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“Now Dead I Begin to Sing”: A Protohistoric Clothes-Burning Ceremonial Feature in the Colorado Desert

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The discovery of a well-preserved ceremonial feature at CA-IMP-6427 (the Elmore Site) provided the rare opportunity and special privilege to investigate the archaeological remains of a specific mortuary ritual, the Kumeyaay waltma or clothes-burning ceremony. Burned remains of a female's bark skirt, yucca cordage carrying net, possible yucca sandal fragments, painted ceramic jar, hundreds of shell beads, and a shell pendant were found in a charcoal-filled pit within a Protohistoric Period temporary camp on the receding shoreline of Lake Cahuilla. That this feature could be identified with such certainty is due to several fortunate circumstances. The excellent preservation and spatial separation of the feature from the main occupation area made it possible to interpret it as the remains from a single event in time and space. The well-established late dates of the site and feature (A.D. 1600 to 1700) make an association with the Kumeyaay highly probable, although an affiliation with Delta Yumans is also considered below. Finally, the well-documented examples of Yuman mortuary ritual make an identification of the feature virtually certain. What makes the feature even more significant is the possibility to address aspects of gender and status among the prehistoric ancestors of the modern Kumeyaay, as well as the context of mortuary ceremonies within Late Prehistoric Period settlement systems.

A clothes-burning ceremony is still solemnly held by the Kumeyaay several days after the passing of a tribal member. Not only clothes, but furniture and other personal possessions are burned, with some items retained or substitutes provided for the one-year anniversary memorial (Woodward 1968). It is an opportunity for family and friends to comfort one another and share cherished memories of the deceased. This article documents the discovery of an archaeological feature from one such event at the Elmore Site (CA-IMP-6427) during the data recovery phase of a road-widening project by the California Department of Transportation (Caltrans) in 1996.

One is reminded that these archaeological finds resulted from what must have been a tragic and sad event in the lives of the participants. That loss was, in part, ameliorated through a tradition that continues to the present day. The following description of a clothes-burning ceremonial feature is presented as documentation of the

continuity of Kumeyaay values and traditions and of what the ceremony may have entailed before the rapid changes of the historic period. It should also be noted that due to the sensitive nature of this ceremonial feature and subsequent to analysis, the material was re-interred under the direction of the Kumeyaay monitor, the late Clarence Brown. It was also his opinion that the information on the find had important educational and scholastic value that should be made available to the public, in part by publication of this article. Slides of all finds were also prepared at his request and delivered to Mr. Brown, along with the final technical report, for use by the Kumeyaay.

ETHNOGRAPHY OF YUMAN MORTUARY RITUAL

All Yumans and their neighbors burned the property of the deceased (Drucker 1937:37). This could take place within the contexts of sev-

eral different ceremonial events and with some degree of variability, at least in the ethnographic present. Specific circumstances affected the scheduling of cremations and property burnings, as many documented cases have attested (Forde 1931:208; Densmore 1932:41-48; Devereux 1961). The Yuman clothes-burning ceremony was one of the events at which all personal property, including the dwelling of the deceased, would eventually be destroyed to prevent the spirit of the dead from lingering among the living. There could be very unfortunate consequences if these ceremonies were not conducted. Increased disease, misfortune, and death might ensue, often preceded by the appearance of the dead in the dreams of the living, at which time they may be lured into the land of the dead by suggestions of a better existence. Thus, a loved one in life became dangerous in death (Gifford 1933:294-295, 297; Devereux 1961:186-191).

The specific Kumeyaay term for the clothes-burning rite is *watlma* (Kroeber 1925:713, 716). The fact that it is distinguished as a specific ceremonial activity suggests that it can be spatially and temporally differentiated from the cremation ceremony or the memorial known as the *keruk*, a common rite among the Quechan (Densmore 1932; Halpern 1997). Indeed, this seems to be the case at the Elmore Site (see below). Today, the Kumeyaay conduct the ritual burning of personal possessions several days subsequent to and at a different time and location than the actual burial (C. Brown, personal communication 1996).

The *watlma* was one of five mortuary ceremonies that were observed, depending on the status and affiliations of the deceased. These rituals were carefully planned events during which deeply felt emotions of loss and grief found public expression. They also ameliorated the potentially dangerous effects that could be caused upon the death of an individual. The fundamental precepts of Kumeyaay beliefs and cosmology were also reinforced and reiterated at these times, as the death of an individual was a reflection of the

universal life cycle hearkening back to creation. The most detailed description of the Kumeyaay clothes-burning ceremony, complete with songs, was recounted by Waterman (1910:306-307) at the beginning of this century:

At the appointed time word is sent to the neighboring villages and families, and a large assembly drawn together. According to invariable custom, both for this and kindred ceremonies, the head of the family passes over the management of everything to a friend or visitor. Both he and his family carefully refrain from even tasting any of the food gathered for the festival.

The first night is passed by the relatives of the deceased in wailing. On the following night a great fire is built and all the people, men and women, dance around it, circling alternatively in each direction. The man who has charge of proceedings, assisted by one or two others, carries the dead person's clothes. The songs sung at this time are the regular songs of the Fire dance. At the close of each song all the dancers together make the deep grunting sound: "mwau---u," and motion upward in the air. At the completion of three or four songs, all pause and face toward the fire, repeating the grunting sound three times. Then the sound is repeated once more, and all the clothes are thrown at the same time on the fire. While the garments, together with numerous baskets and other property, burn, they sing this song:

<i>menai dispa tcawai tcawi</i>	now dead I-begin-to-sing
<i>menai dispa tcawai tcawi</i>	now dead I-begin-to-sing
<i>xitoL kawak enyak awik</i>	North, South, East, West
<i>amai amut</i>	up, down

Following this they dance several more times around the fire, singing Fire songs, then throw on more clothes and sing:

<i>mawi-a! mawi-a!</i>	what-for? ah! what-for? ah!
<i>moyo-o! mawi-a!</i>	you-dead oh! what-for? ah!

Any one of the strangers who wants a little money takes a long stick and turns over the clothes so they will burn better. The relatives of the dead person then come around and give him small jars, baskets, and other "little things."

When the clothes are completely burned they sing as follows:

apamsi penoxi inyoxo

The rites are completed by dancing the fire out, singing meanwhile the songs which belong to that ceremony.

Among the Cocopah, personal possessions were burned either directly after the cremation or

the following day (Kelly 1949, 1977:89). Individual Quechan mourners also threw personal clothing onto the pyre (Forde 1931:211; Densmore 1932:46). For the Cocopah *wasluma'* ceremony (Gifford 1933:294) and the desert-dwelling Kumeyaay (Kamia) (Gifford 1931:57), most of the deceased's clothing would have normally been burned on the cremation pyre. Citing Spier (1923), Kroeber (1925:723) asserted that the Kumeyaay did not have a separate clothes-burning ceremony apart from the *keruk*, but the evidence from the Elmore Site indicates otherwise. It is difficult to ascertain the reason for ethnographically documented variability in the ceremonial contexts within which clothes-burning took place. Potential explanations include cultural differences between tribal groups, situational intratribal variability that existed in precontact times, culture change from the disruptive effects of Euroamerican contact, or a combination of all of the above.

In another of the funerary rites, the *keruk*, offerings to the dead were burned on the last night of the four-to-six-day ceremony (Dubois 1908; Davis 1919, 1921; Gifford 1931:59; Halpern 1997). Many of such offerings consisted of new clothing and blankets. Among the Quechan, clothing of the deceased was retained by relatives at the time of cremation, when a decision was made to hold a *keruk* in the future (Densmore 1932:74, 85). These garments were then used to dress the memorial image. Two Quechan practitioners introduced this image-burning ceremony to the Quechan around 1890. Prior to that time, representations of the faces of deceased leaders were painted on the posts of the *keruk* house and the clothes were then tied to the posts beneath each face, to be burned with the house (Forde 1931:221-222). At the time of the burning, relatives threw gifts into the flames. Because of the expense involved, *keruks* were periodically held to honor a number of individuals. The small number of items found at the Elmore Site suggests that a clothes-burning *watlma* ceremony was held, rather than the larger *keruk* ceremony.

In the case of the Elmore Site, it is probable that the deceased person, presumed to be a female, was cremated elsewhere prior to the clothes-burning ceremony, although some of her personal possessions were probably retained by her relatives and burned at a later date, perhaps days later or on the anniversary of her death. It is also possible that the cremation took place at some undiscovered location nearby, but certainly not within the residential area. The remaining bones and ashes may have been placed in a ceramic vessel and buried or cached elsewhere, as is often the Kumeyaay custom in addition to the primary pit cremation (Dubois 1907; Waterman 1910:306; Heye 1919; Davis 1921; Myrekrantz 1927).

A similar ceremony, held one year after death, characterized the Luiseño clothes-burning rite, or *tuvish*, as described by Dubois (1908:180-182), Sparkman (1908:226-227), Davis (1921:102-103), Strong (1929:301), and White (1963:131). Among the Acagchemem (Juaneño), the *Tcúttcamic* or *Tcuy'ic* ceremony was the second of four different memorial rites. Harrington's (1933:191-192) description of such rites was generally similar in form to the Kumeyaay ceremony, including the participation of large numbers of men, women, and a ceremonial specialist. It was conducted several days or weeks after cremation, involved a special feast, gifts or payments in shell beads, and the execution of specific songs, dances, and speeches.

THE ELMORE SITE

The Elmore Site is a small, temporary camp covering approximately 300 m.² on lacustrine clays and sand dunes. It is located just south of Route 78 in Imperial County, opposite the entrance to the Elmore Ranch near Kane Springs (Fig. 1). At 55 m. (180 ft.) below sea level, the site is 67 m. (220 ft.) below the former maximum shoreline of Lake Cahuilla, located 4.8 km. (3 mi.) to the south, and 30 m. (100 ft.) above the lowest point in the Salton Trough, now under

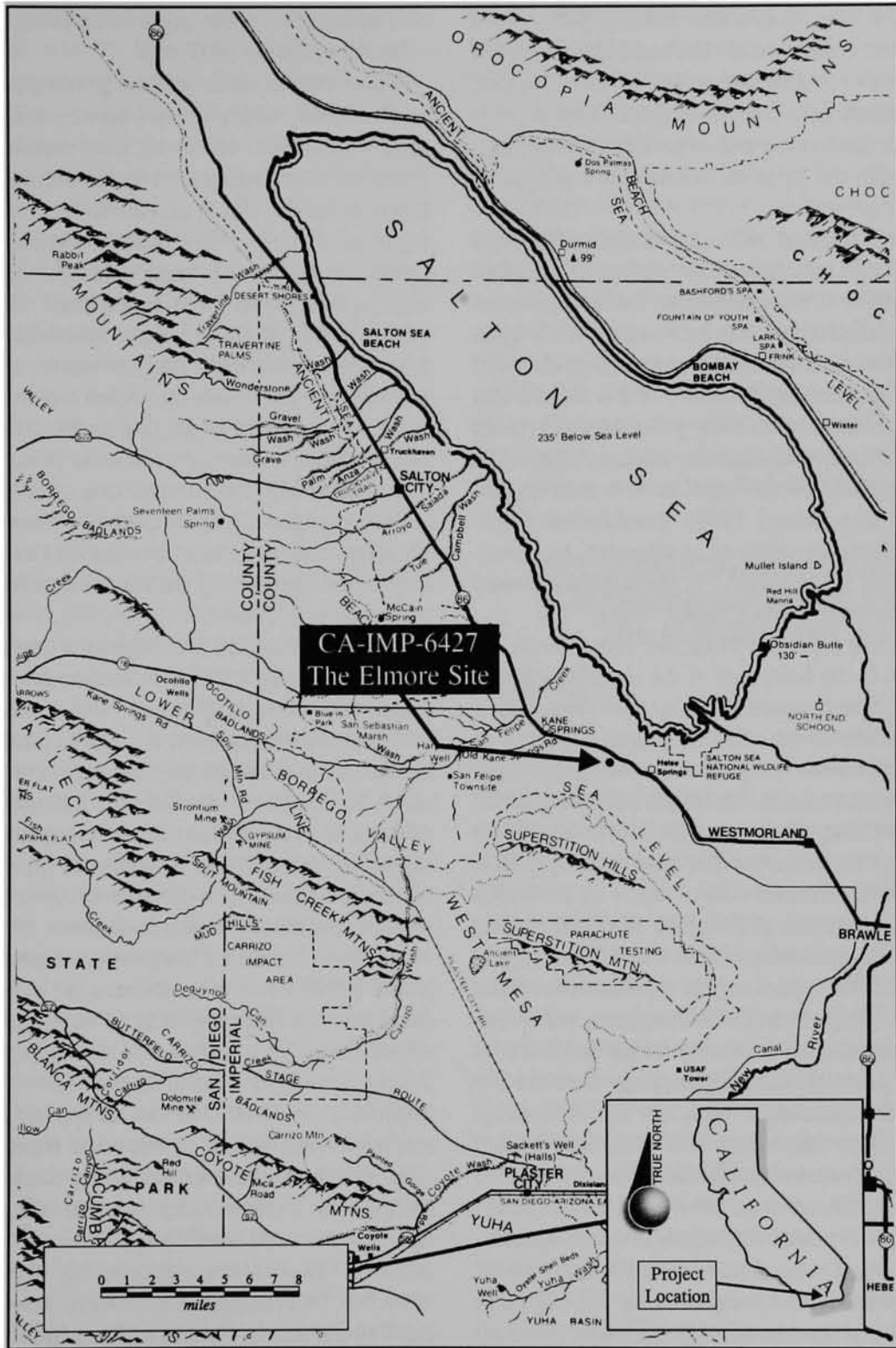


Fig. 1. Location of the Elmore Site (CA-IMP-6427).

the Salton Sea. Laylander (1994, 1995, 1997) conducted a substantial data recovery project at the site to mitigate impacts from the Caltrans road-widening project. The clothes-burning feature was discovered and excavated during grading of the site prior to construction (Schaefer 1999).

Ten calibrated radiocarbon dates from the testing and data recovery phases (Laylander 1994, 1995, 1997) established the date of occupation of the Elmore Site between ca. A.D. 1663 and 1798. An additional large piece of charcoal from the subsequent recovery of this feature was radiocarbon dated to 160 ± 60 RCYBP (Beta-94982) which, when dendrocalibrated, yielded a calendar date of A.D. 1665 to 1890 (one sigma) (Stuiver and Reimer 1993). Late Period radiocarbon dates are difficult to interpret, however, because of atmospheric ^{14}C fluctuations, known as the DeVries effect (Taylor 1987).

The low elevation of the site indicates an occupation in the latter half of the seventeenth century at a time between Oñate's (1604) and Kino's (1700) visits to the Colorado River. This is in conformity with many other recent dates from low elevation sites that establish a final Lake Cahuilla infilling between A.D. 1600 and 1700 (Wilke 1978; Waters 1983; Laylander 1994:83-124, 1995; Schaefer 1994; Apple et al. 1997: 6.4). Laylander's (1994:124, 1997:68) review of 83 radiocarbon dates from Lake Cahuilla presents one of the most cogent arguments for three major infillings in the last millennium, in the thirteenth, fourteenth, and seventeenth centuries.

The unusual faunal assemblage from the Elmore Site indicates a wetlands focus (Beezley 1994, 1995). More than 99% of the 2,309 identified vertebrate bones derived from wetland bird species (minimum number of individuals [MNI] = 575), with over 70% from a single species, the American coot (*Fulica americana*). These birds are most easily captured by driving them into nets that have been set in the water (Beezley 1994, 1995). The presence of known migratory

bird species at the site suggests an autumn occupation (Laylander 1997:42).

Fish remains were scarce in comparison to bird remains, with only 407 elements and three species identified. However, their presence verifies that fish were captured by the prehistoric inhabitants of the site at elevations below 180 ft. (Laylander 1994:147). Indeed, Apple et al. (1997) recorded fish traps and abundant fish bone assemblages from recessional shoreline camps at just slightly higher elevations on the Salton Sea Test Range. Higher fish bone counts at contemporary sites in the region therefore indicate that the pattern at the Elmore Site is not due to a depletion of the Lake Cahuilla fishery from increased salinity, but rather to a specialization not seen at contemporary sites elsewhere along the lake. This emphasis on waterfowl has implications for interpreting the actual function of the entire site (see below).

The site contained a thin midden deposit that occurred as a single, mostly continuous lens. The midden was extremely carbonaceous and several hearth areas were defined during the final monitoring phase. During the data recovery phase, other features were discovered, including concentrations of sandstone slabs. Perhaps the most enigmatic feature was a series of small pits. None showed evidence of either firing or storage and the function of these pits remains unclear.

Artifacts recovered from the site include projectile points ($n = 33$), unifaces ($n = 66$), bifaces ($n = 8$) chopping tools ($n = 7$), hammerstones ($n = 16$), cores ($n = 41$), debitage ($n = 5,151$), manos ($n = 10$), metates ($n = 2$), and ceramics ($n = 727$). The tool kit appears consistent with what would be expected from a seasonal residential base or temporary camp. Low milling tool counts were attributed to an emphasis on screwbean and waterfowl processing that require no stone-on-stone processing (Laylander 1994:66). Ceremonial items were rare except for a single nearly complete Tizon Brown Ware bow-shaped flanged ceramic pipe.

One of the most intriguing aspects of the Elmore Site was the identification of an *Olivella* spp. bead manufacturing locus (Rosen 1994, 1995). Both *O. biplicata* from the Pacific coast and *O. dama* from the Gulf of California were recovered. This is the only bead manufacturing locus to be identified in the Colorado Desert. Substantial amounts of detritus from the production of simple spire-lopped beads were found, along with complete spire-lopped beads (n = 17) and barrel beads (n = 32). The site also produced the greatest variety of shell species for any excavated site in the Colorado Desert, indicating production and/or special use of shell ornaments. These species included California cone (*Conus californicus*), chestnut cowrie (*Cypraea spadicca*), volcano limpet (*Fissurella volcano*), abalone (*Haliotis* sp.), smooth giant cockle (*Laevicardium elatum*), California horn shell (*Cerithidea californica*), bittersweet clam (*Glycymeris maculata*), several unidentified gastropods, and one oyster. The only local and presumed noncultural species from Lake Cahuilla were the ubiquitous woebegone floater (*Anodonta dejecta*) and a single specimen of Leconte's rangia (*Rangia leconti*).

The focus on *Olivella* spire-lopped bead manufacture provides some support that this area was probably within Kumeyaay territory and that the ethnographic boundary with Cahuilla territory was to the north, perhaps in the vicinity of Borrego Valley as recounted by Font in 1775 (Bolton 1931:141-143). Most Cahuilla *Olivella* beads from this period were made from the sides of the shell and formed into disks. The Cahuilla obtained most of their beads in trade from the coastal Gabrielino or Chumash and used disk beads much like money, as well as for cremations and other social-ceremonial functions (King 1995). The paucity of spire-lopped beads from Cahuilla sites makes it difficult to confirm the extensive use of such beads in any context. Excavation of 16 cremation burials from Tahquitz Canyon (King 1995) and others from CA-RIV-1179 (King 1988) certainly indicated that disk

beads were a frequent element, just as spire-lopped beads appeared to be a regular element of cremation burials and apparently other mortuary rituals among the Kumeyaay. Disk beads dominate at both midden and cremation loci in Cahuilla territory but are relatively rare in Late Prehistoric Period and ethnohistoric archaeological sites in Kumeyaay territory. The spire-lopped beads certainly required less energy to manufacture than the disk beads and appear to have been more important as ornaments and for social exchange than as "money" for the Kumeyaay (Rosen 1994: 26-32). Thus, bead types appear to be a good ethnic marker to distinguish the Cahuilla and the Kumeyaay in the Colorado Desert during the Protohistoric Period, particularly in the context of mortuary rituals.

ARCHAEOLOGICAL EVIDENCE FOR CLOTHES BURNING AT THE ELMORE SITE

The Firing Pit

The firing pit of the clothes-burning feature (identified as Feature 6) was discovered during monitored grading of the sand dunes on the northeast side of the main occupation area, 17 m. east of the northeastern block excavation of the data recovery phase. Only the very edge and top of the pit were exposed by the paddle-wheel scraper and it was found virtually undamaged within sterile dune sand. It was about 50 cm. below the original surface and 60 to 70 cm. above the base of the sand dune at the point where the dune contacts the lake bed deposits. Upon clearing the upper sand, the oval fire-reddened outline was clearly defined, measuring 60 by 84 cm. (Fig. 2). The pit was excavated in two halves to record the profile. All of the soil was placed in sterile plastic bags for flotation and screening in the laboratory. A five-cm. thick charcoal fill conformed to the dish-shaped pit so that the sand fill was first removed from the southwest half of the pit (Fig. 3).

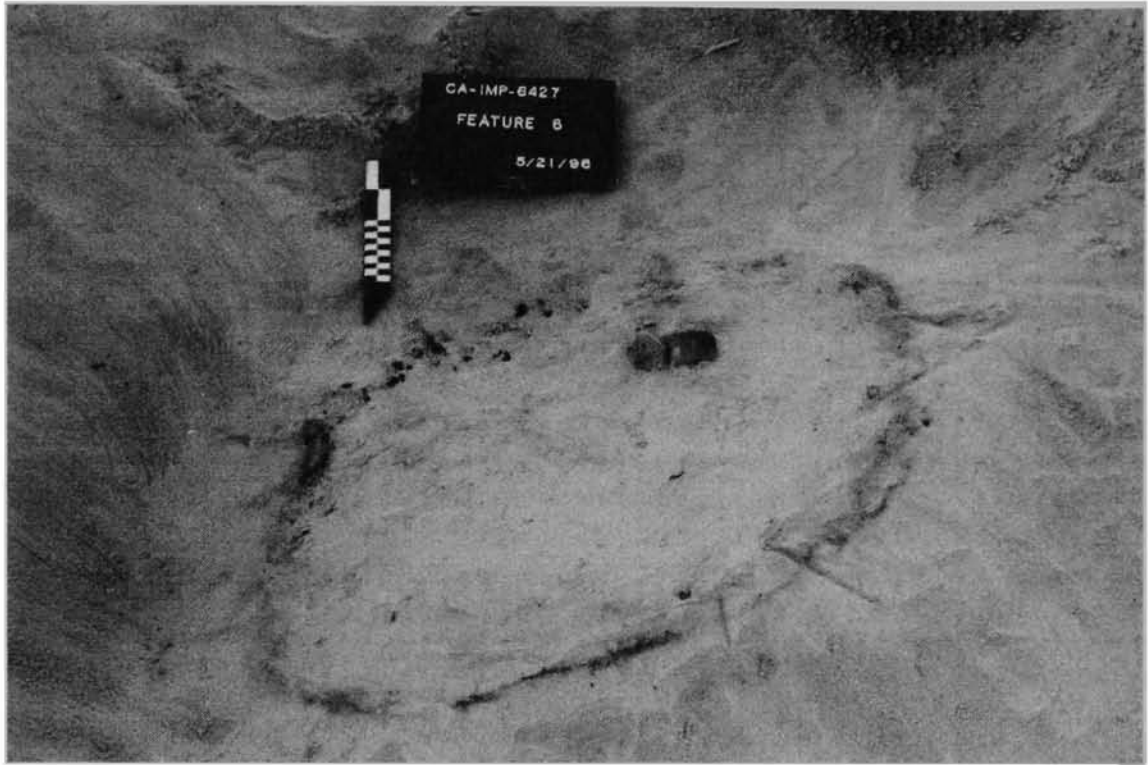


Fig. 2. Exposed outline of Feature 6 at CA-IMP-6427 upon discovery.

Sherds from a single painted ceramic jar were found in the charcoal and were protruding to the surface. Hundreds of *Olivella* sp. beads and a fragment of a *Glycymeris maculata* shell pendant were also evident in this half. The vegetal artifacts (see below) appeared to be concentrated in the northeastern end. Beads were found throughout the deposit, but with concentrations in the northeast end and in the area of the vegetal fiber artifacts (Fig. 4).

After a sandstorm halted work, the northeast half of the pit was excavated a week later, revealing a cross section of the deposit (Fig. 5). In addition to many more beads, braided cordage was evident on the surface, along with large clumps of vegetal fiber concentrated in the south-central portion of the pit. This area was isolated and removed as a consolidated block to the extent permitted by the loose sandy matrix. When examined in the laboratory, small fragments of cordage and bark fiber were found adhering to

large charcoal pieces. The block was then carefully dissected with fine sable hair brushes. Individual vegetal artifact elements were isolated and cleaned under a 10X-20X power microscope. Some items were consolidated with diluted polyvinyl acetate (PVA) so they would not disintegrate before they could be examined. Two types of cordage appeared to be represented, each apparently associated with a specific object. At least three distinct items could be distinguished from the small carbonized fragments; a cordage carrying net, a bark skirt, and an unidentified cordage and fiber item that may have been a sandal (Figs. 6 through 8).

The large pieces of catclaw (*Acacia* sp.) charcoal in the deposit indicate that the fuel was fired and left undisturbed, possibly covered with sand before the coals were allowed to turn to ash. Catclaw was recognized as a fine source of firewood by the Cahuilla (Bean and Saubel 1972:29). Ethnographic information suggests that the fire

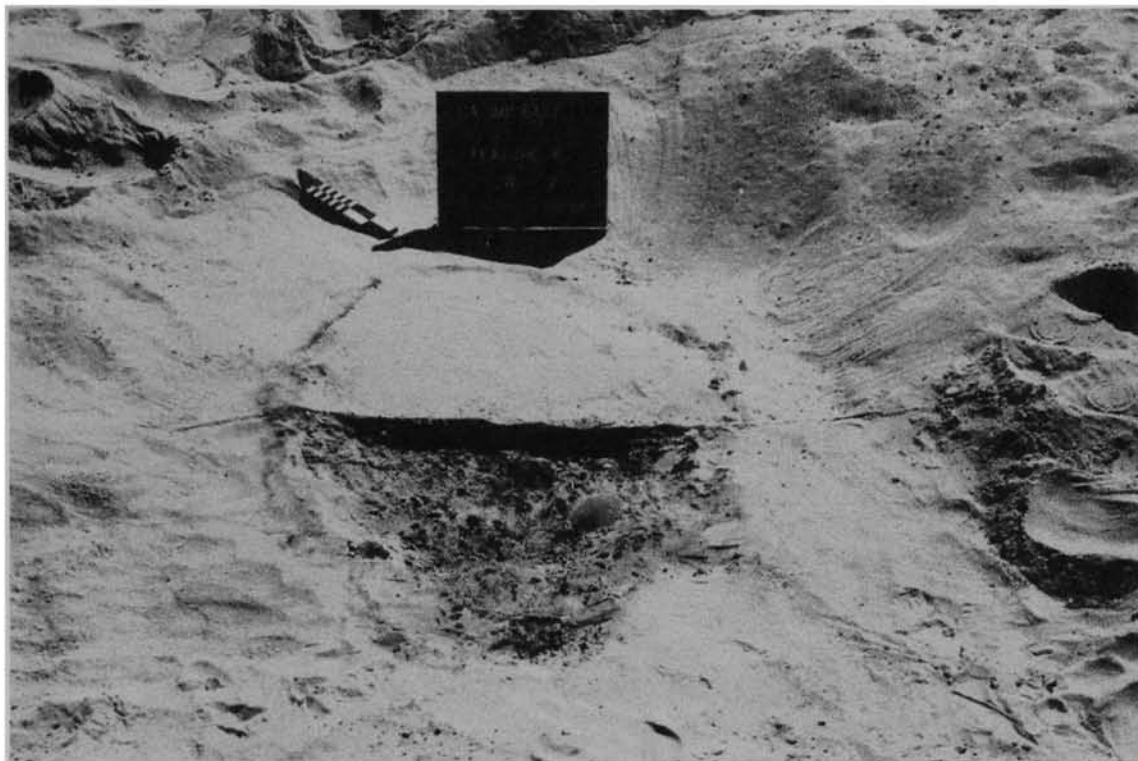


Fig. 3. Half of the sand fill removed from Feature 6 at CA-IMP-6427, revealing beads, ceramics, carbonized wood, and cordage.

would have been turned over to ensure that everything was consumed, but this does not seem to have been the case here. This could explain why many remnants of the vegetal artifacts were found lying on top of some of the larger charcoal fragments. Nevertheless, most of these items were consumed in the fire and only a few vestiges were sufficiently preserved to identify them. It is possible that other items were also consigned to the fire and were completely consumed.

The Cordage Carrying Net

Approximately 50 short segments of carbonized yucca fiber cordage were recovered from Feature 6, weighing a total of about eight grams and ranging in length between 0.5 and 4.0 cm. Most of this cordage was associated with the knotted fragments and netting that appeared to be from a single item identified as a carrying net (Fig. 6a-g). The cordage type was of the S-

spun, Z-twist, two-ply variety, whereby approximately six fiber strands of each ply were twisted from left to right, then the two plies lapped in the opposite direction, from right to left (Fig. 6a). The braided and knotted fragment may have been the tied ends of the suspending loop of a carrying net (Fig. 6c), as described for the Cahuilla (Kroeber 1908:Plate II) and Kumeyaay (Spier 1923:343-344).

Eight pieces of cordage were knotted, including two pieces with multiple knots that indicated a net with an approximately two-cm. gauge (Figs. 6d-g). The knot types were difficult to identify because of the warped and brittle nature of the cordage. Most appeared to have been of the "bowline on a bight" variety, although one square knot was definitely present.

Cordage was a fundamental item of the hunter-gatherer tool kit, and was employed for a variety of purposes, including hunting nets, car-

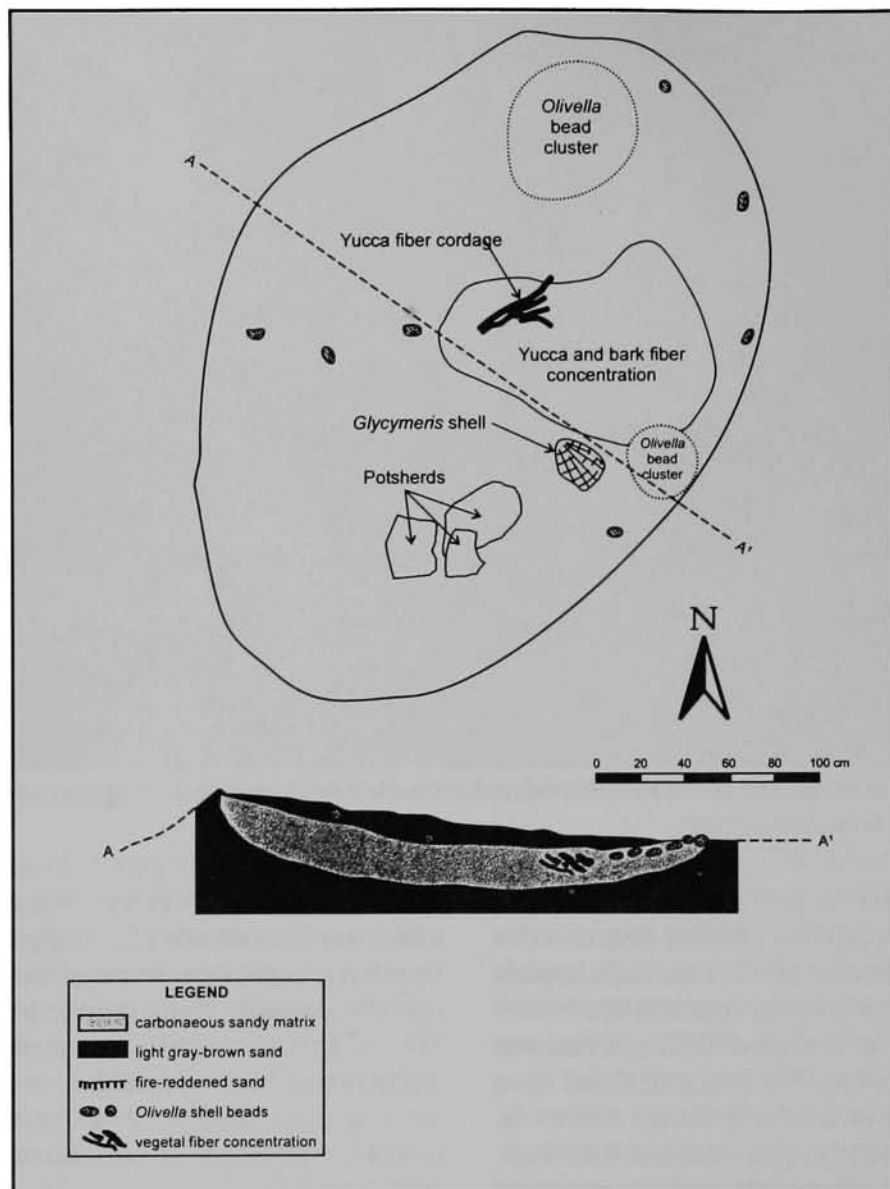


Fig. 4. Plan and profile views of Feature 6 at CA-IMP-6427.

rying nets, fishing line, snares, sandals, blankets, and garments. It could be manufactured using several different methods and from a variety of materials, such as vegetal fibers, human hair, and sinew (Hoover 1974). The Elmore Site examples provide a singular opportunity to glimpse an aspect of prehistoric material culture not often represented in the Colorado Desert or southern California.

Net and cordage fragments are commonly found in dry caves but rarely occur in open air sites. The specimens from the Elmore Site constitute only the third such find in the Colorado Desert. McDonald (1992:303) recovered seven cordage fragments from Indian Hill Rockshelter (CA-SDI-2537). Four of these fragments were two-ply, S-twist cordage made from thin fibers such as milkweed (*Asclepias albicans*). Two



Fig. 5. Profile of carbonized deposit after removal of western half of Feature 6 at CA-IMP-6427.

pieces were double-strand and multistrand two-ply, Z-twist cordage made from round, thick fibers (probably agave or yucca), very similar to the Elmore Site examples. A single-twist ply from a multi-ply Z-twist cord, probably made from milkweed, was also recovered from Indian Hill Rockshelter. Pritchard-Parker (1993) described several fragments of two-ply cordage netting from CA-RIV-150, located on the northwest paleoshoreline of Lake Cahuilla near La Quinta. This cordage was intertwined with some other plaited and carbonized material, possibly leather, that was woven into the artifact as a strap for support. Pritchard-Parker (1993) did not identify the twist and ply direction of the cordage, but did report bowline knots in as many as four rows.

The Bark Skirt

Approximately 15 grams of matted bark fiber and bark cordage were recovered from Feature 6 (Fig. 6h, 7). The bark could not be identified to

species but is in the Salicaceae family, probably willow (*Salix hindsiiana*) or, less likely, cottonwood (*Populus fremontii*). In one fragment, it could be readily seen that the cordage was woven through strips of bark (Fig. 6h, 7a-b). This is precisely the method used to make a woman's bark skirt as described by Gifford (1931:32-34, Plate 2.A.d-e) and replicated by his Desert Kumeyaay consultant, Rosa Narpai. All of the bark cordage, approximately 10 pieces measuring from 0.25 to 2.0 cm. in length, was made in the opposite way of the yucca cordage. It is a relatively thin Z-spun, S-twist variety, with six to 10 fiber strands spun from right to left and then each ply lapped from left to right (Fig. 6b).

Gifford (1933:276) provided one of the most detailed descriptions of Desert Kumeyaay willow bark skirt manufacture, with an illustration of the type probably represented at the Elmore Site. Williams (1995) provided another comprehensive discussion of bark skirts, including a review of

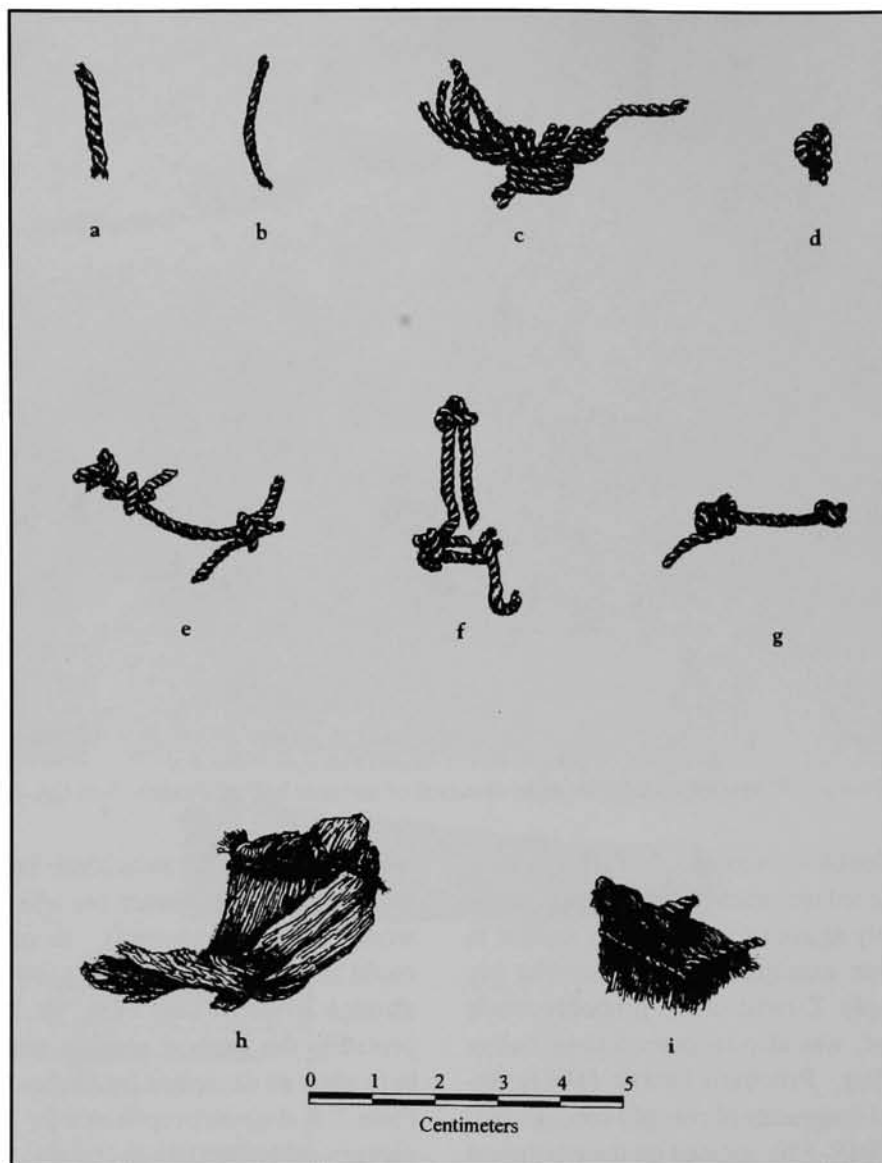


Fig. 6. Vegetal artifacts from Feature 6 at CA-IMP-6427.

ethnographic sources and her observations of the manufacturing process by Cocopah artisan, Inocencia Gonzalez Saiz, on the Hardy River in 1992. Additional information on Colorado Desert bark skirts was provided by Kroeber (1922: 261, 1925:721), Forde (1931:126), Spier (1933: 95, Plate IV), Drucker (1937:18), and Whipple (1961:58).

Bark skirts were decorated in several ways. Whipple (1961:58) described one Quechan exam-

ple in 1849, noting that "The women, dressed in girdles of bark, stripped into thongs, and partially braided, hanging in a fringe to the thighs, and ornamented with many strings of shells or glass beads, were making a mush of zandias (watermelons), or grinding grass seeds into flour." Kroeber (1925:721) and Gifford (1931:32) also described Kumeyaay braiding of the front panel as an alternative to the loose willow bark strips. What appears to be a braided Cocopah example,

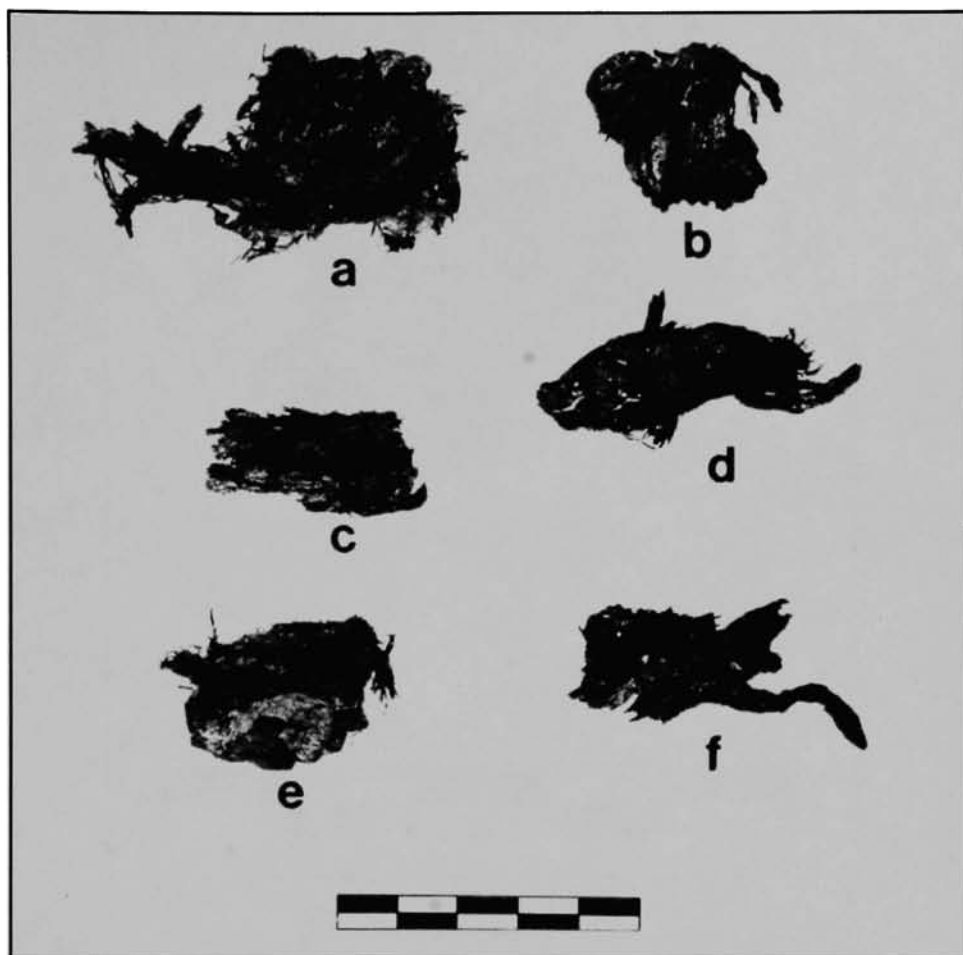


Fig. 7. Bark skirt fragments from Feature 6 at CA-IMP-6427 (scale in cm.).

along with the willow strip type, was also illustrated by Densmore (1932:Plate 6) from a museum display. Desert Kumeyaay women also might hold the skirt in place with a belt made from their own hair (Gifford 1931:34). Both braided and straight bark strips can be observed in the Elmore Site example. Given Whipple's (1961) description of Quechan skirts, it is also possible that at least some of the shell beads are from the skirt and not necessarily from a necklace.

Possible Yucca Sandals

Approximately three grams of loose yucca fiber were found grouped together. One piece was consolidated enough to determine that some of the fibers had been twisted into a very thick

cordage and that finer yucca cordage had been sewn through the mass (Figs. 6i, 8). This combination of bundled yucca fiber with cordage is typical of the construction method for making sandals as described by Spier (1923:345) among the eastern Kumeyaay. Although the elements are too fragmentary to make a positive identification, a mass of unconsolidated yucca fibers is highly suggestive of sandal construction. Such items would likely be included in a clothes-burning ceremony.

Shell Beads and Ornaments

The shell beads and ornaments recovered from the pit were analyzed by Martin D. Rosen of Caltrans, who had previously reported on the



Fig. 8. Bound yucca cordage fragment, probably from a sandal, from Feature 6 at CA-IMP-6427 (scale in cm.).

shell bead manufacturing industry at the Elmore Site. A total of 332 complete *Olivella* sp. beads was recovered (Fig. 9, Table 1). The total weight of the beads was 106.3 g., including about 16.9 g. of unidentified fragments. This latter material probably derived from complete beads that were calcined and fragmented from the burning rather than the manufacturing detritus identified in other portions of the site. Within the occupational midden, detritus outnumbered complete beads by a ratio of 3:1 (Rosen 1994:8).

Two species are represented among the identified beads within the pit: *Olivella dama* (n = 177; 61%) and *O. biplicata* (n = 113; 39%). Small and medium-sized specimens are represented, although the medium-sized specimens dominate for both species. All beads are of the

simple spire-lopped variety (Type A1; see Bennyhoff and Hughes 1987:116) or Type F5 (see Gifford 1947:10). The spires were mostly chipped off, with a small number of *O. dama* exhibiting ground spires. The *O. dama* beads tend to be very roughly chipped with large (3.0 mm.) diameter holes, while the *O. biplicata* beads tend to have smaller (1.0 mm.) diameter holes. This may be due to the different characteristics of the two species, or may possibly have resulted from different individuals making the beads.

The two species also appear to have reacted to the fire differently. *O. dama* beads calcine to a black or dark gray color, while the *O. biplicata* beads fire to a chalky white color (Fig. 9). It seems unlikely that chemical differences between the species explains the color difference. Per-

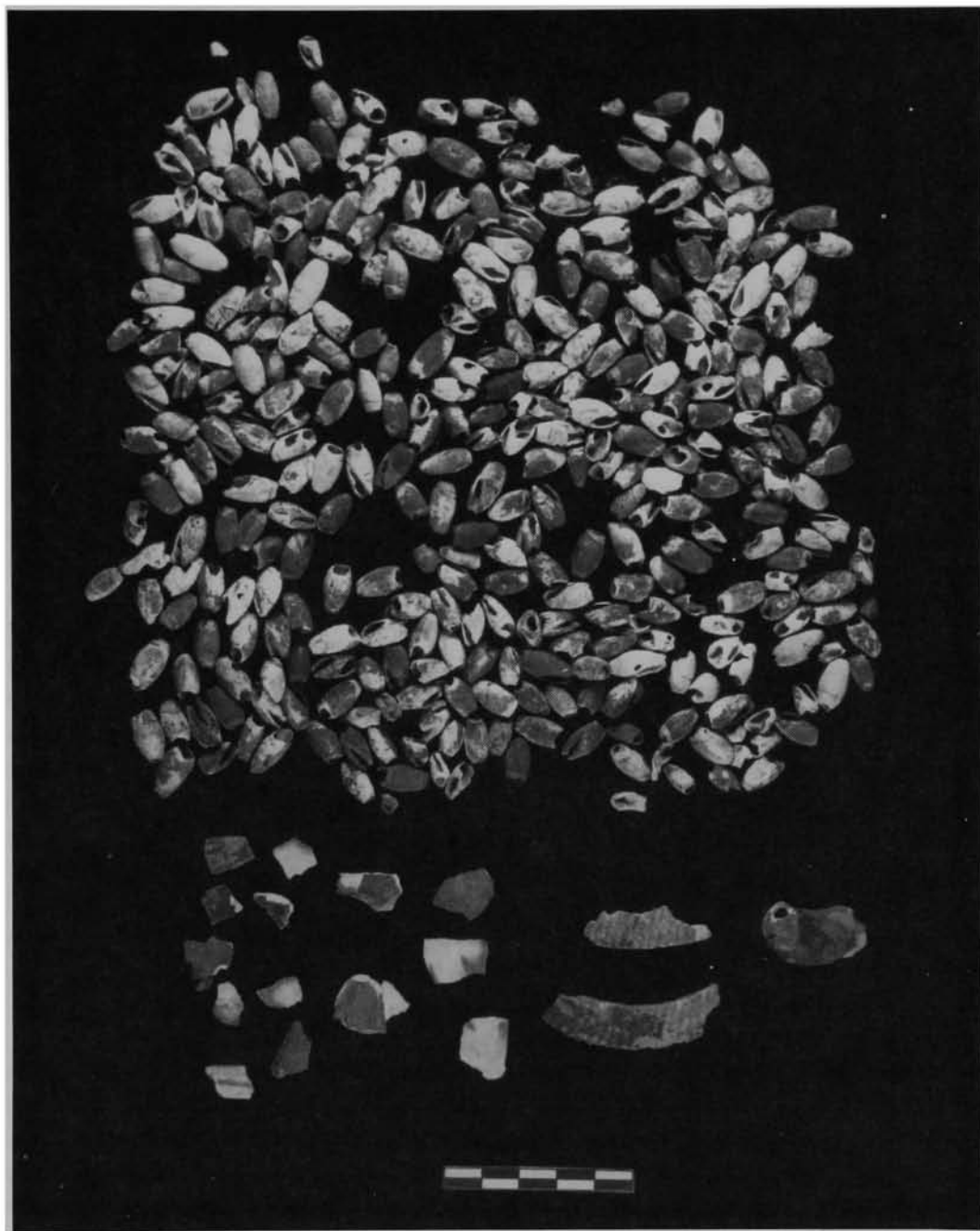


Fig. 9. Beads and shell pendant fragments from Feature 6 at CA-IMP-6427 (scale in cm.).

haps one type was heat treated prior to manufacture. This was sometimes done to whiten the shells and make them easier to cut (Hartzell 1991:36). The color difference may suggest that beads of each species underwent different pro-

cessing trajectories before use or were thrown into the fire under different conditions.

Several thin fragments of Z-twist, S-ply cordage were recovered from inside some of the *Olivella* beads, indicating that at least some of the

Table 1
SHELL BEADS FROM FEATURE 6, CA-IMP-6427^a

Species	Small (3.0 to 6.5 mm.)	Medium (6.51 to 9.5 mm.)	Large (9.51 to 14.0 mm.)	Totals
<i>Olivella biplicata</i>	49	64	0	113
<i>Olivella dama</i>	84	93	0	177
<i>Olivella</i> sp.	17	25	0	42
Totals	150	182	0	332

^a Metric measurements per the criteria of Bennyhoff and Hughes (1987:117). All beads are Type A1, simple spire-lopped (Bennyhoff and Hughes 1987:116-117).

beads were strung. This very fine agave cordage resembles the Z-twist, S-ply bark cordage recovered from the bark skirt.

One *Glycymeris maculata* (Keen 1971:55) shell ornament was represented by 25 highly calcined fragments (5.1 g.). One of the largest pieces measured 27.7 by 15.8 mm. (Fig. 9, bottom right). The apex of the valve was recovered and it exhibited a punched hole measuring 2.5 to 3.2 mm. This shell may have been suspended as a pendant and could well have been part of an *Olivella* necklace. Eight highly calcined pieces of *Laevicardium elatum* (4.5 g.) or cockle were also recovered.

The quantity of beads from this single feature outnumbers the total number of *Olivella* beads and detritus from the remainder of the site by 103. Nevertheless, Rosen (1994) was correct to identify the detritus found at the site as the first bead manufacturing locus to be identified in the Colorado Desert. This identification fills a noticeable gap in the ethnohistoric and ethnographic literature (see Rosen 1994), which is either silent on bead manufacture or suggests that most beads were acquired by the Desert Kumeyaay as trade items. While the unmodified beads may have been acquired through trade, at the Elmore Site it is clear that the shells were shaped into beads on location.

It is possible that there is a connection between the large number of beads in Feature 6 and the bead manufacturing locus found in the occu-

pational area of the site, in that the beads from Feature 6 may have been specifically made for the clothes-burning ritual. Presumably, the pit contained only the property of the deceased and it is likely that the recovered beads were once worn by the deceased. In one known case, shell beads were attached to a horse that was killed at the funeral of its Cocopah owner (Gifford 1933:294). Beads are commonly found associated with western Kumeyaay (True 1966:150-151) and Ca-huilla (Bean et al. 1995:XXI-6) cremation burials, although there is no known way to distinguish between burned personal property and possible offerings. Alternatively, beads may have been manufactured as "payment" (or gifts) to participating attendees, rather than for burning (Waterman 1910:306-307).

The Painted Ceramic Jar

Five pieces from a single, partially reconstructed Colorado Red-on-Buff ceramic jar were found clustered in the southern half of the feature. The fragments suggest a small, conically shaped jar (Fig. 10). While the exterior surface was even and well smoothed, the interior was very rough and uneven, as would be expected for a small, narrow-necked jar. The finely crushed buff-colored (5YR 7/4) clay contained occasional rounded quartz grains, as well as some surface and interior vugs and freshwater mollusk shells, as expected from Lowland Patayan ceramics (e.g., Waters 1982:569). The vessel walls are

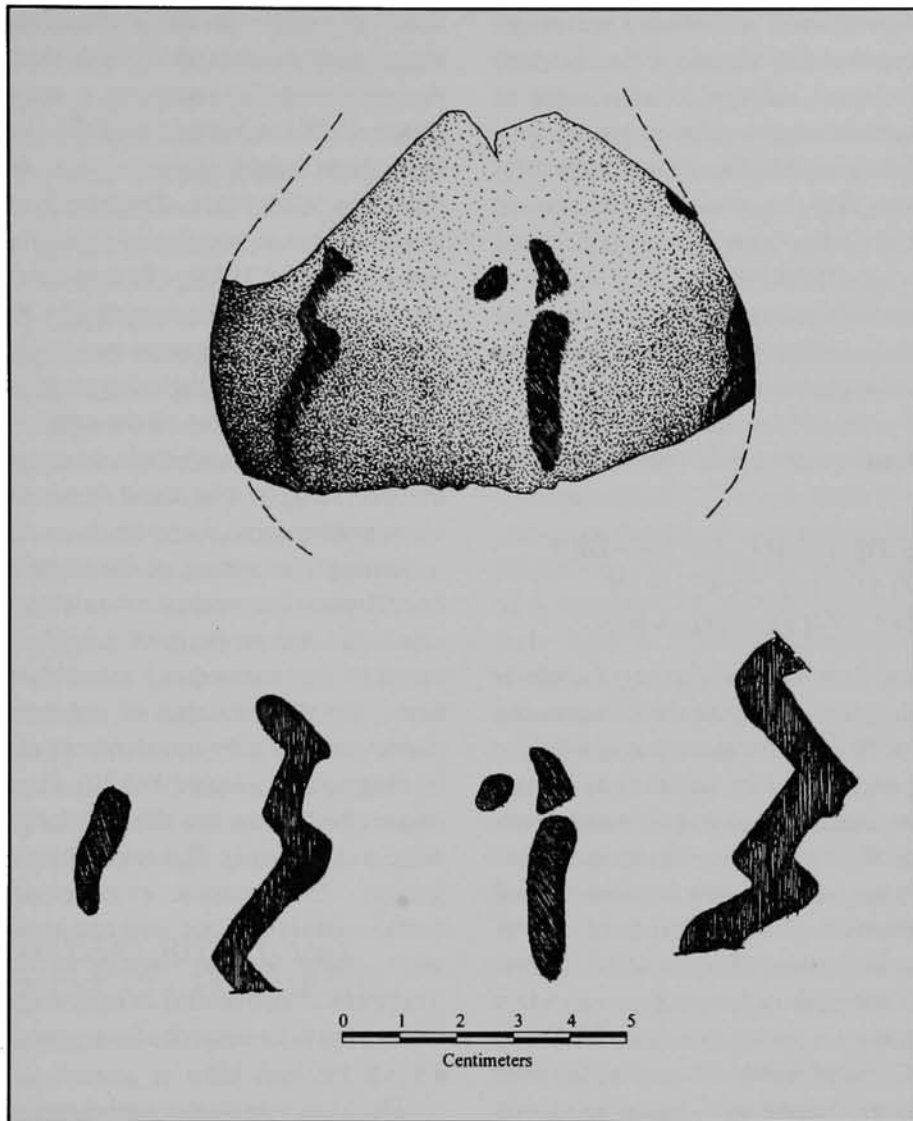


Fig. 10. Colorado Red-on-Buff jar fragment and design elements from partially reconstructed jar from Feature 6 at CA-IMP-6427.

comparatively thick (0.4 to 0.8 cm.) and the volume, not including the neck, is estimated to be 455 cm.³ (0.455 liters) based on the method described by Hagstrom and Hildebrandt (1990).

The exterior painted decoration, applied with a red mineral paint, includes two incomplete vertical wavy lines and a discontinuous dashed line. The line thickness suggests that the designs were applied with a finger-painting technique. Only one sherd (of indefinite type) of the 726 sherds

previously reported at the Elmore Site was painted (Laylander 1994:70). Lower Colorado Buff Ware ceramics are rarely painted, but there does appear to be an increase in decorative elements in the later dated Colorado Buff type.

One possible function for this vessel is as a personal canteen or ollita used in women's ceremonies (Griset 1996:56-61). Such a vessel may have been used by the Kumeyaay, but is specifically documented for the Luiseño, in which a

special vessel (*peclicmul*) was used to heat water for treating menstruating women and to prepare a water and tobacco mixture to administer to women during their adolescence ceremony (*pa-apukumal*) (Strong 1929:298; Griset 1996:57). Among the Kumeyaay, warm water was prepared for girls to drink and to wash after their first and subsequent menses (Gifford 1931:52). It is possible that such an item might have ownership marks or marks resembling rock art or body decoration that accompany women's ceremonies. It would also be expected that such a very personal vessel would be destroyed at the death of its owner.

A CONSIDERATION OF GENDER AND SOCIAL STATUS IN CEREMONIAL BEHAVIOR

The Elmore Site clothes-burning feature is particularly significant because the contents can be associated with a person maintaining a female role (carrying net, bark skirt, painted jar). Moreover, the large number of recovered beads leads to the question of whether this is some indication of high wealth or prestige. The number of shell beads is extremely high compared to other cremations found in the area. For example, at CA-IMP-5260, a 200-year-old cremation near Dry Lake on the Lake Cahuilla shoreline, 30 *Conus ximenes* and *C. perplexus* beads and a minimum of 60 *Olivella* sp. beads were found in association with two steatite arrowshaft straighteners, a soapstone effigy pendant, a ceramic pipe, three bone tools, a hammerstone, a sandstone abrader, and five to eight ceramic vessels (Eighmey and Cheever 1992). Sex could not be determined from the bones, but the arrowshaft straighteners suggest a male owner. The steatite figurine may be indicative of a shaman, but the number of beads is still relatively low compared to that of Feature 6 at the Elmore Site.

There is a possibility, albeit slight, that the skirt and beads might have been those of a transvestite, a role often overlooked during investiga-

tions of gender in the archaeological record. Preparation of a shredded bark skirt was part of the ceremony for inducting a transvestite into Colorado River Yuman society, after which the individual would always wear female attire (Kroeber 1925:748). Transvestites were often given deference because of their shamanic abilities (Devereux 1937). In any case, the female gender role would be assumed by the individual and such activity patterns would be difficult to distinguish from biological women in the archaeological record. Also, if the ceramic jar was associated with menses rituals, as suggested above, the likelihood is that these items were the personal possessions of a woman.

During monitoring of the excavations, Clarence Brown (personal communication 1996) indicated that the property of a high status female might be represented in Feature 6 at the Elmore Site. Possible sources of achieved status for women included the development of shamanic or healing powers (Bean 1992:30). Possible sources of ascribed status are through birth or by marriage to the family of a high status clan or band leader. Ethnographic evidence indicates that certain *cimul* (sibs or clans) had higher status and were oftentimes the sources of band leaders. These *cimul* also tended to have larger land holdings and greater control of resources (Bean 1974; Shipek 1987:15-17).

The ability to detect social rank or "heredity inequality" in mortuary data has often been a difficult and controversial task, and a considerable body of literature has been devoted to the subject (Brown 1981). The analytic approaches and assumptions involved in this issue are most problematic when dealing with prehistoric societies with relatively simple material culture and presumed relatively low levels of sociopolitical differentiation. This is especially true in Yuman society with its cultural proscriptions against the accumulation of material wealth (Forbes 1965:58).

Byrd and Monahan (1995) argued that associated items of personal adornment are poor mark-

ers of socioeconomic differentiation. They examined burials from the Near Eastern Natufian cultural complex, representing a hunter-gatherer society with some similarities to southern California Late Prehistoric complexes. No pattern was found between amount of grave goods and sex, age, or spatial association of the interred (Byrd and Monahan 1995:265). They concluded that too many other factors played a role in the amount of personal adornment an individual might have accumulated or been bestowed at the time of death (Byrd and Monahan 1995:280). For example, factors to be considered in any association with beads include gifting of items to children, increased self-adornment during the age of courtship, age-set membership, and sentimentality. Certainly when examining early photographs of Colorado River Yumans, many individuals of different gender and age sets are shown with multiple strands of beads that would make the quantity recovered from Feature 6 seem unremarkable (Ives 1861:Plate IV; Forbes 1965). Therefore, to infer differential status from personal ornaments in one feature becomes a tenuous exercise at best.

MORTUARY RITUAL AND SETTLEMENT AT LAKE CAHUILLA

The occurrence of the Elmore Site clothes-burning ritual feature at what appears to be a very small temporary camp diverges from the more common association of such ceremonies with larger assemblages of people at residential bases, as described or inferred from ethnographic sources (Waterman 1910:306). This find therefore leads us to critically examine the normative approach to understanding mortuary ritual and the inherent problems of using ethnographic analogy in archaeological interpretations. However, the following discussion can take place with considerably more confidence because Feature 6 is so specifically associated with an ethnographically documented mortuary ritual and ideology, even though it represents a secondary ritual to

the actual cremation. Behavior associated with such secondary rituals rarely leaves identifiable archaeological signatures (Bartel 1982:53).

Archaeological approaches to mortuary behavior by prehistorians have parallel developments in cultural anthropology. Early efforts focused on explanations of observed variability, whether due to chronology, culture change, or social differentiation. The first half of the twentieth century saw the application of burial data to defining normative "cultures," delineating culture areas, and tracing the diffusion of cultural traits through space and time, often as an indication of population movement. This approach was particularly strong in European archaeology (Chapman and Randsborg 1981:3; Bartel 1982). Mortuary rites, as a reflection of deeply held religious beliefs, were seen as a particular diagnostic and static attribute of a cultural tradition, if not a specific ethnic or linguistic population.

Ethnographic studies of California Native American mortuary practice were pivotal in these discussions. Although not questioning the normative approach, Kroeber (1927) warned that burial practices within a group were likely to be much more variable than most researchers assumed. He noted that multiple mortuary rites were practiced by many California Indian tribes and that mortuary patterns frequently crosscut tribal boundaries (Kroeber 1927:308). Mortuary behavior was viewed by Kroeber (1927:314) as a "fashion" characterized by detachment from the other cultural elements, as having a high degree of entry into consciousness, and as having a high emotional association. This is in contrast to "core" cultural traits that were related to subsistence and social expression. Kroeber (1927:313) concluded that mortuary behavior was "unstable" and particularly inappropriate for the types of culture historical and diffusionist reconstructions that were the focus of most studies at that time.

California Indian mortuary behavior came to the forefront of processual archaeology theory

when Binford (1971) critiqued Kroeber's (1927) assumptions and applied a larger cross-cultural data base to the issue of variability in mortuary behavior. His goal was to strike at the assumptions of the traditional historical approach and to demonstrate that meaningful sociocultural variability was manifested in behavior patterns with observable archaeological correlates (Binford 1971). Binford (1971:15-16) refuted Kroeber's underlying propositions that mortuary behavior was mainly influenced by ideological variables and documented considerable cross-tabulation between sociocultural elements and burial practices. According to Binford (1971:15, 18), variability was related to sex, age, social status, group affiliation, and cause and location of death. As expected, hunter-gatherer societies expressed sex and age differences more readily in mortuary behavior, while sedentary agriculturalists placed additional emphasis on social rank and standing. Mortuary ritual was thus seen to vary in regular and patterned ways.

At the same time, Bean (1972) and Blackburn (1974) were among those anthropologists who specifically adopted a systemic, rather than normative, approach to California ethnography, recognizing considerably more patterned variability in ceremonial behavior as a result of interacting social, political, and environmental variables. Saxe (1971) applied a similar approach but with archaeological data from the Mesolithic Period in the Sudan, where he correlated variability in mortuary practice with age, sex, and personal achievement within an egalitarian hunter-gatherer social system. He also interpreted greater variability in body positioning among females than males as a result of patrilocality, whereby women with different burial customs were marrying into a patrilineal territorial group (Saxe 1971:46-48). This approach of emphasizing the social dimension of mortuary practice has gone on to influence numerous other archaeological studies.

This background leads to an examination of the variability in Lake Cahuilla settlement associ-

ated with ritual activity, particularly mortuary ritual. The stratigraphic and faunal evidence from the Elmore Site led Laylander (1997:96) to conclude that it was probably occupied by a small group in the fall or early winter and probably for no more than a portion of a single season as the Lake Cahuilla shoreline receded. Certainly the death of an individual at the site might require the primary cremation ceremony to take place there. However, other funerary ceremonies, especially those entailing property burning or memorials, usually involved the gathering of relatives and friends, at which time the host family was responsible for feeding and providing gifts to the visitors (Waterman 1910:306). Yuman and Takic clothes-burning ceremonies all shared these attributes of gathering many people, feasting, distribution of gifts, and participation in songs, dances, and speeches. Such events took planning and preparation, but as the Elmore Site attests, they need not have taken place at a major residential base. Additional interpretations can therefore be given to the Elmore Site archaeological assemblage based on the known elements of the *watlna*.

Several alternative explanations may account for the occurrence of this mortuary ritual at a small, temporary camp. Specific circumstances contributed to variability in the scheduling of funerary ceremonies and this may have been a situation where the ritual was conducted by immediate camp residents only. The transitory character of recessional shoreline camps may be one factor contributing to this variability. Nevertheless, some neighbors could have attended, and much of the waterfowl evident at the site may result from meals that accompanied the ceremony and fed the visitors. This may well explain the unusually high concentrations of waterfowl bones at the site.

The bead manufacturing locus identified by Rosen (1994, 1995) may also directly relate to the ceremony. Beadmaking loci are extremely rare at any site, and in this instance, the beads

may have been prepared as gifts to visitors or to be included in the clothes-burning ceremony. The bead manufacturing locus at the Elmore Site may therefore be related to the need to provision the clothes-burning ceremony. While some of the beads thrown into the fire may have been personal property of the deceased (some were strung), other beads may have been specifically prepared as offerings by the attending mourners.

Martin Rosen (personal communication 1999) suggested a second possibility for the atypical character of the Elmore Site. Perhaps it was not occupied by Kumeyaay at all but by Delta Yumans, such as the Cocopah. Nineteenth-century lithographs and photographic images frequently show Cocopah, as well as other River Yuman groups, displaying multiple-strand bead necklaces. The Kumeyaay are more often depicted with few or no beads. Groups like the Cocopah would have had much more direct access to *Olivella* shells from the Gulf of California that occur at the site in such large numbers as beads or as manufacturing waste. In this regard, Williams (1991) provided a detailed discussion of beads in Cocopah culture.

The unusual focus on waterfowl may also represent an adaptive specialization more typical of the delta area than in traditional Kumeyaay territory. It is reasonable to suppose that some Delta Yumans may have occasionally traveled to the north during the time when Lake Cahuilla was undergoing its final recession. Both Rogers (1945:192-193) and Kelly (1977:2) considered shifting tribal boundaries and population movements that seemed to occur at the beginning of the Patayan III phase. Certainly early explorers' accounts from 1540 to 1850 indicated considerable shifts in Delta Yuman tribal boundaries and territory as groups were displaced from the delta to insecure positions on the Colorado River (such as the Halchidhoma) or to merge with the Maricopa on the Gila River. Lake Cahuilla infillings may well have left portions of the delta uninhabitable and encouraged Delta Yumans to occupy

shoreline habitats to the north. Either through amicable arrangement or force, Delta Yumans may have maintained use rights of the delta to the end of the seventeenth century. By the eighteenth century, ethnographic accounts indicate that the desert Kumeyaay were allied with the Quechan and Mohave against the Delta Yumans, the Cocopah among them (Gifford 1931:8, 17-18).

It is extremely difficult to distinguish distinct tribal groups in Patayan assemblages, particularly when the subjects are members of the same general linguistic and cultural group. More knowledge of Patayan sites and comparable data sets in the delta region would certainly help to demonstrate if the unusual characteristics of the Elmore Site result not from functional specialization but tribal differentiation.

As a third explanation for the nature of the Elmore Site, the settlement context for mortuary rituals may have been affected by the profound cultural changes accompanying Spanish incursions. By the time ethnographic information could be collected, Kumeyaay mobility had been greatly constrained and populations were aggregated in reservations. With the more flexible settlement strategies of the prehistoric past, there may have been greater situational variability within which mortuary rituals were undertaken. In this regard, the ethnographic record may not reflect the variability in cultural patterns that existed prehistorically. A pattern of considerable flexibility in camp size, resource specialization, and group composition is suggested in the ethnographic data and from archaeological settlement pattern data (Graham et al. 1981; Shackley 1984). Further, a pattern of fission and fusion characterized settlement structure as bands responded to seasonally available resources or environmental perturbations. The late infilling and recession of Lake Cahuilla between A.D. 1600 and 1700 may have been the type of short-term environmental event that small and highly mobile groups would be expected to exploit. Certainly

the *watlma*, in comparison to the *keruk*, may have been a more intimate and personal rite involving only close relatives and acquaintances that was more often conducted at smaller residential sites and on short notice. Other considerations may have been the gender and status of the deceased, as well as the spiritual hazards of keeping the possessions of the deceased until the group returned to the residential base.

It is also likely that by A.D. 1700, European diseases may have already begun to increase the death rate. That unusual or catastrophic mortalities were occurring in the Salton Trough is evidenced at CA-IMP-5959, located about 18 km. southwest of the Elmore Site in the San Felipe Creek area, at an elevation close to sea level (Clewlow et al. 1992). Here at this small, temporary camp was an unusual multiple cremation of at least four individuals, with no associated grave goods, although a single cremation located nearby did have grave goods. While the circumstances of their deaths could not be ascertained, the possibility of introduced European disease was proposed (Clewlow et al. 1992:117).

Recent studies indicate that California Indians likely experienced epidemics before the establishment of the Alta California missions in 1769 (Walker and Johnson 1994:112). The Spanish made direct contact with the Lower Colorado River Yumans during the 1540 Alarcón and Días expeditions, the 1604-1605 Oñate expedition, and Kino's 1701-1702 entradas (Forbes 1965). Even more pernicious would have been native-to-native disease dispersal along trade routes between California, Arizona, Baja California, and Sonora (Cook 1937; Preston 1996). The people of the Lower Colorado River and Salton Trough would have been particularly vulnerable during this period. Although impossible to establish at the Elmore Site, the possibility exists that the social, psychological, and demographic stress of epidemic disease may have necessitated changes in traditional custom with regard to mortuary ritual. Although definitive answers are elusive,

the evidence from the Elmore Site provides important insight into the lifeways and mortuary rituals of Colorado Desert peoples just as they were about to experience much more profound changes and increased mortality.

CONCLUSIONS

The significance of this clothes-burning ceremonial feature goes far beyond the rare archaeological manifestation of a specific mortuary ritual and the unusual preservation of vegetal artifacts. The owner of this property can be reasonably identified as a woman, probably an adult whose actual cremation must have taken place at a different location, probably prior to this ceremony. Her yucca fiber sandals, carrying net, willow (or cottonwood) bark skirt, and painted jar were among the items consumed by the catclaw wood-fueled fire. Other perishable items also may have been cast into the blaze but were completely consumed. Although the large number of shell beads suggests a person of high status, it is also argued that this number is not excessive for a person of average status or who may have simply been highly regarded by her family and friends.

The occurrence of this ceremonial feature indicates that there was certainly more variability in the social and settlement setting for the *watlma* mortuary ceremony than is suggested by the ethnographic record, as this clothes-burning event took place not at a major residential site, but at a seasonally occupied temporary camp. In several ways, this was not a typical temporary camp. It contained the only known shell bead and shell ornament manufacturing locus in the Colorado Desert. Such craft production might normally be associated with a larger residential site, where there was time and resources to support such an effort. Therefore, it is reasonable to conclude that the bead manufacturing was specifically related to the *watlma*, either to produce offerings for the ceremony or as gifts for attendees. The unusual focus on aquatic bird exploitation may also relate to the provisioning of the ceremony,

as well as to expedient resource utilization in the dynamic environmental circumstances of the final recession of Lake Cahuilla.

Does this ceremonial feature change our perception of the nature of settlement along the Lake Cahuilla shoreline? To some degree, it does help to more fully appreciate the range of activities that might occur at a shoreline temporary camp and to understand the types of adaptations and changes in settlement that accompanied the final recession. With regard to the debate over whether Lake Cahuilla supported large, permanent residential bases or seasonal temporary camps (Weide 1974; Wilke 1978; Schaefer 1994; Sutton 1998), the Elmore Site suggests that evidence of ceremonialism must be carefully considered when evaluating sites on the maximum shoreline. As a temporary camp, it conforms to the small size, shallow midden, and generally low artifact variability that might be predicted for a seasonal temporary camp. However, this does not negate the use of such a small site for ritual and symbolic behavior that penetrated every aspect of Native American life in the Colorado Desert. With regard to funerary ritual, cremations took place all along the Lake Cahuilla shoreline, usually as isolated or dispersed occurrences, but sometimes involving more than one individual.

As archaeologists, we therefore must critically examine the criteria we apply to settlement typologies and the application of ethnographic analogy. Some of the ethnographically documented associations of mortuary ceremonies with larger residential sites may have resulted from the social and spatial aggregation caused by the loss of territorial sovereignty and mobility in the nineteenth century. The Elmore Site is an excellent example of the often-stated caution that the patterns of human activity in the prehistoric past may be quite different from that recorded in the ethnographic present. Apparently, conditions were sufficient during the occupation of the Elmore Site to conduct the *watma* ceremony. This included the availability of resources, attendees,

and possibly ritual specialists to support this rarely recognized ceremonial event in the archaeological record.

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