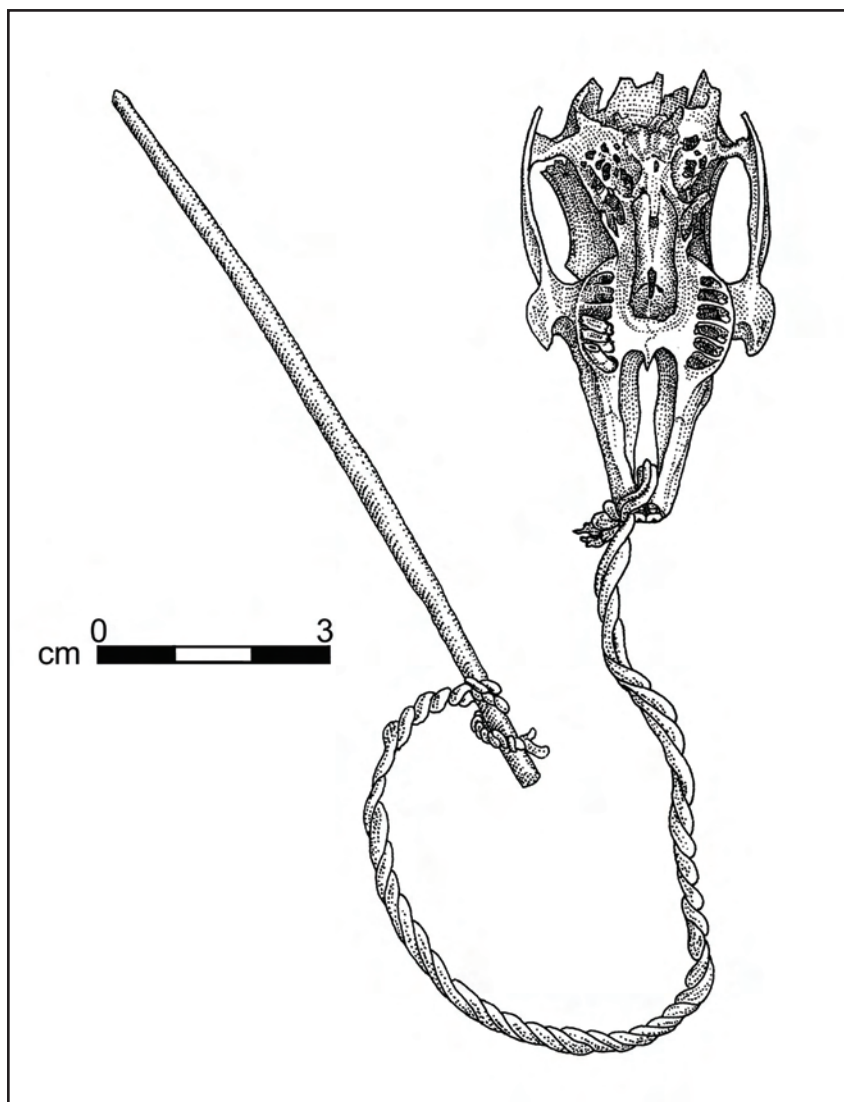


Figure 6. Cottontail rabbit skull and wooden pin game, Southern Paiute; Peabody Museum of American Archaeology and Ethnology: Cat. No. 9434 (after Culin 1907:534, Figure 734a). Size only approximate.

offered by Sapir in an unpublished manuscript on the Kaibab Paiute, to wit: “tooth sockets, 3; one of 2 holes at end of row of teeth, 10; other parts of skull, 1.”

Kelly (1964:115) illustrated a southern Utah game whose single target was a small, hollow bone tube with a notch cut through one side (Figure 7a). It is the same artifact as that pictured in Figure 734b in Culin (1907:554). As previously noted, from Hogup Cave, which is just west of the Great Salt Lake in Western Shoshone territory, there came a highly unusual bone

ring-and-pin game (Aikens 1970:91, 95, Figure 58c, d). Its target was a use-polished bone tube, and its two bone pins were bound together in parallel by the same thong that attached to the target (Figure 7b).

Parenthetically, this study encountered no ethnographic mention of either cervid or bovid bones modified into ring-and-pin targets within the Great Basin. Culin (1907:555) did list a bird bone target collected at St. George, Utah, which is in the middle of Southern Paiute territory. A Southern Paiute artifact of mountain

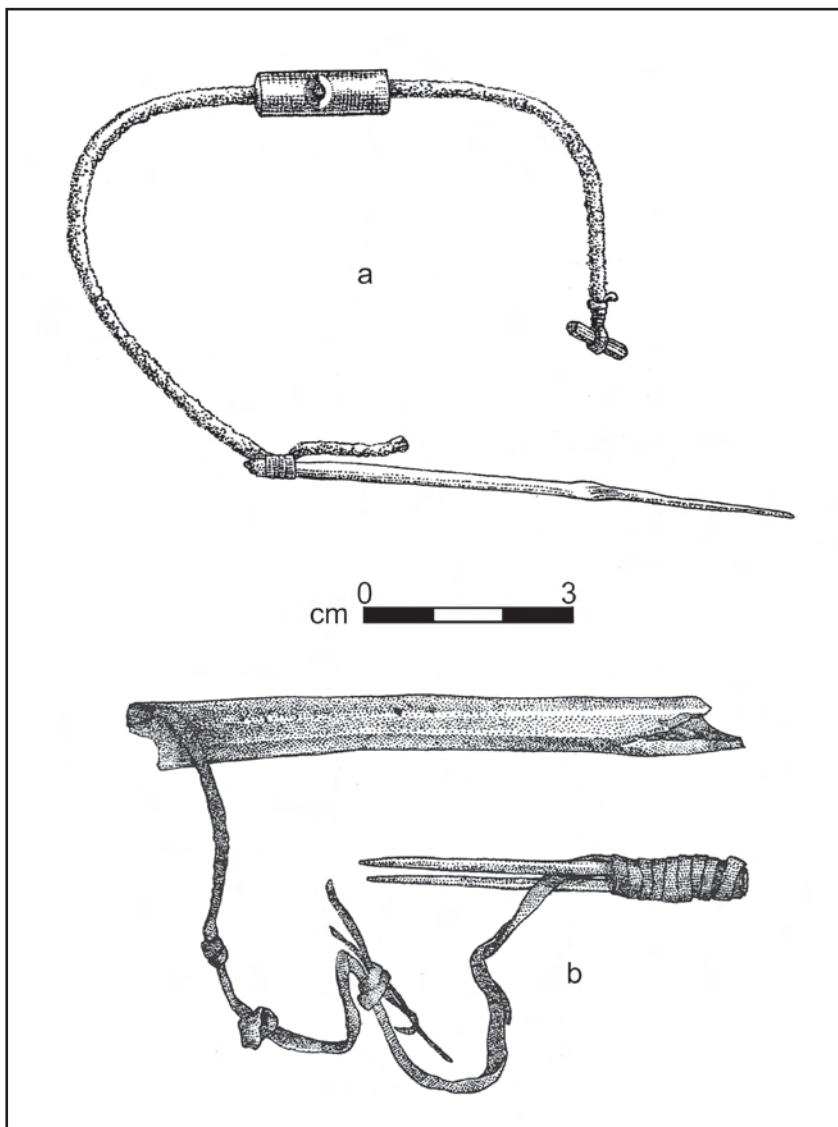


Figure 7. Great Basin ring-and-pin devices with bone targets: (a) Southern Utah (Palmer Collection, 1875). Peabody Museum of American Archaeology and Ethnology, Cat. No. 9433 (after Kelly 1964:115, Figure 17); (b) Hogup Cave, Western Shoshone territory (after Aikens 1970:95, Figure 58d).

sheep horn (see Koerper, et al. 2008b: Figure 4h), said to be a “shaft-straightener-gauge” (Kelly and Fowler 1986:372, Figure 2i, 373) offers the look of a possible target element.

A most unusual ring-and-pin target, one mixing animal and vegetal materials, was documented for the Tipai by Drucker ((1937:24). The type was described as consisting of feathers with weights of piñon gum.

For the California and the Great Basin culture areas, the ring-and-pin game was not a major gambling venue. There were small bets at most. For instance, in the Kūpa Band of Northern Paiutes, men might wager puffs on a pipe or cigarettes, while girls wagered gum or pins (Stewart 1941:437). Even when played competitively, ring-and-pin did not normally rise above the level of a diversion/amusement.

The literature often describes mild punishment for the player who was bested. Returning to the Kūpa Band, Stewart (1941:437) described boys and men betting a certain number of finger thumps between the eyes, the loser’s fate, which if repeated enough, caused a bump to erupt. Thumps were administered when a contestant failed to capture the ring in a given number of attempts. Fillipping of the forehead, wrist, and/or hand is recorded for other Northern Paiutes, and for Southern Paiutes, Utes, and the Washo (Culin 1907:553; Stewart 1941:397, 1942:286). Among some Southern Paiutes, a loser received a humorous epithet, “bald head” (Stewart 1942:286). A Wintu winner might rap the knuckles of his opponent as many times as the number of fish vertebrae he had speared (DuBois 1935:44). Modoc and Shasta also rapped knuckles (Voegelin 1942:98), and with the Modoc and Wintu, the bested opponent’s eyebrow hairs might be plucked out.

Other observations of interest regarding ring-and-pin involve folk beliefs that touched on periodicity of play, magical practice, or taboos. Among the linguistic tribes of the northwestern California culture area,

intensity of play occurred during the winter. The game activity was believed to shorten winter and hasten the coming of springtime. Writing of the Shasta, Dixon (1907:445-446) reported that ring-and-pin play occurred on the occasion of the moon in wane. The game device held 12 salmon vertebrae, each one representing the moon. Capture of the end-bone, or the “eye of the moon,” killed the moon more quickly (hastened its death) than catching any of the other targets. Parenthetically, the effort to make winter pass as fast as possible was abetted by playing cat’s cradle on the occasions of waxing moons. Specifically, the looping and stretching of the string sped up the growth of the moon (Dixon 1907:446; see also Culin 1907:550; Holt 1946:315; Gendar 1995:90). The sympathy here was clearly imitative, or homeopathic. Voegelin (1942:205) noted that December and January were key months for this type of magical practice, and that the Modoc, a tribe transitional between the California and Plateau culture areas, also employed ring-and-pin to make the moon wane (Voegelin 1942:98). For the Western Shasta, the game was embedded in mythology (Voegelin 1942:205).

Similarly, among the Klamath, another transitional tribe, ring-and-pin activity occupied people during long winter nights in their earth lodges, where successful play “breaks the month,” thus hastening springtime (Spier 1930:83). Dorsey (1901:21) noted that the Klamath “split the moon,” or “punch out” the moon, always in the winter. Dorsey’s referent was a device with a vegetal ball whose braided loop was the target to be caught with a downward thrust of the pin.

Among the Achumawi in northeastern California and among certain Great Basin groups (e.g., Washo, Goshute Shoshone, Ute, and Southern Paiute) it was taboo to play ring-and-pin during the summer (Stewart 1941:397, 1942:286; Stewart 1941:248, 303). Rattlesnake bites were punishment for breaking this taboo, at least in parts of Ute and Southern Paiute territories (Stewart 1941:248; Stewart 1942:286). Kelly

(1964:103, 112, 116) reported that for the Southern Paiute the taboo applied to all seasons except winter, with taboo violation bringing risk of a viper bite.

Among the Kato and Lassik, ring-and-pin was known as “gigging a salmon.” Successful play rewarded a fisherman with good luck in his actual salmon harpooning (Essene 1942:25).

As previously noted, ring-and-pin play was easily sexualized. A California example to illustrate such is found in the notes of John Hudson (cited in Culin 1907:543; see also Gendar 1995:90). The game was common between Hupa maids and young men, and it was “said to symbolize the desire for a partner.”

Discussion

The Late Prehistoric and/or contact period LAN-62A crafted vertebrae beg questions of purpose and meaning owing to their recovery among manifestations of death rites. Possible roles as ornaments evokes no surprise since beads were a common presence in funerals and mourning ceremonies. Interest is piqued, however, with the recognition that both resemble target elements for certain kinds of ring-and-pin devices. Supposing a game/amusement interpretation is accurate, what symbology recommended the two artifacts as grave goods or as offerings in remembrances of the deceased?

In coastal southern California, material manifestations of life-force symbology frequently accompanied funerary ritual. Grave offerings, for instance, included seeds (see Koerper 2006a:116-117) and a variety of stone artifacts – sacred bowls, phallic pestles (Koerper 2006b), bird stones (e.g., Koerper and Labbé 1987:112), donut stones, canoe effigies (Koerper 2006a), and sacred shaft straighteners (Koerper et al. 2008a). The various items involved sex-based iconography wrapped in a fertility/fecundity or related theme.

For most, if not all of the noted stone effigies, the forms and imageries are purported to have evolved through a process identified as “sexualization-sacralization” (see Koerper 2006a:99-105, 2006b:141-142, 2007:89, 91; Koerper et al. 2008a). The morphologies and/or kinetics of tools used in food procurement or processing drive the initial stage of the process, sexualization. For instance, milling acorn meal employing pestle and mortar/bowl elicited an easy double entendre. Sexualization abetted by anxiety concerning nature’s bounty, beginning with food energy issues and extending to related life-death concerns, further paved the way for certain artifacts to transform and fold into magico-religious strategies that, for instance, promoted the abundance and successful exploitation of crucial resources. Sacralization, then, followed from sexualization. The general scenario offered by the sexualization-sacralization hypothesis implicates each type of sacralized artifact in at least some permutation of life-force symbolism.

In the examples listed above, save for the birdstone genre, the mundane tool referents of the sacralized types are obvious. As an aside, we hypothesize that the evolvement of birdstones issued from some sort of utilitarian hook device that had operated in a maritime economy.

With the various proffered cases of sexualization-sacralization (Koerper 2006a, 2006b, 2007; Koerper et al. 2008a), the aetiological trajectories initiated from food procurement or food preparation technologies, however, hoop and pole and its alter ego, ring-and-pin, were not tools but rather games. While not directly involved in hunting/fishing/gathering, indirect linkages are palpable, and through those linkages, we believe, hoop and pole and ring-and-pin became unusual sub-cases of the sexualization-sacralization process.

Regarding the larger game, Koerper (2006a:103) put it succinctly when he opined, “‘Hoop-and-pole’ might be called, alliteratively, ‘deer-and-spear.’ Linking this

game to hunting skill hardly qualifies as an epiphany.” Recall the instances given above in which hoop and pole, ring-and-pin, and a game intermediate between the two were implicated in magically securing animal flesh (i.e., respectively, “shooting the buffalo,” “gigging a salmon,” and “the elk game”).

Beyond their homologous linkage, and beyond the observation that each has an association, albeit indirect, with procurement activities, hoop and pole and its miniaturized derivative further connect through shared experiences of sexualization. For instance, as previously noted, one ring-and-pin manifestation of sex-based imagery was its role as a lovers’ game, this among tribal groups as dispersed as the Penobscot, Assiniboin, Cheyenne, and Hupa (e.g., Culin 1903:62, 1907:529, 541-543, 555). Recall, too, the phallic significance attaching to Zuni ring-and-pin (Culin 1907:529). Also, among some Prairie and Plains tribes, hoops and poles, respectively, symbolized nature’s female and male principles (Dorsey 1904a:344, 1904b:196, 1904c:189; Culin 1907:468, 471), and regionally, at least the Ventureño identified hoops as “female” and poles as “male” (Harrington 1942:26).

Sacralization, emerging through sexualization, provided another shared experience. To illustrate, a sacred dimension attached to hoop and pole in local mythology, where the game was applied to divination in Gabrielino (Heizer 1968:59-60) and Chumash (Blackburn 1975:236-237) narratives. In Chumash cosmology, when played by the Two Thunder brothers, hoop and pole acted as a causal agent affecting weather (e.g., Hudson 1979:89). Elsewhere, hoop and pole in magical practice effected capture of animal foods (e.g., Meeker 1901:25-27; Culin 1903:62; Dorsey 1904a:343) and in intensification rites promoted increase of both animals and plants (Culin 1903:62; 1907:422, 472). As mentioned earlier, symbolic hoops adorned Zuni ceremonial costumes (Culin 1903:61-62; 1907:432-443).

Turning again to ring-and-pin, for certain California and Great Basin groups, the game embedded in the supernatural world through associations with taboos, magic, and divination. Taboos might direct the scheduling of game play (Stewart 1941:397, 1942:286; Steward 1942:248, 303; Kelly 1964:103, 112, 116). Playing the game provided a magical means for some control over the duration of winter or the phases of the moon (Dorsey 1901:21; Culin 1903:61, 1907:60-61; Dixon 1907:445-446; Spier 1930:83; see also Voegelin 1942:98, 205). Successful play of ring-and-pin by the Kato and Lassik conferred good fortune upon the salmon harpooner (Essene 1942:25).

Connected indirectly to procurement activities, sexualized, and subsequently sacralized as evidenced by its appearance in magico-religious venues, ring-and-pin certainly came to carry life-force symbology. Mourning and mortuary customs might be expected to select for such symbolic communications as they assuaged grief and mitigated angst attendant to contemplations of mortality. Such communications would have been of the kinds embracing resurrection and/or related themes. In this, a reasonable, if tentative, accounting emerges for how the holed vertebrae could have ended up in a mortuary component at LAN-62A, but there remains the caveat that there is no disproof of the proposition that the two artifacts had merely been ornamental.

Summary and Concluding Remarks

In coastal southern California, an uncommon find is the peripherally ground fish vertebra with a carefully reamed, large perforation through the centrum. Regionally, holed fish vertebrae are frequently interpreted as beads (e.g., Orr 1968:203; King 1981:371-373; Rosenthal 1998:68; see also Greenwood and Browne 1969:38). Ethnohistoric support for a bead hypothesis might draw on Herrera’s (1615:113) 1542 observation of Channel Islanders’ manufacturing beads of fish

bone. Miller (1991:90) interpreted one specimen from Catalina Island as a finger ring.

Another explanation of function proposes that the artifacts were targets for the ring-and-pin game (e.g., Gifford 1940:179; Wedel 1941:91; see also Heye 1921:112-113), particularly those vertebrae so thoroughly crafted as to reveal cellular structure on both outer and inner walls. Ethnographic analogy offers some support for this view, specifically drawing on the fact of centrum-reamed salmon vertebrae having commonly been used as targets in greater northwestern California. All five centrally perforated vertebrae illustrated for this study (Figure 2) were recovered in territory historically occupied by the Gabrielino/Juaneño, where ring-and-pin devices are known to have employed holed acorn cups as targets (see Drucker 1937:23-24; Harrington 1942:26). Perhaps, along the maritime zone, shark, mackerel, etc. vertebrae had once been fashioned for the purpose.

The ring-and-pin game could possibly offer another fit, at least as an oblique sub-case, to the sexualization-sacralization model. Sexualization was a foregone outcome of ring-and-pin action following that a straight, hard pin was repeatedly thrust toward a target hole. The double entendre was certainly the inspiration for some of the Native American names given the game/amusement, such as “lovers’ game,” “love game,” “courting,” or “matrimonial” game, and “match-making game.” Consider also Culin’s observation that ring-and-pin was a miniaturization of hoop and pole and that the larger scale game carried sexual connotations among many Indian peoples.

Sexualization, as argued by Koerper (e.g., 2006a, 2006b, 2007; Koerper et al. 2008a) facilitates sacralization. Thus, it is not so remarkable that ring-and-pin might have been applied to divination and increase ritual, or that it might have been used to hurry winter’s demise, thus hastening the rebirth of springtime with its bloom of nature’s bounty, or that the game might

have ended up in association with other sacred objects on an altar.

We propose that if ring-and-pin had offered a vehicle for communicating life-force symbolism, it could have been a logical choice for a funerary or mourning offering. Could this explain the presence of two reamed out fish vertebrae at LAN-62A? The more basic interpretive issue, however, bead versus target element, is likely to remain an insoluble problem, unless, say, similar perforated vertebrae turn up together with a bodkin, a circumstance that would be made all the better should the context be that of a burial feature.

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