# *Excavations at Teddy Bear Cave (CA-KER-508), Tomo-Kahni State Park, Southern Sierra Nevada, California*

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**Abstract**

Teddy Bear Cave (CA-KER-508) is thought to be the location where the Kawaiisu people and world were created. The site, which contained an archaeological deposit and many pictograph elements, was excavated on two occasions, first by the Archaeological Survey Association in 1955 and 1956 and then by Antelope Valley College in 1971. The rock art was recorded on a number of occasions, including a major effort in 1999 led by Dr. Georgia Lee. The rock art and ethnographic data suggest that the site served as ceremonial locality while the archaeological data indicate that people lived at the site for some short periods of time during Late Prehistoric/ Protohistoric times.

## Introduction

Teddy Bear Cave is a small cave located on the north-facing side of a small rocky ridge along the western edge of Sand Canyon, some 12 miles northeast of Tehachapi (Figs. 1 and 2). The cave lies approximately 1,200 meters to the east of the large site complex centered around Nettle Springs. The Nettle Spring site complex consists of a number of localities, including Teddy Bear Cave and the large habitation area now recorded as CA-KER-230. The CA-KER-230 site contains numerous circular rock ring features, over 400 bedrock mortars, some rock art and was investigated between 1954 and 1956 by the Archaeological Survey Association of Southern California (ASA) and between 1970 and 1971 by Antelope Valley College (AVC). A number of nearby and potentially associated sites, including small camps (Ptomey 1991; Osborne 1994; Hinshaw and Rubin 1996), rock art localities (e.g., Sutton 1981; McQueen 1995; Lee 1999), and a cremation site (Siefkin and Sutton 1995) have also been investigated. In addition, archaeologists from the California Department of Parks and Recreation conducted extensive surveys of the area, recording and updating many sites in the 1990s (see Dallas 2000). The majority of the materials from these various sites appears to date to the Late Prehistoric and/or Ethnohistoric periods, although there are some "earlier" projectile point types present in the collections.

Teddy Bear Cave is remarkable for its painted images on its walls, some of which are so-called "pelt" figures that resemble teddy bears (see Fig. 3), thus the site has often been referred to as "Teddy Bear Cave." The site has been excavated, photographed, and visited many times by tourists and researchers. It is now within the boundaries of Tomo-Kahni, operated by California State Parks.

Teddy Bear Cave has been excavated on two separate occasions. Most of the site was excavated by ASA in 1955 and 1956. In 1971, additional work at the site

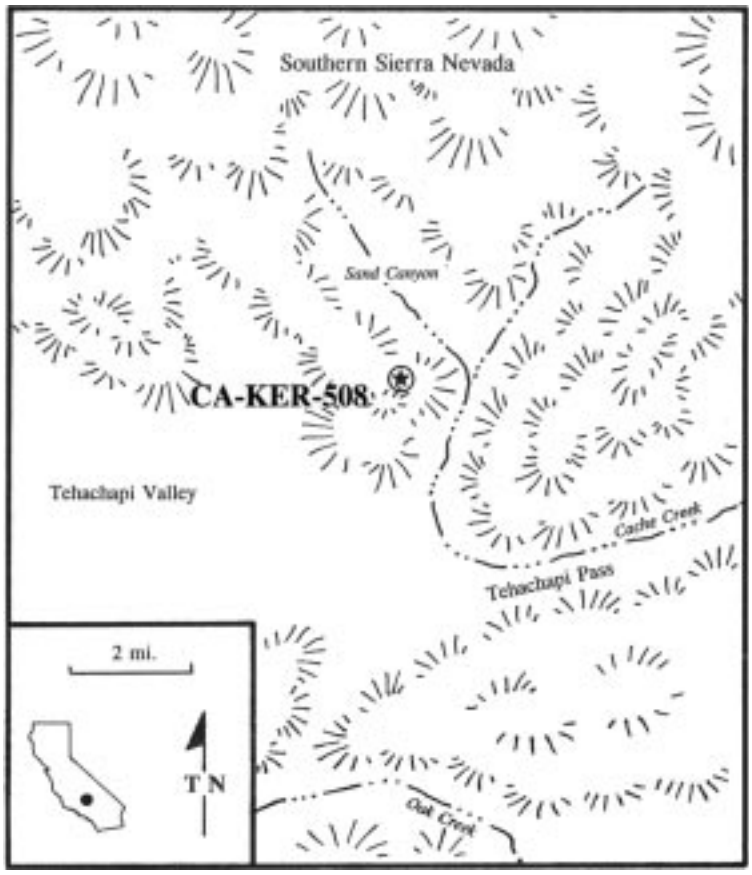


Fig. 1. Location of Teddy Bear Cave (CA-KER-508) in the southern Sierra Nevada, California.

Fig. 2. Teddy Bear Cave (CA-KER-508) in 1955 (center left, view to the southeast).

Fig. 3. One of the main “Teddy Bear” elements at the site (the main figure in Panel D, Lee 1999:Fig. 21, height of figure is 73 cm).

was undertaken by AVC, under the overall direction of R. W. Robinson. This paper serves as the final report on both the ASA and AVC excavations at the site. The rock art at CA-KER-508 was recorded and reported separately by Lee (1999). An earlier version of this paper was presented at the annual meeting of the Society for California Archaeology (Sutton 1995).

## Site Description

The cave (Fig. 4) overlooks a small valley on the western side of Sand Canyon, located in the far southern Sierra Nevada, very near the interface with the Tehachapi Mountains, at an elevation of 1,400 m. (4,620 ft.). The site lies within a juniper woodland plant community and the major species present include California juniper (*Juniperus californica*), a number of oaks (*Quercus* spp.), big sagebrush (*Artemisia tridentata*), various bunchgrasses (e.g. *Achnatherum hymenoides*), fiddleneck (*Amsinckia* spp.), and beavertail cactus (*Opuntia basilaris*).

The cave faces north and is 9.4 m wide at its mouth, about 15 m wide in the interior, and a maximum of 9.75 m deep, a total of approximately 125 square meters. Ceiling height varies greatly, from a maximum of about 10 m to as little as 20 cm. Much of the interior of the cave would have been subjected to rainfall; therefore, perishable artifacts should not be expected in those areas. However, the southern edge of the site and both the western and eastern ends are dry. The rock floor in both the western and eastern portions of the site (the dry areas) slopes upward, and there was little soil accumulation in those areas. The soil appears to have been relatively deep in the rear of the cave. A single bedrock mortar is present in the western end of the cave, reportedly the exact spot where the Kawaiisu were created (see Zigmond 1977:76).

A peculiarity of the terrain around the site is the incidence of naturally shaped boulders and outcrops that have forms suggestive of animals, including bears and rabbits. Many of these are on the skyline as one enters or exits the site, and one boulder with the shape of a rabbit lies directly outside the cave entrance. Such features were surely not overlooked by the Kawaiisu and may have been the impetus for the designation of the cave as the place where the animals “decided upon their human form.” In any event, rock formations in animal shape would have enhanced the mythological environment of the site.

## The Rock Art

The rock art at the site consists of over 100 polychrome and monochrome pictographs, painted in red, black, and white. The elements have been recorded on a number of occasions (e.g., Cawley n.d.; Weidler 1981), with the latest effort (Lee 1999) resulting in a complete and detailed inventory. Lee (1999) recorded

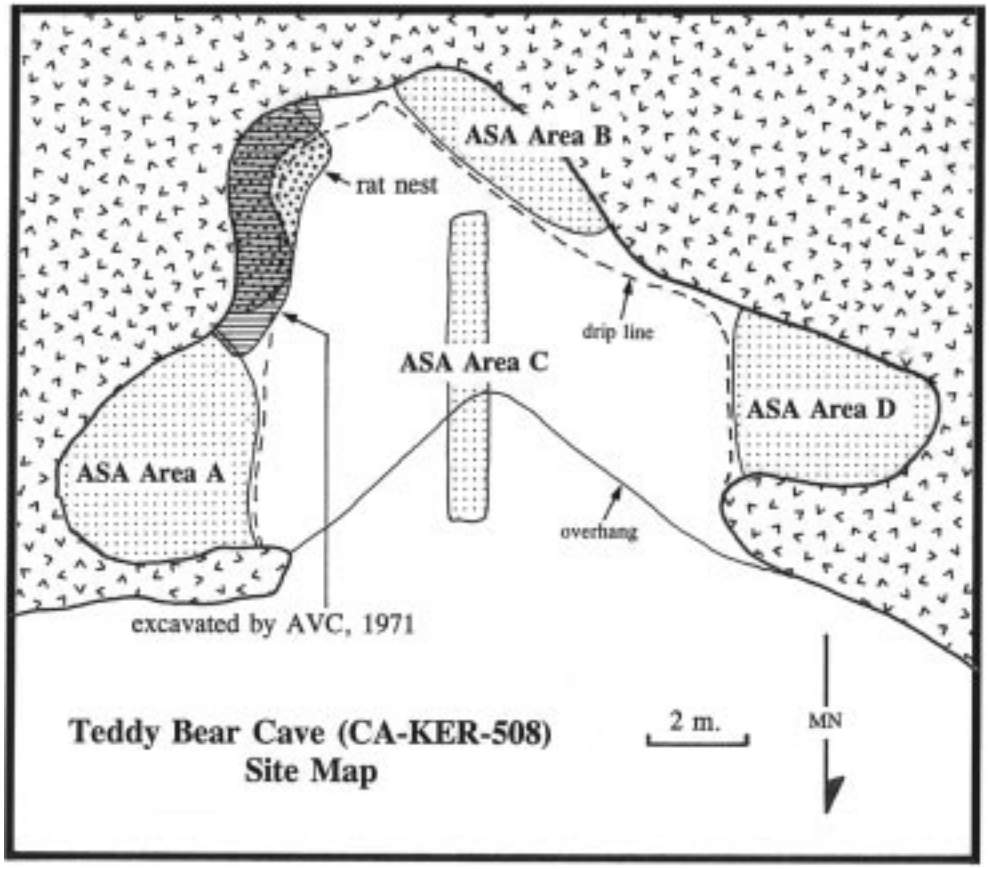


Fig. 4. Map of Teddy Bear Cave (CA-KER-508).

the various elements in 10 panels (A-J). Some of the elements have faded beyond recognition, leaving only traces. An element absolute count is not possible due to factors such as overpainting and exfoliation. Many different forms are present in the art (see Lee 1999), including anthropomorphs, zoomorphs, geometric designs, curvilinear designs, smears, dots, and concentric rings.

The most remarkable paintings are the “pelt” figures. Some have a bear-like feeling to them and may have some relation to bear shamanism. Pelt figures have been noted at other rock painting sites in south-central California, both in Chumash and Yokuts territory. The other remarkable element is the unique large red and white snake found in a small concavity in the rear of the cave. Similar, but smaller and less complex, elements have been recorded at sites in Chumash territory (Lee 1977).

Four nearby sites are known to contain rock art. First, a small shelter with cupules (part of CA-KER-4445 [P-15-004826]) is located some 300 meters due west from Teddy Bear Cave (see McQueen 1995; Lee 1999; Dallas 2000). Second, a number of other paintings and incised lines are located at nearby Nettle Springs (CA-KER-230; Lee 1999). Third, several petroglyph elements are recorded at CA-KER-769, located just east of Nettle Springs (Sutton 1981). Lastly, a small cave (CA-KER-4198 [P-15-004394]) containing bedrock mortars and lithic debris has a pictograph element (Dallas 2000). Each of these sites contain

elements that are very different from those at Teddy Bear Cave. Lee (1999) thought that this indicated that the various sites were probably used for different purposes, and suggested that Teddy Bear Cave was a special place reserved for specific ceremonies.

### Teddy Bear Cave In Kawaiisu Oral Tradition

Rockshelters and caves were frequently mentioned in Kawaiisu oral tradition, sometimes with distinctive locations being identified, and caves in the Sand Canyon area were mentioned at least twice (Zigmond 1980:160, 161). Teddy Bear Cave is specifically mentioned on two separate occasions. First, Zigmond (1977:71) noted that Rock Baby was usually responsible for painting pictographs and that the paintings may be viewed but not touched, as this would anger Rock Baby who may then kill the person. However, Teddy Bear Cave was identified as one of the two locations (the other being the Horse Canyon pictograph site, CA-KER-93) where Rock Baby was *not* responsible for making the paintings (Zigmond 1977:76; also see Kirkbride 1996).

Second, Teddy Bear Cave was identified as the place where the Kawaiisu world was created (also see Sutton 1982).

> In mythological times the animal-people held celebrations at both these locations [Teddy Bear Cave and Horse Canyon Cave]. It may be that each of the participants painted his own picture. In any case, it was at the rock shelter [Teddy Bear Cave, Zigmond always referred to the site as a rockshelter] that the world was created. A mortar hole marks the spot. It was Grizzly Bear who called the animals together although, according to one version, he was not the chief. He still lives in the rock and there is a fissure through which he can come and go. He is known to have growled at a non-Indian woman—and perhaps chased her—when she approached too near… Here the animals decided what they wanted to be [Zigmond 1977:76].

In spite of the rather specific identification of the site, Teddy Bear Cave was not mentioned in the "Earth Diver" creation tale (Zigmond 1980:27) or in the "Discussion of the Animals" tale (Zigmond 1980:41) where the animals gathered together to decide what to be. Also, some of Zigmond's Kawaiisu consultants did not even refer to the site (M. Zigmond, personal communication 1980). Zigmond was taken to Teddy Bear Cave in the 1930s by several Kawaiisu.

> When Sam Willie and John Marcus took me to the rock-shelter site…, they stopped a few hundred feet before we reached our destination and told me that, before we could proceed farther, it would be necessary for each of us to make an offering to an animal whose representation we chose to see. Otherwise we would see nothing. Unnoticed by me, Sam had picked up some juniper berries along the way. He now divided them among us, and I was instructed to name the animal I wanted to see and then scatter my berries in the general direction of the site. Sam and John did the same. After having performed this ritual, I was assured that we would see pictographs—which we did. They told of a non-Indian woman who had come to see the pictographs but made no offering (possibly she was ignorant of the custom!). She heard the growl of a grizzly bear [the same animal that called the other animals together at the cave, see above], fled, and never returned. According to one version of the story, she was actually chased by the bear [see below] [Zigmond 1977:79].

Zigmond (1977:76, 1980:41) thought it possible that the site was one of the caves where the animal-people gathered to decide what to be and perhaps even the

same cave where the Kawaiisu world was created (also see Sutton 1982).

More recently, a Kawaiisu elder, Andy Greene (personal communication 1994) related a story about the site (paraphrased here).

> Times were hard, and grandmother went to the cave to give an offering so that things would improve. She took a shovel to turn over dirt to serve as the offering; she had nothing else. When she got to the cave and put the shovel in the soil, a bear came out of the cave and chased her. She took the shovel and ran away very fast. If the bear had caught up with her, she planned to whip around and hit it with the shovel. She ran so fast that the bear never caught her.

## A History Of Investigations At Teddy Bear Cave

The first anthropologist to visit the site was Maurice Zigmond in the 1930s (Zigmond 1977:79). The site was recorded for the ASA by Charles LaMonk, Gordon Redtfeldt, and one other person in 1952 when the location of the site was pointed out by an Indian ranch hand working in the area. ASA called the site Teddy Bear Cave, Painted Cave, or site 39-S-F. At the time of its recordation in 1952, there was no apparent damage to the site (C. LaMonk, personal communication 1980).

The site was visited by some ASA members in 1954, at which time a number of artifacts was removed from the cave, including a bundle of painted arrow shafts from the east end of the cave, a badly decayed basket, and several other pieces of basketry (C. LaMonk, personal communication 1980). None of these items were in the collection transferred to California State University, Bakersfield (CSUB).

The ASA visit was reported by Price (1954:10), who noted the presence of "over 100 paintings" at the cave, and described them as being "phallic symbols or human representations… [and] Teddy Bear contours." Price (1954:10) noted that ASA planned to dig the site, as a "few artifacts" had been noted there. Price (1954:10) also referred to paintings "in black, red, pink, green, and a white which is fluorescent under black light." However, no green paint has ever been observed at the site by others and Lee (1999:16) noted that the white paint probably was not fluorescent.

Cawley (n.d.:28, 146-147) visited the cave in 1963 and photographed much of the rock art. At that time, Cawley noted that many of the paintings had been, or were in the process of being, destroyed by vandalism. In 1971, the pictographs appeared to be in generally good shape, although some chalking was present (as noted by Cawley in 1963) and there were places where the surface of the cave wall had been removed (or exfoliated). The late John Weidler made observations relating to solstice alignments at the site in 1981, but the results of that work were never published. Georgia Lee visited the site to record the art in 1981, 1995, and 1999, culminating in her final report on the art (Lee 1999).

## The ASA Excavations

The ASA conducted excavations at the site in 1955 and 1956. The excavation field methods employed by the ASA appear to have been fairly standard for the time. The details of the methods are herein reconstructed from the few surviving notes and photos (Fig. 5); no original map of the site, grid, or unit locations are known. A grid was established on the site by the ASA crew (presumed to have been a three-foot grid as was used by ASA at the Nettle Spring site [CA-KER-230]) and a total of 36 units was excavated. None of the units was excavated deeper than 18 inches (about 46 cm), the western alcove (Area D) being the deepest. The units were excavated in four areas of the cave (see Fig. 4), although it is believed that the entire surface of the cave was at least scraped and screened.

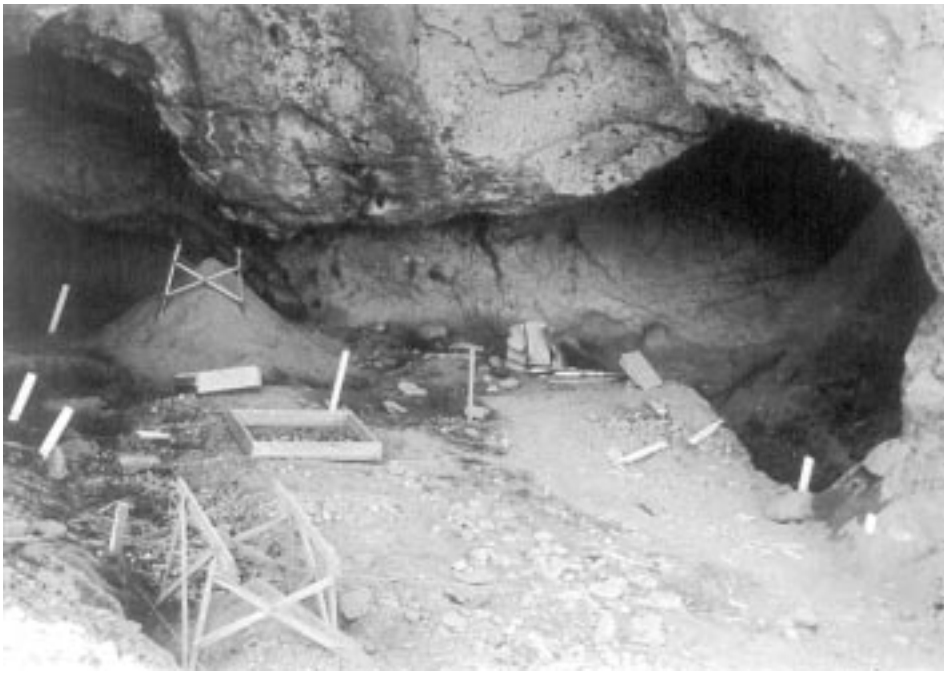

Fig. 5. Excavations underway at CA-KER-508 by the Archaeological Survey Association in 1955.

Thirteen units (51-F, 52-F, 53-F, 55-F, 56-F, 51-G, 52-G, 53-G, 55-G, 56-G, 51-H, 52-H, and 56-H) were excavated in the eastern alcove (Area A), 11 units (59-K, 60-K, 59-L, 60-L, 61-L, 59-M, 60-M, 61-M, 58-N 59-N, and 60-N) in the rear (Area B), seven units (45-N, 47-N, 48-N, 49-N, 50-N, 51-N, and 54-N) in a central trench (Area C), and five units (52-S, 53-S, 55-S, 56-S, and 53-T) in the western alcove (Area D). The units were excavated in 6-inch levels and screened using 1/4-inch mesh, with the materials being bagged by unit and level. The provenience of the materials was apparently later lost.

### The AVC Excavations

In August, 1971, the site was examined by the author and R. W. Robinson of AVC as part of the larger work at the Nettle Springs site. Teddy Bear Cave was provisionally designated by AVC as "Ker-21, Pictograph Cave." The work by AVC involved the dismantling of a packrat nest located in a low overhang in the southeastern portion of the cave (Fig. 4). The AVC crew knew that ASA had worked at the site and so believed that the intact packrat nest might contain materials missed by ASA. In addition, the soil directly below the nest was excavated and was passed through 1/8-inch mesh screen with all recovered cultural material being saved.

### Results Of The Excavations

Both the ASA and AVC collections were cataloged but were not reported, although a brief description of the recovered materials was presented by Sutton (1982). In 1989, the various collections from the site held by both ASA and AVC were transferred to CSUB for analysis. The materials were sorted and recatalogued at CSUB, and each artifact received a separate number; debitage of the same material, faunal remains, and botanical remains from the same prove-

nience were grouped and received one number. Metric attributes (length, width, thickness, and weight) were obtained on each artifact. However, not all of the materials reported in the field notes of either excavation were present in the collections. Most of the materials in the ASA collection were unprovenienced, but much could be deduced from their field records.

### *Soils and Stratigraphy*

No details on the presence or nature of any stratigraphy of the deposit is known, and no detailed description of the soil was recorded. In general, however, the soil was a very fine, dry and dusty, light gray silt containing considerable roof fall. The exact depth of the deposit is not clear, but the ASA notes suggest that it was not deeper than 18 inches. A small sample (Cat. No. 60) of soil from the floor of the cave was collected by ASA in 1960.

### *Material Culture*

A total of 280 artifacts (or descriptions of) is present in the combined ASA and AVC collection (see Table 1). Each category is discussed below.

*Ground Stone*. Eleven artifacts of ground stone are reported from the site (Table 2). A complete metate was found by ASA on the surface of Area A, but was not included in the collection. Three manos (or fragments thereof) were recovered: one by AVC and two by ASA. One of the specimens found by ASA had also been used as a hammer.

ASA reported three pestles from the 0 to 6-inch level of Unit 18-L (the test trench), but none were present in the collection. No portable mortars were found, but a small bedrock mortar is present at the site. A stone awl (Cat. No. 53, Fig. 6a; called a “file” in the ASA notes) was found by ASA in the 6 to 12-inch level of Unit 51-G. This piece was well-made and has a slight twist from end to end, apparently formed intentionally during manufacture. Lastly, two dark grey/green steatite beads were found by ASA, both in the 0 to 6-inch levels.

*Flaked Stone.* Thirteen flaked stone tools were reported in the collection (Table 3). Four points were recovered by ASA, but only two were in the collection. The others are the tip of an unidentified point (Cat. No. 61) and the base of a Cottonwood Triangular point (Cat. No. 86, Fig. 6b). Two bifaces were reported by AVC (Nos. 3 and 4), but neither are in the collection. The latter specimen was described as having some sort of black-colored material, possibly a mastic, on its base.

Two drills were reported by ASA, only one of which is in the collection (Cat. No. 57, Fig. 6c). The other is a chalcedony specimen. In addition, AVC reported the presence of a rhyolite core (Cat. No. 5), a basalt scraper (Cat. No. 6), and three modified flakes (Cat. Nos. 9, 10, 11), but none of these artifacts are in the collection.

In addition to the formed tools, a total of 84 pieces of debitage was reported. The ASA notes show the recovery of 79 pieces of debitage (none were in the collection) mostly from the upper portion of the site (see Table 4). In the ASA notes, the debitage was divided into two material types: “agate” (n=47; 59.5 per cent) and obsidian (n=32; 40.5 per cent). In addition, AVC recovered five more flakes (one basalt, one obsidian, two silicate, and one granite) from the area of the packrat nest.

*Quartz Crystal*. One quartz crystal (Cat. No. 52) was found by ASA in the rear of the cave (in the 6 to 12-inch level of Unit 60-K). It measures 16.7 x 6.9 mm and weighs 1.0 grams.

*Bone Artifacts*. Three artifacts of bone were found, two by ASA and one by AVC. The first is the burned midsection of an awl (Cat. No. 59) and came from the

Table 1. Summary of recovered artifacts, CA-KER-508 (totals from all known collections).

| Artifact/Level | Unknown | Rat Nest (all from AVC collection) | 0 to 6 inches | 6 to 12 inches | 12 to 18 inches | Totals |
|---|---|---|---|---|---|---|
| metate | 1 | — | — | — | — | 1 |
| manos | 1 | — | — | — | — | 1 |
| mano fragments | 1 | 1 | — | — | — | 2 |
| mano/hammerstone | 1 | — | — | — | — | 1 |
| pestles | — | — | 3 | — | — | 3 |
| stone beads | 2 | — | — | — | — | 2 |
| stone awl | — | — | — | 1 | — | 1 |
| projectile points | 1 | — | 1 | 1 | 1 | 4 |
| bifaces | — | 2 | — | — | — | 2 |
| drills | — | — | 1 | 1 | — | 2 |
| core | — | 1 | — | — | — | 1 |
| scraper | — | 1 | — | — | — | 1 |
| modified flakes | — | 3 | — | — | — | 3 |
| debitage | — | 5 | 53 | 20 | 6 | 84 |
| quartz crystal | — | — | — | 1 | — | 1 |
| bone awl | — | — | — | 1 | — | 1 |
| scapula cutting tool | — | — | — | — | 1 | 1 |
| bone bead | — | 1 | — | — | — | 1 |
| *Haliotis* ornament fragment | — | — | 1 | — | — | 1 |
| *Haliotis* bead | 1 | — | — | — | — | 1 |
| *Olivella* beads | 10 | 1 | 1 | — | — | 12 |
| basketry fragments | 4 | 8 | 3 | 2 | — | 17 |
| cordage | 11 | 2 | — | — | — | 13 |
| arrow shaft fragments | 1 | 4 | 5 | 2 | — | 12 |
| feather fragments | 4 | 1 | — | — | — | 5 |
| quids | 3 | — | — | — | — | 3 |
| modified wood | 2 | 1 | 1 | — | — | 4 |
| glass beads | — | 3 | 67 | 19 | 1 | 90 |
| historic artifacts (including string) | 6 | 1 | 3 | — | — | 10 |
| Totals | 49 | 35 | 139 | 48 | 9 | 280 |

Table 2. Provenience and attributes of ground stone rrtifacts, CA-KER-508 (metrics in millimeters and grams).

| Catalog Number | Source / In Collection? | Comments | Provenience | Material | Length | Width | Thick-ness | Weight | Figure |
|---|---|---|---|---|---|---|---|---|---|
| Metate | | | | | | | | | |
| N/A | ASA / no | seen in an ASA photo | surface | unknown | — | — | — | — | |
| Manos | | | | | | | | | |
| 20 | AVC / yes | fragment, bifacial, burned | rat nest | granite | 103.6 | 50 | 39.2 | 237.9 | |
| 41 | ASA / yes | complete, bifacial | unknown | granite | 95.5 | 89.9 | 67.6 | 793.8 | |
| 43 | ASA / yes | fragment, bifacial, burned | unknown | granite | 104.5 | 76.4 | 75.9 | 576.2 | |
| Mano/Hammerstone | | | | | | | | | |
| 42 | ASA / yes | fragment, bifacial, burned | unknown | sandstone | 92.8 | 86.6 | 53.9 | 659.4 | |
| Pestles | | | | | | | | | |
| N/A | ASA / no | unknown | Unit 18-L, 0 to 6 inches | unknown | — | — | — | — | |
| N/A | ASA / no | unknown | Unit 18-L, 0 to 6 inches | unknown | — | — | — | — | |
| N/A | ASA / no | unknown | Unit 18-L, 0 to 6 inches | unknown | — | — | — | — | |
| Stone Awl | | | | | | | | | |
| 53 | ASA / yes | — | Unit 51-G, 6 to 12-inches | schist | 54.1 | 10.6 | 3.7 | 3.4 | 6a |
| Stone Beads | | | | | | | | | |
| 135 | ASA / yes | — | unknown | steatite | 5.3 | 3.1 | 2.2 | 0.1 | |
| 136 | ASA / yes | — | unknown | steatite | 8.3 | 2.8 | 2.7 | 0.3 | |

Table 3. Provenience and attributes of flaked stone artifacts, CA-KER-508 (metrics in millimeters and grams).

| Catalog Number | Artifact | Source / In Collection? | Provenience | Material | Length | Width | Thick-ness | Weight | Figure |
|---|---|---|---|---|---|---|---|---|---|
| 61 | point tip | ASA / yes | Unit 53-S, 12 to 18-inches | obsidian | 20.5 | 11 | 2.3 | 0.4 | |
| 86 | Cottonwood Triangular point base | ASA / yes | unknown | obsidian | 12.7 | 13.2 | 3.3 | 0.6 | 6b |
| 3 | biface | AVC / no | rat nest | obsidian | 30 | 25 | 4 | 5 | |
| 4 | biface | AVC / no | rat nest | chalcedony | 57 | 32 | 3 | — | |
| 57 | drill | ASA / yes | Unit 53-G, 6 to 12-inches | chalcedony | 30.9 | 22.2 | 6.9 | 3.6 | 6c |
| 5 | core | AVC / no | rat nest | rhyolite | 58 | 42 | 35 | — | |
| 6 | scraper | AVC / no | rat nest | basalt | 55 | 45 | 17 | — | |
| 9 | modified flake | AVC / no | rat nest | obsidian | 28 | 8 | 2 | — | |
| 10 | modified flake | AVC / no | rat nest | chalcedony | 41 | 39 | — | — | |
| 11 | modified flake | AVC / no | rat nest | chalcedony | 40 | 33 | — | — | |

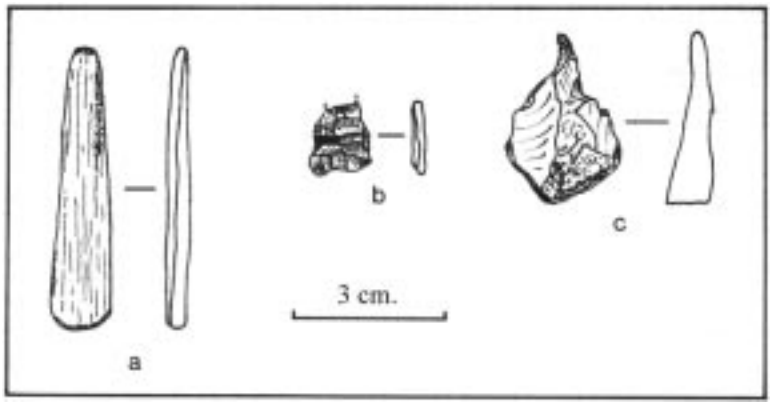


Fig. 6. Assorted artifacts from CA-KER-508: (a) stone awl (Cat. No. 53); (b) Cottonwood Triangular projectile point base (Cat. No. 86); (c) chalcedony drill (Cat. No. 57).

Table 4. Distribution of debitage in ASA excavations, CA-KER-508 (as determined by the notes).

| Material | Depth (inches) | | | Totals |
|---|---|---|---|---|
| | 0 to 6 | 6 to 12 | 12 to 18 | |
| "agate" | 30 | 13 | 4 | 47 |
| obsidian | 23 | 7 | 2 | 32 |
| Totals | 53 | 20 | 6 | 79 |

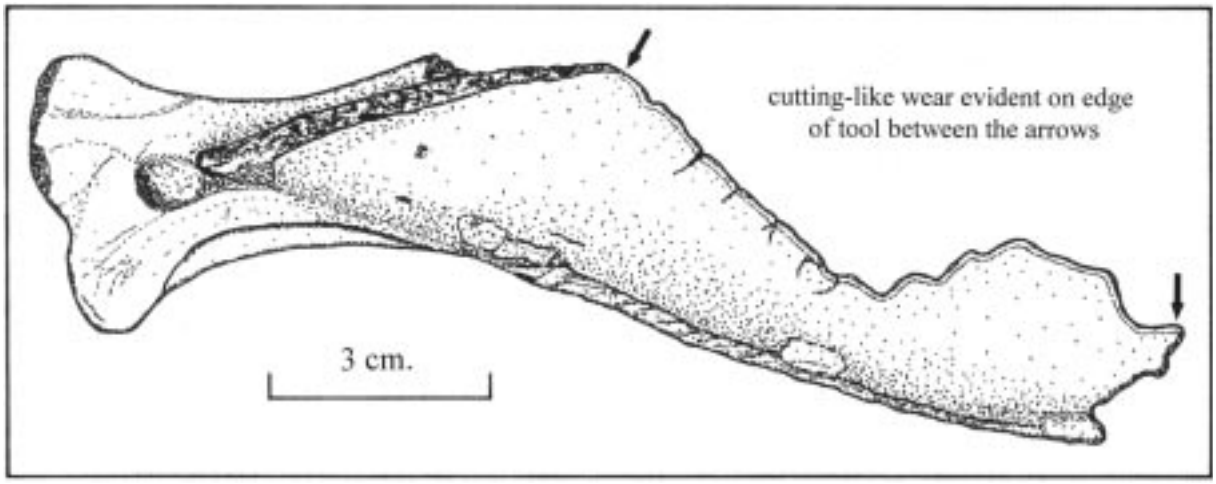


Fig. 7. Scapula cutting tool (Cat. No. 85).

6 to 12-inch level of Unit 56-H. It measures 21.3 x 9.1 x 6.1 mm, weighs 1.6 grams, and was made from the bone of a large mammal. The second bone artifact (Cat. No. 85, Fig. 7) was made from the scapula of a deer (*Odocoileus hemionus*). The piece appears to be a cutting tool of some sort, and has beveled edges where it was used. The wear pattern on those edges appears to be consistent with the cutting of grass. It was found in the 12 to 18-inch level of Unit 51-G, measures 167.0 x 38.9 x 28.9 mm, and weighs 41.6 grams. The third (Cat. No. 17) is the midsection of a leporid tibia, cut and polished on one end, and cut on the other end.

Table 5. Provenience and attributes of *Olivella* beads, CA-KER-508 (metrics are in millimeters and grams).

| Catalog Number | Source / In Collection? | Provenience | Type (see Bennyhoff and Hughes, 1987) | Diameter | Perforation Diameter | Comments |
|---|---|---|---|---|---|---|
| 1 | AVC / yes | rat nest | B5 | 3.59 | 1.55 | |
| 137 | ASA / yes | unknown | H1a | 4.01 | 1.58 | |
| 138 | ASA / yes | Unit N-60, 0 to 6-inches | H1a | 3.67 | 0.96 | decorated edges, mastic on both faces |
| 139 | ASA / yes | unknown | H1a | 4.01 | 1.2 | |
| 140 | ASA / yes | unknown | J | 6.26 | 0.85 | metal needle-produced perforation |
| 141 | ASA / yes | unknown | A1a | 5.93 | 1.94 | |
| 142 | ASA / yes | unknown | H1a | 4.74 | 1.19 | |
| 143 | ASA / yes | unknown | B5 | 4.07 | 1.38 | |
| 144 | ASA / yes | unknown | B5 | 3.81 | 1.45 | |
| 145 | ASA / yes | unknown | B5 | 3.79 | 1.55 | |
| 146 | ASA / yes | unknown | B5 | 4.1 | 1.33 | mastic substance on dorsal surface |
| 147 | ASA / yes | unknown | G2 | 5.36 | 1.3 | |

It appears to be an unfinished tubular bead. This piece measures 15 mm long, has a diameter of 5.5 mm, and weighs 0.5 grams.

*Shell Artifacts*. One fragmentary (in at least six pieces, Cat. No. 55) *Haliotis* ornament was found by ASA in the 0 to 6-inch level of Unit 59-N. One perforation is evident and the largest piece is 10.7 x 6.5 mm. In addition, a single *Haliotis rufescens* bead (Cat. No. 134) was recovered by ASA. It measures 3.7 mm in diameter, is 1.4 mm thick, has a perforation diameter of 1.4 mm, and weighs 0.1 grams.

A total of 12 *Olivella biplicata* shell beads (none burned) was recovered; 11 by ASA and one by AVC (Table 5). Five were classified as spire beads (B5), dated from the Late Period to Historical times (Bennyhoff and Hughes 1987:122). One of the spire beads (Cat. No. 146) has some residue, possibly mastic, on its dorsal surface.

Four of the beads were classified as ground disks (H1a), generally dating to the early Mission Period, ca. A.D. 1770 to 1800 (Bennyhoff and Hughes 1987:135). One ground disk (Cat. No. 138) has an edge decorated by 10 lines around the 11.5-mm circumference of the bead, incised at a 45 degree angle to the plane of the bead. A black-colored substance, possibly a mastic, is present in each of the incised lines, on the surfaces of the bead, and in the perforation (along with some organic material, possibly a fragment of cordage). It is tempting to view this material as asphaltum, but given the recent research on the identification of mastics in the southwestern Great Basin (Fox, Heron, and Sutton 1995), a visual identification is unwise. This bead may have been an applique.

One wall disk (Class J, Bennyhoff and Hughes 1987:136) bead was identified. Its perforation was quite small, probably produced using a metal needle. Wall disk beads date to the Protohistoric Period (Bennyhoff and Hughes 1987:136). One small spire-lopped bead (A1a, Bennyhoff and Hughes 1987:117) was identified but it has no real temporal significance (Bennyhoff and Hughes 1987:117-118). One normal saucer (G2, Bennyhoff and Hughes 1987:132) also was identified. Saucers generally date to the Middle Period (Bennyhoff and Hughes 1987:132); however, the differentiation of a Middle Period saucer from a Late Period disk is sometimes difficult.

*Basketry*. Seventeen pieces of basketry (Table 6) are known to have been removed from the cave by ASA and AVC, although Charles LaMonk (personal communication 1980) reported that a “badly decayed” basket and “several other” pieces of basketry were also removed from the cave by the ASA in 1954. None of these items were in the collection transferred to CSUB by ASA.

At least several types of basketry are represented in the collection, including burden baskets and water bottles. Some of the pieces are coiled (n=9), others are twined (n=2), with the remainder (n=6) being unclassified. Five rims pieces are present, 10 are body fragments, and two are unknown. The water bottle fragments are covered with some sort of sealant, called asphalt in the notes, but the identification is far from certain. In addition, several fragments of materials used to make basketry were recovered.

Zigmond (1978:200, 1986:9-10) reported that work baskets used by the Kawaiisu were often twined while baskets used for hats and trays were usually coiled. Decorative nonutilitarian baskets were always coiled (Zigmond 1978:200, 1986:9-10).

*Aboriginal Cordage*. A total of 13 pieces of cordage was reported as being recovered. However, of that number, only eight were in the collection (Table 7) and only six could be classified. Five pieces are fine 2-ply, S-twist specimens, one of which has a simple knot on one end. The sixth is a fragment of coarse 3-ply braided

Table 6. Provenience and attributes of basketry fragments, CA-KER-508 (length, width, and thickness in millimeters).

| Catalog Number | Source | Provenience | Form | Type / Section | Length x Width x Thickness (mm) | Materials | Weft (stitches per mm) | Warp (elements per bundle) |
|---|---|---|---|---|---|---|---|---|
| 28a | AVC[a] | rat nest | "burden" | body | unknown | unknown | unknown | unknown |
| 28d | AVC[a] | rat nest | "burden" | body | unknown | unknown | unknown | unknown |
| 29a | AVC[a] | rat nest | "burden" | rim | unknown | unknown | unknown | unknown |
| 29b | AVC[a] | rat nest | "burden" | rim | unknown | unknown | unknown | unknown |
| 29c | AVC[a] | rat nest | water bottle | coiled / body | unknown | unknown | unknown | unknown |
| 29d | AVC[a] | rat nest | water bottle | coiled / body | unknown | unknown | unknown | unknown |
| 29e | AVC[a] | rat nest | unknown | twined / rim | unknown | unknown | unknown | unknown |
| 29f | AVC[a] | rat nest | unknown | twined / rim | unknown | unknown | unknown | unknown |
| 62 | ASA | 60-K, 0 to 12 inches | unknown | coiled / rim | 86.6 x 11.5 x 4.0 | unknown | 10 in 17 | 11, 3, 7 |
| 63 | ASA | 60-K, 0 to 12 inches | unknown | coiled / body | 35.5 x 5.5 | unknown | 10 in 25 | 10 |
| 64 | ASA | 55-F, 0 to 6-inches | unknown | coiled / body | 154.0 x 63.0 x 7.3 | unknown | 3 in 5 | 6-8 |
| 106 | ASA | unknown | unknown | coiled / body | 86.5 x 24.9 x 5.4 | unknown | 4 in 10 | 7 |
| 107 | ASA | unknown | unknown | coiled / body | 44.0 x 33.7 x 8.2 | unknown | 4 in 10 | 7 |
| 108 | ASA | unknown | unknown | coiled / body | 20.2 x 4.6 x 4.3 | unknown | 7 in 20 | 8 |
| 109 | ASA | unknown | unknown | coiled / body | 17.5 x 10.2 x 4.6 | unknown | 5 in 10 | 7 |
| 149 | ASA | 61-M, 0 to 6-inches | unknown | unknown | unknown | unknown | unknown | unknown |
| 150 | ASA | 59-N, 0 to 6-inches | unknown | unknown | unknown | unknown | unknown | unknown |

a: these fragments are stored at Antelope Valley College and were unavailable for this study

Table 7. Attributes of aboriginal cordage, quids, and historic string, CA-KER-508.

| Catalog Number | Source / In Collection? | Provenience | Material | Lenght x Width x Thickness (mm) | Ply | Twist | Comments |
|---|---|---|---|---|---|---|---|
| Aboriginal Cordage | | | | | | | |
| 25 | AVC / yes | rat nest | unidentified | 20.0 long | 2 | S | |
| 26 | AVC / yes | rat nest | unidentified | 20.0 long | 2 | S | |
| 102 | ASA / yes | unknown | unidentified | — | — | — | 3 small fragments of fiber |
| 115 | ASA / yes | unknown | unidentified | 48.0 long | 2 | S | simple knot on end |
| 116 | ASA / yes | unknown | unidentified | 80.0 long | 2 | S | |
| 117 | ASA / yes | unknown | unidentified | 42.0 long | 2 | S | |
| 118 | ASA / yes | unknown | unidentified | 95.0 long | — | — | strip of fiber |
| 119 | ASA / yes | unknown | unidentified | 51.0 long | 3 | — | braided |
| Quids | | | | | | | |
| 103 | ASA / yes | unknown | yucca ? | 64.0 x 36.0 x 16.7 | — | — | |
| 104 | ASA / yes | unknown | yucca ? | 99.0 x 25.4 x 11.3 | — | — | two came from the 56-F, 0 to 6-inches, the other from 52-G, 0 to 6-inches |
| 105 | ASA / yes | unknown | yucca ? | 38.7 x 30.3 x 10.1 | — | — | |
| Historic String | | | | | | | |
| 110 | ASA / yes | unknown | hemp ? | 55.0 long | 2 | S | |
| 111 | ASA / yes | unknown | hemp ? | 25.0 long | 2 | S | |
| 112 | ASA / yes | unknown | hemp ? | 55.0 long | 2 | S | |
| 113 | ASA / yes | unknown | hemp ? | 30.0 long | 2 | S | |
| 114 | ASA / yes | unknown | hemp ? | 92.0 long | 2 | S | |
| 131 | ASA / yes | unknown | hemp ? | 95.0 long | 2 | S | simple knot on end |

Table 8. Provenience and attributes of arrow fragments, CA-KER-508 (metrics in millimeters and grams).

| Catalog Number | Source / In Collection? | Provenience | Material | Length | Diameter | Weight | Comments | Fig. |
|---|---|---|---|---|---|---|---|---|
| Foreshaft Fragments | | | | | | | | |
| 28b | AVC / no | rat nest | unknown | — | — | — | | |
| 58 | ASA / yes | Unit 53-S, 0 to 6-inches | unknown | 29.7 | 5.5 | 0.5 | possible foreshaft fragment | |
| 69 | ASA / yes | Unit 55-G, 0 to 6-inches | unknown | 48.9 | 11 | 0.6 | midsection of shaft, with 3 painted bands (4.5 mm wide) perpendicular to the length of the shaft | |
| Main Shaft Fragments | | | | | | | | |
| 27a | AVC / no | rat nest | cane | — | — | — | | |
| 27b | AVC / no | rat nest | cane | — | — | — | | |
| 28c | AVC / no | rat nest | cane | — | — | — | | |
| 28e | AVC / no | rat nest | cane | — | — | — | | |
| 54 | ASA / yes | Unit 51-F, 6 to 12-inches | cane | 25.5 | 8.5 | 0.2 | distal end with notch (4.95 mm wide, 3.8 mm deep), wrapping impressions present, some indication of fletching mastic | 8a |
| 56 | ASA / yes | Unit 56-F, 0 to 6-inches | cane | 31.8 | 8.8 | 0.6 | distal end with sides of notch missing, wrapping impressions present | |
| 65 | ASA / yes | Unit 52-F, 0 to 6-inches | cane | 105.9 | 7.3 | 1 | distal end with notch (4.76 mm deep), wrapping impressions extending 14 mm from distal end, several incisions on the shaft just below notch, perhaps to facilitate grip, 5 bands of paint on the shaft, beginning 56 mm from distal end | 8b |
| Other Possible Fragments | | | | | | | | |
| 66 | ASA / yes | Unit 55-F, 0 to 6-inches | cane | 180 | 79 | 0.8 | unmodified | |
| 70 | ASA / yes | Unit 55-G, 0 to 6-inches | cane | 109 | 6.3 | 0.9 | cut-mark on one end | |
| 74 | ASA / yes | Unit 56-F, 0 to 6-inches | cane | 68.3 | 8.4 | 1.1 | cut-mark on one end | |
| 75 | ASA / yes | Unit 56-F, 0 to 6-inches | cane | 90.9 | 2.8 | 0.5 | unmodified | |
| 76 | ASA / yes | Unit 56-F, 0 to 6-inches | cane | 68.3 | 3.3 | 0.3 | unmodified | |
| 97 | ASA / yes | unknown | cane | 96.6 | 8.9 | 0.4 | unmodified | |
| 99 | ASA / yes | unknown | cane | — | — | 3.1 | 29 unmodified fragments | |
| 100 | ASA / yes | unknown | cane | — | — | 0.5 | three fragments with burned ends | |

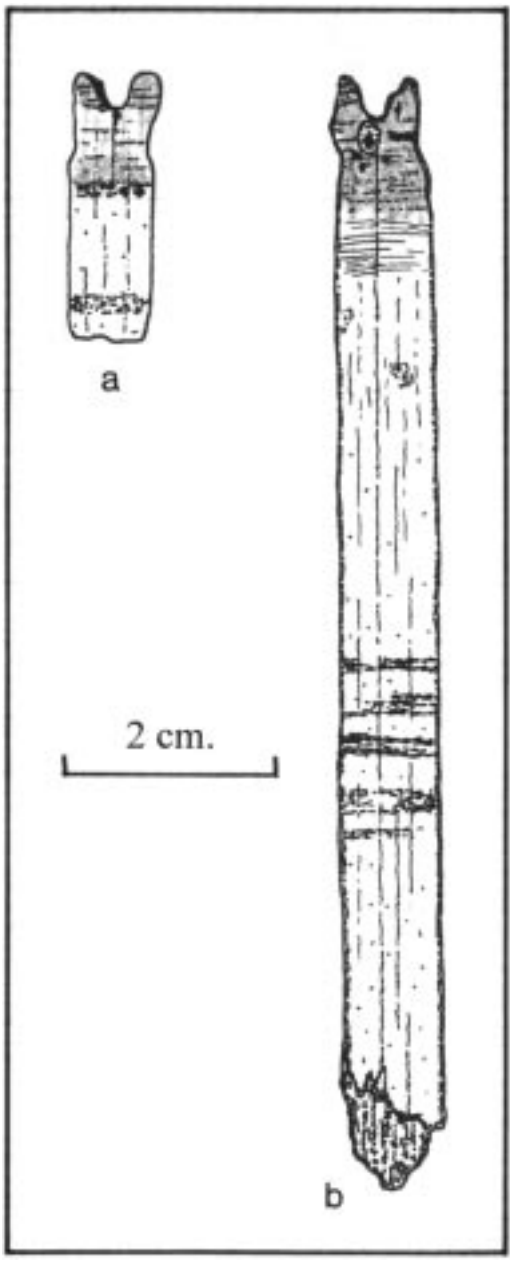


Fig. 8. Examples of arrow mainshaft fragments from CA-KER-508: (a) distal end of mainshaft with notch (Cat. No. 54), note wrapping impressions and indication of fletching mastic; (b) distal end of mainshaft (Cat. No. 65) with notch, note wrapping impressions, incisions just below them, and bands of paint.

piece. Zigmond (1986:402) reported that the Kawaiisu usually used 3-ply cordage, none of which was identified at the site. However, Harrington (1942:24-25) reported that the Kitanemuk used 2-ply string and combined several strands of 2-ply string to make "heavier" cordage.

*Arrow Shaft Fragments*. Twelve fragments of modified cane, thought to be arrow shafts fragments, were reported from the site (Table 8). Of these, three are believed to be foreshaft fragments, seven to be mainshaft fragments, and two, modified only by cut-marks, may be mainshaft fragments. An additional 34 unmodified pieces of cane, the material from which mainshafts were made, were found. Charles LaMonk (personal communication 1980) reported that "a bundle of painted arrow shafts" was removed from the east end of the cave by the ASA in 1954 (these are not in the collection).

Three of the mainshaft fragments are noteworthy. The first, (Cat. No. 54; Fig. 8a) is the distal end of an arrow mainshaft with a well-defined notch. The impressions from material wrapped around the shaft to reinforce the notch are clearly present, and there is an indication of fletching mastic. The second piece (Cat. No. 56) is the distal end of a mainshaft. The sides of the notch are missing but the impression of wrapping to reinforce the notch and anchor the distal portion of the fletching are evident. The third piece (Cat. No. 65; Fig. 8b) is the distal end of a mainshaft with a notch and notch reinforcement wrapping impressions are present. A number of incisions perpendicular to the length of the shaft are present just below the wrapping impressions. The purpose of these cuts is not known, but it is possible that they were placed there to facilitate the grip of the fingers when drawing the arrow. The remains of five bands of paint, apparently red, are present on the shaft.

The presence of so many (presumed) arrow parts is interesting and it is possible that these materials

Table 9. Provenience and attributes of feather fragments, CA-KER-508 (metrics in millimeters and grams).

| Catalog Number | Source / In Collection? | Provenience | Length | Diameter | Weight | Comments |
|---|---|---|---|---|---|---|
| 14 | AVC / yes | rat nest | 4 | 7 | <0.1 | shaft midsection |
| 88 | ASA / yes | unknown | 85.1 | 3.8 | 0.1 | shaft midsection |
| 89 | ASA / yes | unknown | 90 | 4 | 0.2 | shaft midsection |
| 90 | ASA / yes | unknown | 62.5 | 4.9 | 0.2 | shaft midsection |
| 91 | ASA / yes | unknown | 73 | 3.9 | 0.2 | shaft midsection |

represent the manufacture of arrows at the site. This idea is supported by the presence of feather fragments that may have been used in fletching. The presence of both foreshaft and mainshaft fragments suggests the manufacture of compound arrows, as reported for the Kawaiisu (Harrington 1942:14; Zigmond 1986:401).

*Feather Fragments*. Five feather shaft midsections were recovered, one by AVC and four by ASA (Table 9). Only feather shafts (no feather parts) were found and may indicate that the shafts were being discarded as the result of attaching fletching to arrows.

*Quids*. Three quids (cf. *Yucca* sp.) were recovered by ASA (Table 7). Two (though which two could not be determined) came from the 0 to 6-inch level of Unit 56-F and the other came from the 0 to 6-inch level of Unit 52-G. No tooth marks were noted on any of the specimens.

*Modified Wood*. Four pieces of modified wood were identified in the collection and notes. The first (Cat. No. 15) is two very small pieces of lightweight wood that fit together to an unknown purpose. The second (Cat. No. 95) is a stick with tapered end measuring 65.0 mm long, 16.4 mm in diameter, and weighing 2.8 grams. The piece appears to be too large to be the proximal end of a mainshaft, at least for an arrow. The third piece (Cat. No. 98) is a fragment of reed with a tie mark, perhaps part of a mat. It measures 71.9 x 5.7 mm and weighs 0.2 grams. The last piece was described as a "wooden pin," recovered by the ASA in the 0 to 6-inch level of Unit 60-M, but it is not in the collection.

### *Glass Beads*

A total of 88 glass beads was reported (in the field notes) as having been recovered in both excavations, three by AVC and 85 by ASA (Table 10). The glass beads recovered by ASA are clearly distributed mostly in the upper portion of the site (Table 11).

Nine types of glass beads (arbitrarily named Types 1 through 9, see Table 10) are represented in the glass bead subassemblage. The Type 1 bead (n=17) is compound, polychrome, drawn, opaque, red barrel bead with white center. The Type 2 bead (n=2) is similar to the Type 1, but has a black center. The Type 3 bead (n=12) is a variant of the first two types, being polychrome, compound, drawn, red with white center, but tubular. These types correspond to Motz and Schulz's (1980:53) Type 15 and to Sorensen and Le Roy's (1968:42) Type I-5 and/or I-37 (1968:44). Such beads are sometimes referred to as Cornaline d'Allepo (Woodward 1965:19) and generally date to after 1840.

The Type 4 bead (n=48) is simple, monochrome, drawn, opaque, cobalt-blue, and hexagonal with many facets. This type corresponds to Motz and Schulz's (1980:53) Type 18 and to Sorensen and Le Roy's

Table 10. Description and attributes of glass beads, CA-KER-508 (metrics in millimeters).

| Catalog Number | Source / In Collection? | Type (see text) | Description | Number | Diameter | Length |
|---|---|---|---|---|---|---|
| 2a | AVC / no | 4 | simple, monochrome, drawn, cobalt-blue hexagon | 2 | — | — |
| 2b | AVC / no | 1 | compound, polychrome, drawn, red barrel with white center (Cornaline d'Allepo) | 1 | — | — |
| 120 | ASA / yes | 6 | simple, monochrome, drawn, green hexagon | 1 | 4.4 | 4.1 |
| 121 | ASA / yes | 4 | simple, monochrome, drawn, cobalt-blue hexagon | 4 | 6.5 | 6.4 |
| 122 | ASA / yes | 7 | simple, monochrome, drawn, blue barrel | 2 | 5 | 2.9 |
| 123 | ASA / yes | 2 | compound, polychrome, drawn, red barrel with black center (Cornaline d'Allepo) | 2 | 4 | 3.7 |
| 124 | ASA / yes | 3 | compound, polychrome, drawn, red tube with white center (Cornaline d'Allepo) | 12 | 4.2 | 4.9 to 7.7 |
| 125 | ASA / yes | 1 | compound, polychrome, drawn, red barrel with white center (Cornaline d'Allepo) | 16 | 5.1 | 3.5 |
| 126 | ASA / yes | 9 | simple, monochrome, drawn (?), blue barrel | 1 | 4.2 | 3.3 |
| 127 | ASA / yes | 5 | simple, monochrome, drawn, clear hexagon | 4 | 4.4 | 4.6 |
| 128 | ASA / yes | 4 | simple, monochrome, drawn, cobalt-blue hexagon | 42 | 4.4 to 5.1 | 2.6 to 6.2 |
| 129 | ASA / yes | 8 | simple, monochrome, drawn white barrel | 1 | 4.7 | 3.3 |

Table 11. Distribution of glass beads in ASA Unit Areas, CA-KER-508.

| Depth | Areas | | | | Totals |
|---|---|---|---|---|---|
| | A | C | B | D | |
| 0 to 6 inches | 23 | 20 | 10 | 14 | 67 |
| 6 to 12 inches | 8 | 4 | — | 7 | 19 |
| 12 to 18 inches | 1 | — | — | — | 1 |
| Totals | 32 | 24 | 10 | 21 | 87 |

Areas as defined in Figure 4. These data were compiled from the field notes, no information regarding the types of beads is available.

(1968:45) Type I-72 bead. Sorensen and Le Roy (1968:45) believed that this type is the "true" Russian trade bead traded along the Northwest Coast in the late 1700s and early 1800s. The Types 5 (n=4) and 6 (n=1) beads are very similar to the Type 4 but Type 5 is transparent clear and Type 6 is translucent green. Both fall within the description of Sorensen and Le Roy's (1968:45) Type I-72 bead.

The last three types are barrel beads. The Type 7 bead (n=2) is a simple, monochrome, drawn (?), opaque blue barrel bead most similar to Motz and Schulz's (1980:53-54) Type 20. The Type 8 bead (n=1) is a simple, monochrome, drawn, opaque white barrel bead with a glossy surface and some pitting, especially near the perforation. In general description, this type corresponds to Motz and Schulz's (1980:52) Type 9 and to Sorensen and Le Roy's (1968:42) Type I-3

Table 12. Provenience and attributes of historic artifacts, CA-KER-508 (metrics in millimeters and grams).

| Catalog Number | Artifact | Source / In Collection? | Provenience | Material | Length | Width | Thick--ness | Weight |
|---|---|---|---|---|---|---|---|---|
| 16 | can lid | AVC / yes | rat nest | metal | 24 | 11 | 2 | 1.4 |
| 68 | toy soldier | ASA / yes | Unit 55-S, 0 to 6 inches | lead | 56.4 | 24.7 | — | 21.9 |
| 71 | .22 long shell | ASA / yes | Unit 53-T, 0 to 6 inches | lead, brass | — | — | — | 3.4 |
| 72 | pipe frag. (5/8" ID) | ASA / yes | Unit 53-T, 0 to 6 inches | steel | 9.7 | — | — | 10.5 |

bead, but it is smaller than Motz and Schulz's Type 9, being closer in size to their Type 13 (Motz and Schulz 1980:52). The Type 9 bead (n=1) is an unclassified simple, monochrome, opaque blue, barrel-shaped bead. The single example is heavily patinated but has small "dimple" depressions on each end near the perforation.

### *Historical Materials*

Ten historical artifacts (exclusive of glass beads) were collected (Table 12). These include a lead toy soldier (Cat. No. 68), a fragment of loose-weave cotton cloth (Cat. No. 34), a 4-hole mother of pearl button with European thread attached (Cat. No. 51), and six fragments of historical 2-ply, S-twist string (Table 7).

### *Other Materials*

Several pieces of assorted materials were collected. A lump of "baked clay" (Cat. No. 33) was reported by AVC from the packrat nest, but it is not in the collection and nothing further is known about it. A fragment of unidentified material (Cat. No. 37), perhaps from a

Table 13. Provenience and attributes of botanical remains, CA-KER-508 (metrics in millimeters and grams).

| Catalog Number | Taxon | Material | Number | Source/In Collection? | Provenience | Weight |
|---|---|---|---|---|---|---|
| 22 | unknown | grass stems | 28 | AVC / yes | rat nest | 18.6 |
| 24 | *Pinus* spp. | cone frags. | 8 | AVC / yes | rat nest | 15.1 |
| 30 | *Quercus* spp. | hull frags. | 8 | AVC / yes | rat nest | 2.6 |
| 31 | *Pinus* spp. | hull frags. | 24 | AVC / yes | rat nest | 1.9 |
| 32 | *Quercus* spp. | hull frags. | 3 | AVC / yes | rat nest | 1.4 |
| 67 | *Pinus* spp. | cone frag. | 1 | ASA / yes | Unit 55-F, 0 to 6 inches | 4.1 |
| 73 | *Quercus* spp. | hull frag. | 1 | ASA / yes | Unit 56-F, 0 to 6 inches | 0.5 |
| 77 | unidentified | seed | 1 | ASA / yes | Unit 52-S, 0 to 6 inches | <0.1 |
| 78 | unidentified | seed | 1 | ASA / yes | Unit 53-I, 0 to 6 inches | <0.1 |
| 87 | *Pinus* spp. | cone frag. | 1 | ASA / yes | unknown | 0.6 |
| 92 | *Quercus* spp. | hull frags. | 13 | ASA / yes | unknown | 4.4 |
| 93 | *Pinus* spp. | hull frags. | 3 | ASA / yes | unknown | 0.4 |
| 94 | unidentified | hull frags. | 2 | ASA / yes | unknown | 1 |
| 96 | unidentified | seed frags. | 4 | ASA / yes | unknown | 0.1 |
| 101 | unidentified | seed frags. | 51 | ASA / yes | unknown | 6.5 |

"hoof," was recovered by AVC from the packrat nest. Two pieces (Cat. No. 46, 2.7 grams) of what appears to be burned resin or sap were recovered by AVC.

*Botanical Remains*. A total of 149 unmodified plant remains was found (Table 13). These include 27 pine (*Pinus* spp.) nuts, 10 pine cone fragments, 25 fragments of acorn (*Quercus* spp.) hulls, 28 stems of unidentified grass, and 59 unidentified seeds. The lack of provenience on any of this material precludes any meaningful analysis.

*Faunal Remains*. A total of 235 vertebrate faunal elements were collected. Of that number, 93 were recovered by ASA but are not in the collection. The remaining 142 pieces, all recovered by AVC, were recovered from the packrat nest are summarized in Table 14. Of the 142, 97 are burned. While all of this material was recovered from the packrat nest, it seems likely that much of it is ultimately cultural in origin, suggesting that some food preparation and/or consumption took place at the cave.

Of some interest is the recovery of a burned atlas vertebrae from an artiodactyl, possibly a sheep. The site is apparently an important locality in Kawaiisu oral tradition regarding origins (see Sutton 1982) and may have been a place where ceremonies were conducted. Smith (1940:17-18 [perhaps following Gayton 1935:593]) identified two general types of origin stories in the Great Basin. In Smith's (1940) general Type II story, Coyote is lured to an island by a girl, with whom he wants to have sex. The girl, however, has a toothed vagina (*vagina dentata*) with which she kills her lovers. Coyote discovers this and uses the atlas vertebra from a bighorn sheep (*Ovis canadensis*) as a penis sheath. The bone sheath breaks the teeth of the girl's vagina, and Coyote successfully makes the girl pregnant. When the children are born, they are put in a jug. When Coyote leaves the island, he opens the jug, scattering the children who then become the various tribes. Although the Kawaiisu do not have a story detailing the first part of this sequence, the second part can be seen in the Kawaiisu tale of "Coyote and the Basket" (Zigmond 1980:139), where Coyote was carrying a basket full of children. He started out in "South Fork" (Tubatulabal territory), heading north into Inyo County, on his way to Mono Lake. He got tired before he got there, and all of the Indians got out and scattered. This story suggests that the Kawaiisu may also have had a Type II origin story that involved a *vagina dentata* and a bone penis sheath.

Thus, it is possible that the presence of the artiodactyl atlas vertebra at the site could be related to ceremonial activities having to do with the Kawaiisu origin story. At least one other such association has been hypothesized, based on the recovery of an *Ovis* atlas vertebra from Nopah Cave, in Southern Paiute territory just east of Death Valley (Sutton and Yohe 1987).

#### *Human Remains*

Four pieces of human cranium were recovered from the packrat nest area by AVC in 1971 (Table 15). All are from adults of unknown sex. All of the pieces are burned, three of them badly, and apparently represent cremations. It is possible that at least two individuals are represented.

No human remains were present in the ASA collection and there is no indication that burials were present in the cave. The presence of the four fragments in the packrat nest suggests that they were brought to the site by packrats and originated from nearby burials and/or cremations.

The practice of cremation was not customary for the ethnographic Kawaiisu (Zigmond 1986:404), although it was reported by Driver (1937:99). However, a Late Period cremation was discovered by ASA at a nearby

Table 14. Summary of faunal remains recovered by AVC, CA-KER-508 (number of identified specimens; number of burned specimens is listed in parentheses).

| Element | *Lepus californicus* | *Sylvilagus audubonii* | *Neotoma lepida* | *Dipodomys* sp. | *Thomomys bottae* | *Odocoileus hemionus* | Leporid | Artiodactyla | Canidae | Felid | Snake | Small mammal | Medium Mammal | Large Mammal | Unidentified | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| antler | — | — | — | — | — | 2 (2) | — | — | — | — | — | — | — | — | — | 2 (2) |
| skull | — | — | 1 | — | — | — | — | 1 | — | — | — | 1 (1) | — | — | — | 3 (1) |
| maxilla | 1 (1) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1 (1) |
| mandible | 4 (4) | — | — | — | 3 (1) | — | — | — | — | — | — | — | — | — | — | 7 (5) |
| tooth | — | — | — | — | — | — | — | — | — | — | — | 2 | — | — | — | 2 |
| vertebra | — | — | — | — | — | — | — | 2 (1) | — | — | — | — | — | — | — | 2 (1) |
| rib | — | — | — | — | — | — | — | — | — | — | — | — | 3 (2) | — | — | 3 (2) |
| scapula | 1 | 1 | — | — | — | — | — | 3 (3) | — | — | 1 (1) | — | 1 | — | — | 7 (4) |
| humerus | 1 | 1 | — | — | — | — | — | — | — | 1 | — | — | 1 (1) | — | — | 4 (1) |
| radius | 2 (1) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 2 (1) |
| ulna | 1 (1) | — | — | — | — | — | — | — | 1 (1) | — | — | — | — | — | — | 2 (2) |
| pelve | 4 (3) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 4 (3) |
| femur | — | — | — | — | — | — | — | — | — | — | — | 1 (1) | 1 | — | — | 2 (1) |
| tibia | 1 | — | 1 (1) | — | — | — | — | — | — | — | — | — | — | — | — | 2 (1) |
| unidentified longbone fragments | 3(2) | 2 (1) | — | 1 | — | — | 22 (12) | — | — | — | — | 3 (2) | — | 2 (2) | — | 33 (19) |
| calcaneus | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — | 1 |
| phalange | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | 1 |
| unidentified fragments | — | — | — | — | — | — | — | — | — | — | — | 27 (15) | — | 5 (4) | 32 (24) | 64 (43) |
| Totals | 18 (12) | 4 (1) | 2 (1) | 1 | 3 (1) | 2 (2) | 23 (12) | 7 (4) | 1 (1) | 1 | 1 (1) | 34 (19) | 6 (3) | 7 (6) | 32 (24) | 142 (87) |

Table 15. Human remains recovered by AVC, CA-KER-508 (all from the packrat nest).

| Catalog Number | Element | Metrics | Condition | Pathologies | Age | Sex |
|---|---|---|---|---|---|---|
| 38 | skull fragment (occipital/parietal) | 60 x 58 x 6 mm; 21.85grams | slightly burned | none noted | middle-aged adult | unknown |
| 39 | skull fragment (parietal) | 45 x 41 x 5 mm; 10.85grams | partly burned | none noted | adult | unknown |
| 40 | skull fragment | 50 x 31 x 4 mm; 5.42grams | burned | none noted | adult | unknown |
| 45 | skull fragment | 45 x 30 x 6 mm; 4.75grams | burned | none noted | adult | unknown |

site (at CA-KER-4168/H [P-15-004364]; Siefkin and Sutton 1995). In that cremation, much of the bone was incompletely burned.

### *Obsidian Studies*

Two of the relatively few pieces of obsidian large enough for analysis were submitted for sourcing and hydration analyses. The first piece (Cat. No. 19) is a flake recovered by AVC from the rats nest and had a hydration rind of 2.45μ and was sourced to the Coso Volcanic Field. The second piece is the base of a small Cottonwood Triangular projectile point (Cat. No. 086, Fig. 6b). This piece had a hydration rind of 1.06μ and was also sourced to the Coso Volcanic Field.

### *Dating*

There are no chronometric dates for the site. The temporally diagnostic artifacts recovered (projectile points and beads) suggest a Late Prehistoric to Historic Period use of the site, and the presence of perishables supports a generally late temporal assignment. The obsidian data also suggest a late use. Direct dating of the rock art may be possible, but has not been conducted. At this time, the site appears to have been occupied within about the last 500 years.

## Conclusions

Based on the rock art and associated oral tradition data, Lee (1999:1) suggested that the site "fits the model of a class of ceremonial sites, related to Kawaiisu mythology and possibly to puberty ceremonies." Lee (1999) felt that the elements painted on the walls of Teddy Bear Cave represented offerings and prayers, and there seems little doubt that the site is an important ceremonial locality to the Kawaiisu.

The material culture at the site appears to reflect some domestic activities. The artifact assemblage is not large, but is diverse. No rock art production tools (e.g., pigments or palettes) were found, but other artifacts indicate that milling activities, transporting and/or storing materials in baskets, lithic reduction or rejuvenation, and perhaps the manufacture of arrows, were conducted at the site. The relative abundance of beads may reflect "offerings" made at the site as suggested by the ethnographic and oral tradition data. Interestingly, there are no ceramics known from the site, but such artifacts are common at the nearby habitation sites.

It is tempting to argue that much of the material culture could be attributed to males, perhaps shamans

visiting the site for assorted ceremonial purposes. Perhaps both males and females visited the site in conjunction with puberty ceremonies, perhaps residing at the site for some time and so contributing some domestic debris.

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