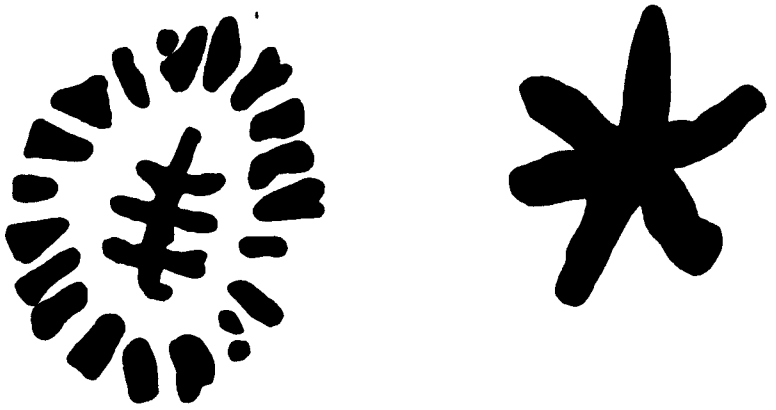
KERN COUNTY

ARCHAEOLOGICAL SOCIETY

JOURNAL



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The Kern County Archaeological Society Journal is published on an occasional basis. The Journal publishes articles and reports on the archaeology and ethnography of Kern County and surrounding areas.

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Cover illustration: Pictographs from CA-LAN-484 (see page 49).

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MESSAGE FROM THE EDITOR

This is the fourth issues of the Kern County Archaeological Society Journal published to date: Vol. 1 in 1977, Vol. 2 in 1984, and Vol. 3 in 1992. It is the goal of the KCAS to publish a Journal each year. We are interested in papers on the archaeology or ethnography of the San Joaquin Valley and surrounding areas, written by members of the KCAS: professional, student, and avocational.

We intend the papers to make a contribution to the anthropology of the San Joaquin Valley and southern California. We will strive to include as much material as possible and encourage authors to submit their papers for consideration.

Sharynn-Marie Valdez
Editor, Vol. 4.

THE INDIANS OF PELICAN ISLAND [CA-KER-33]

Harold A. Estep, Sacramento, California
[Edited and Annotated by Mark Q. Sutton], Dept. of Sociology and Anthropology, CSU Bakersfield

"Gone, But Not Forgotten"

EDITOR'S PREFACE

This paper originally was written in 1933 as a paper in history for a class at Bakersfield College. Mr. Estep forwarded a copy to the University of California, Berkeley (UCB) where it was accessioned into their manuscript system. Copies of the report (Berkeley MS No. 38) were made available by UCB to researchers as needed. The majority of the paper is devoted to reporting the work undertaken by Mr. Estep and associates at Pelican Island (CA-KER-33), although several other sites are discussed. The text of the report published below is as written in 1933, with some very light editing (spelling, etc.) along with the deletion of specific site location data. Annotations to the text (shown in bold) have been added to clarify and/or add more recent information. Figure 1 is a new updated map of the southern valley showing the locations of the sites discussed and Figure 2 is a redrawing of the original Pelican Island site map. The artifact drawings were redrawn from the original report; none have scales and few show any detail.

THE PELICAN ISLAND SITE

The Pelican Island site (at Buena Vista Lake, there are several other "Pelican Islands" in the San Joaquin Valley) originally was recorded by Gifford and Schenck (1926:41-43) as their site No. 4 and is now recorded as CA-KER-33. It is located along the northern side of Buena Vista Lake at an elevation of approximately 90 m. (295 ft.). It has since been subject to agricultural impacts. Gifford and Schenck (1926:41-42) described the site location as being

> **. . . about two hundred yards from the actual water of Buena Vista lake [sic] . . . and gave some evidence of having been a tule marsh. The "island" itself supported a scattered growth of very small willows, some brambles, and some annual plants. Along the lake front were dense but limited clumps of tule, and along the slough considerable growth of willows and larger shrubs.**
>
> **Water fowl of many kinds, including ducks, geese, pelicans and waders, were much in evidence. In ancient times the spot must have been frequented by tremendous numbers of such birds.**
>
> **When the level of the lake was at 295 feet or thereabouts [it must have been a few feet lower] the island was at least a mile from the north margin of the lake and a true island. The other extreme—say a lake level of 282 feet—left the spot quite a distance from the water. . . .**
>
> **In all, this was an extraordinarily favorable location. It was among the perennial channels of the Kern river [sic], adjacent to a lake containing fish and frequented by vast flocks of waterfowl, and high enough to be above all but the highest floods.**

Kern County Archaeological Society Journal 4:2-30 (1993).

Gifford and Schenck (1926:42) described the site as

> **. . . an S-shaped portion of shore line, some five hundred yards long by some thirty yards wide (at the widest part) and perhaps seven feet above the land to the north. The "island" is highest near its center point. It is composed very largely of river-mussel shells and is simply a large shell heap with mud deposited over its lower slopes on the southern or lake side.**

INVESTIGATIONS AT PELICAN ISLAND

In 1924, Gifford and Schenck visited the site and described it (1926:42) as being "literally covered" with artifacts, even after having been surface-collected for years. They conducted some limited excavations (at least three pits or trenches), "turning over" about 400 cubic feet of deposit. A variety of artifacts was recovered and briefly reported (Gifford and Schenck 1926:passim). Although human remains had been reported to Gifford and Schenck as being "plentiful" on the site, they saw few such remains and did not collect any (1926:43). However, two burials were removed late in 1925 (described in Gifford and Schenck (1926:51). The next investigations at Pelican Island were in 1933 by Estep and associates (this report).

Since 1933, no formal investigations have been conducted at the site. However, it continues to be impacted by collectors and agricultural activities. A recent (1993) visit to the site revealed a number of artifacts and human bones lying on the surface. No formal work was conducted at that time and none is anticipated.

> The exact understanding of the Indian History of California still lies before us. Some foundations may have been laid for it in the present work. The outlines were sketched for all time forty years ago by the masterly hand of Stephen Powers. But the real structure will be a gift of the future; and its materials can only be assembled by investigations far more intensive, as well as continuous, than those undertaken [Kroeber 1925:543].

INTRODUCTION

Pelican Island **[Fig. 1]** is the general subject of this History Thesis. I chose Pelican Island as the subject for this paper because I found, by investigation, that there is very little material, of authentic nature, available concerning this former island and its former inhabitants, the Indians. Furthermore, even before I started this project, my attention had been attracted to this island, that is in reality a shell mound, by the numerous artifacts I had found there. I believe that more recent discoveries, made by Mr. Alvin Luitjens and myself, have justified my choice of this former island as a History project.

LOCATION AND DESCRIPTION OF PELICAN ISLAND

Pelican Island lies three miles southeast of the Bakersfield, Panama, Taft Highway, some 25 miles southwest of Bakersfield. The country surrounding Pelican Island is of adobe and sand; the island having at one time, up to about 59 years ago, been located in the northeastern section of Buena Vista Lake, the waters of which surrounded it to a depth of several feet during most of the year. However, of recent years, the waters of the lake have receded until it is now dry practically the entire year, and Pelican Island has, therefore remained as part of the mainland.

In size, Pelican Island has a total length of nearly seven hundred yards, and an average width of approximately fifty yards, Of course, the size during the period when Buena Vista Lake was "in fact" a lake, was dependent upon the depth of the water. I stepped **[paced]** the above distances from end to end, and side to side of the island, from what appeared to have been the average water level.

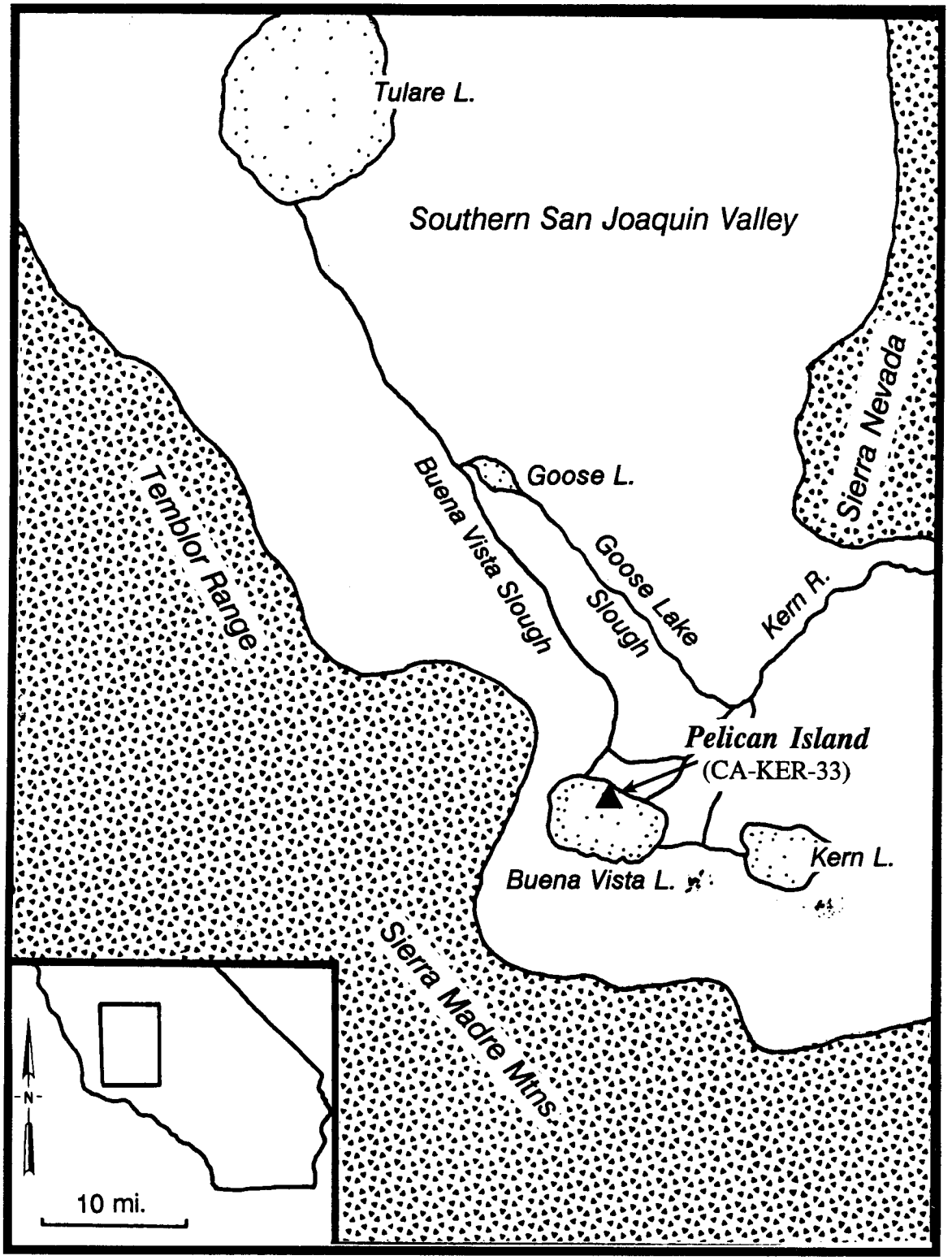

Fig. 1. Map of the Southern San Joaquin Valley and location of Pelican Island (CA-KER-33).

IN REGARD TO PURSUIT OF DATA ON PELICAN ISLAND

I first read all the material I was able to obtain relating to the southern San Joaquin Valley, of which Buena Vista Lake, and Pelican Island, is a part. I especially studied and noted all references to the *Tulamni*, linguistic group of the Yokuts tribe, who were generally conceded to live in this locality. This material was chiefly available in the works of Gifford and Schenck, Kroeber, Latta, Miller, Morgan, and others.

However, the material that I received from these sources was too general to be of much immediate value in determining the modes of living, height of civilization, customs, and manners of the early Indian inhabitants of Pelican Island. I next read rather extensively concerning the Indians of the United States, as a whole; and then of the Indians of California, in order to have a basis for a comparison of the Yokuts with other tribes, and the *Tulamni* with other linguistic groups.

Many interesting data were gathered by Mr. Alvin Luitjens and myself, and those who aided us in making excavations on Pelican Island, through the shell deposit to the conforming earth below. Here, in the eleven definite excavations we made on the island, we took samples of the earth, (shell content), at each level as noted by composition of varying strata and also took note of artifacts discovered, and the depth where found.

Not only did we make excavations through the shell composition of the island, but we also dug many long, shallow trenches. We found that most of the data to be found regarding the Indians, was to be found from one to twelve inches below the surface of the island. By crawling on hands and knees over a large portion of the island, spending probably six hours at this work, we recovered a number of shell beads. We found no trade beads on Pelican Island.

After having spent considerable time delving into the fascinating exploration of Pelican Island itself, we skirted its edges on hands and knees several times, despite the array of cockleburs that hindered our progress. Apparently the burs had kept others from doing likewise, for by so doing we made several valuable discoveries. The next move, in pursuit of more data, was a wider circle of the island, on foot. We picked up several fragments of arrowheads and other artifacts at various distances from the island . . . mostly to the southwest of the central portion.

We then decided to look for the U.C. No. 32 burial mound **[see Gifford and Schenck 1926:Table 5; the site is now recorded as CA-KER-59 and located in and beneath the Buena Vista Lake Recreational area campground]**. This mound is located about 1.5 miles NNE of Pelican Island. From about 3/4 mile after leaving Pelican Island, to about 200 yards from site U.C. No. 32 **[CA-KER-59]**, we were surprised to find the ground literally "covered" with artifacts. We proceeded on to the burial mound **[CA-KER-59]**, which we discovered without difficulty. After unearthing several jaw bones, with only one definite **[skeleton]** which was badly decayed, and with which was but one bead, we continued excavations, unearthing at a depth of approximately two feet, three skeleton**[s]**. These remains had, as nearly as it was possible for us to determine, been buried "back to back." No beads were found in this latter excavation. A third excavation yielded fragmentary evidence of another burial in this mound. The clay composition of this mound, that attained an approximate elevation of about four feet above the surrounding country, was so hard that digging was very difficult.

Feeling that further excavations would serve to do more actual damage than good, due to the hardness of the soil, and also feeling that there might be another mound nearby, we left site U.C. No. 32 **[CA-KER-59]**. We made a wide circle in this area, picking up several arrowheads and other artifacts. To the west we discovered what proved to be another burial mound **[this site is not formally recorded and its specific location is unknown]**. After unearthing the remains of many skeletons, too fragmentary and decayed to be of much value as a source of data, except due to their possible age as shown by this fact, we unearthed a skeleton that was in a some what better state of preservation. These remains had been buried in a horizontal position with the head and shoulders slightly elevated. The head lay to the southwest. This was in decided contrast with the skeletal remains found in site U.C.

No. 32 **[CA-KER-59]**, where the remains had been buried in a sitting position with the legs and arms drawn up against the chest.

Despite the fact that there had been some slight indication of shallow excavations on this latter mound, there was no indication that skeletal remains had previously been discovered here. This mound is not listed in any of the references studied previous to, nor prior to this discovery.

This mound, as compared with site U.C. No. 32 **[CA-KER-59]**, that was oval in shape and had an average diameter of about 30 feet, was approximately 150 feet long and 50 feet wide. Our main excavation on this mound was in the south-central portion, to a depth of 3.5 feet. An additional excavation to the east of this central section some, 50 feet, to a depth of about four feet, led us to believe that this mound was used for burial purposes, only from its central-southern to western portion.

During the course of our intensive search for information regarding the Indians of Pelican Island, we made a more complete survey of the territory covered by artifacts and found that it was nearly a mile in diameter, and almost oval in shape, indicating that the habitat of the Indians at this place assured an elongated characteristic. The greatest extremities were from east to west.

We next visited a burial mound **[CA-KER-67, described as being on the northern shore of Kern Lake and apparently part of Gifford and Schenck's (1926) site No. 34]**. Here we made several excavations, obtained several skeletons, and a few beads. This site was not officially listed by Gifford and Schenck (1926).

Our next **[search]** for material was carried out in **[the area of CA-KER-66, along the northern shore of Kern Lake and apparently part of Gifford and Schenck's (1926) site No. 34]**, where we found several inches of shell, and trader **[glass]** beads; and what was at one time a burial ground, but the skeleton remains were too decayed to be of much value. This was probably due to a great extent to the low-lying nature of this section. Near the Buena Vista Lake Canal we picked up several fragments of pottery (see Appendix 1). Further artifacts were found on the surface of a shell mound **[CA-KER-32, apparently Gifford and Schenck's (1926) site No. 3]**. Here we found several arrowheads and a number of shell beads.

The above, is an accurate account of the manner in which material for this paper was collected. Acknowledgement will be made in another place in this thesis of sources of information, other than those included in footnotes, and of individuals who contributed personal aid in unearthing the tangible clues of Indian culture, as previously stated.

HOW I PLAN TO ORGANIZE DATA ON THIS PAPER

1) I will first give a general sketch of the habitation, history, customs, and possible cultural status of the Yokuts, with special emphasis placed on the *Tulamni*, and other groups in the vicinity of Buena Vista Lake. 2) I will then list the known camp sites, as presented by various authors; and the known burial sites (Table 1). 3) To the officially recognized list of camp and burial sites I will add those discovered, or substantiated while gathering data for this thesis. 4) Next, I will consider the data collected on the structural formation and composition of Pelican Island, including the Structural History of Pelican Island. 5) I will make a rather thorough consideration of the excavations made, and the artifacts found in, and about them; and illustrate the important artifacts recovered. 6) My next review, will be that of the camp site discovered **[north of Pelican Island but apparently not recorded]**; and rather complete consideration, and illustrations of artifacts found. 7) This will be followed by a study of the burial mounds **[also unrecorded sites north of Pelican Island]** that we visited while gathering data. 8) I will then draw a conclusion, based primarily on the information available, and artifacts recovered, in regard to the [Indians] who once inhabited Pelican Island. 9) The above will be followed by interviews (appendices 1 and 2), and a bibliography, that are preceded by photographs. 10) Throughout this thesis will be found available maps.

Table 1

YOKUTS TRIBES AND LOCATIONS

Spanish Name	Yokuts Name	Location	Noted in
Malapoa Malapica	*Hoschiu*	Bitterwater Creek	1806 1809
Buena Vista	*Tulamniu*	SW end of Buena Vista Lake	1824
Tulali			1824
Sisupistu	*Pohalin*) *Loasau Tinliu*)	SE shore Kern Lake or NE of Kern Lake	1806
Yaguelame	*Loasau* *Woilo*	as above near Bakersfield	1776 1776
--	*Tsineuhiu*	N side of Kern River above Bakersfield	1776
--	*Konoilkin*	as above	1776
Bubal) Hubal) Thuohuala)	*Sokwutnu*	Atwell's Island near Alpaugh	1804
Sumtache	?	E shore Tulare Lake	1814
"	*Walna*	W shore Tulare Lake	1850
Lucluc	?	W portion of basin	--
Gelecto	?	Goose Lake area	--

HABITAT, HISTORY, CUSTOMS, AND CULTURAL STATUS OF THE YOKUTS

The Yokuts (the name Yokuts is taken from a native word for "person" or "people" [Kroeber 1925:488] lived in the San Joaquin Valley, the floor of which they held, from the mouth of the San Joaquin River to the foot of Tehachapi Pass. They also occupied the adjacent foothills of the Sierra Nevada up to the altitude of several thousand feet, from Fresno River southward, and in places somewhat north of that stream (Kroeber 1925:475). (Kroeber stated [1925:475] that the Yokuts were not north of Fresno River; this is belied by his map [Kroeber 1925:Plate 47].)

The San Joaquin River proper flows down the southerly portion of the valley. Above it, Kings and then Kern rivers flow westward from the high mountains, and the latter turn northward into treeless plains. The Kern River drained into Buena Vista Lake and Goose Lake Region. (I take issue with the following statement: "The Kern River drained into Tulare Lake, formerly a large, shallow basin of water surrounded by an even more extensive tract of swamp tules, as two or three species of bush are locally known" [Kroeber 1925:475]. This, it seems to me, is a mis-statement by Mr. Kroeber, for his own map [1926:Plate 47] shows that Kern River does not

directly drain into Tulare Lake. Only when there is an overflow from Buena Vista Lake into Goose Slough, and thence into Goose Lake, and from there into Tulare Lake, does the above statement of Mr. Kroeber become a reality.) Overflow from these lakes, in turn, drained into Tulare Lake, and hence northward into Kings River, and finally into the Pacific Ocean. Due to the utilization of water for irrigation purposes, it is noted that, in recent years the overflow from Buena Vista Lake and consequent lakes has not taken place.

> In the whole upper valley, in which the distribution of the Yokuts groups is pretty accurately known, there were only two tribes, the Tulamni and Tachi, in the large tract west of Tulare Lake and Kings River; and even of these two the Tachi preferred to cross to the east side when summer and autumn dried the overflowed lands and rendered their winter habitat a virtual desert [Kroeber 1925:476].

In connection with the historic locations and prehistoric locations of the Yokuts one should keep in mind the fact that the Yokuts have many linguistic divisions. These divisions naturally tended to influence the various groups. Kroeber (1925:477) told us that the Yokuts Valley dialects seem to be classified into two groups, a northern along the San Joaquin, and a southern from Kings River southward, but that of the former very little is known, and it is probable that fuller information regarding it might shift the line of demarcation. Kroeber (1925:478) continued by stating that the Buena Vista group attained the greatest variation from average Yokuts speech, but that this was not necessarily true, because the foothill habitat of the remainder of the division was abandoned, at least in historic times.

The *Tulamni* were the tribe in possession of Buena Vista Lake. On the western, or northeastern shore of this lake, "where the hills come close to the water," was their main settlement, "Tulanmiu." From there they ranged westward to *Wogitiu*, in the vicinity of McKittrick (Kroeber 1925:478). On Kern Lake lived the *Hometwoli*, or *Humetwadi*, who inhabited at least three principal sites: *Halau* near the entrances of Kern River into the channel connecting Kern and Buena Vista lakes; *Loasau*, somewhere on the north side of Kern Lake; and *Pohalin Tinliu*, or *Sihetal Dual*, in the *Hometwoli* dialect itself, on the south shore. The *Tuhoni*, *Tohonai*, or *Tuhohayi* are extinct (Kroeber 1925:478).

We are told that the chief factor of uncertainty concerning the tribe, is especially in regard to its size. Kroeber (1925:488) stated that the number of Indians comprising a Yokuts tribe was probably between 250 and 500 and sets the probable average number at between 300 and 400 (Kroeber 1925:488). The possibility of uncertainty may readily be deducted from the following.

> When Kit Carson first visited California, in 1829 he found the valleys swarming with large and prosperous tribes. About that date it was roughly estimated that the number in the state was upward of 100,000. In 1859 Carson again visited the valley and found that the tribes he had known on his former tour had wholly disappeared and that people living here at that time had never heard of them. In 1863 the Department of the Interior counted 29,300 Indians in the state [Morgan 1918:30].

Kroeber (1925) gave the number of Yokuts in 1770 as approximately 18,000. Miller (1929:61) noted that there were indications that the cause of the sudden extermination of these people was a pestilence. The statement of Merriam (1904:915) regarding the reason for the Yokuts being found in small numbers, was that the Paiutes left their desert homes east of the mountains, pushed through the passes of the Sierras, invaded certain valleys of the western slope, and drove out the Yokuts people.

Regarding the political system, it was known as "Totemic Moieties;" the organization of society into two totemically contrasted halves arising from the conception that nature is one half land and one half water. As to membership, heredity was traced through the father, and an individual had to marry the opposite moiety. There was little polygamy because of the scarceness of women, however there was some, the husband dividing his time

among the villages where resided his wives. As for ceremonies, the jimsonweed ceremony, and the rattlesnake ceremony were used. The Yokuts were not a nomadic people, but neither were they agriculturists. They existed on what they could get from the land with the least effort (Miller 1929:49). It is quite possible that the climate to which the *Tulani* peoples were subjected, was responsible for this apparent lack of ambition **[we now know that the adaptation of the Yokuts to the southern San Joaquin Valley was very successful]**.

Then too, the fact that nature provided the Indian in the region of Pelican Island with food, makes it almost unnecessary for him to exert himself in order to live. In speaking of this location, Morgan (1914:30) stated "The average Indian found by early settlers reared no temple and built no monuments. For a dwelling he hollowed out a little circle in the earth, raised above it a cone shaped framework of poles or brush and thatched it with grass or bushes." Meat formed but a small part of the diet of the Kern County Indian of former times. Those who lived in valleys caught clams, squirrels, and small game, but the main staples of their larder were acorns, juniper berries, pinyon, wild fruits, nuts, edible roots, and seeds from wild grasses (Miller 1929:58-59).

The general culture of the Yokuts is well-defined in the following statement: "The Yokuts are unique among the California natives in one respect. They are divided into true tribes. Each one has a name, a dialect, and a territory. The total number of tribes may, therefore, have reached fifty. Such an array of dialects is unparalleled and gives to the Yokuts alone nearly one-third of all the different forms of speech talked in the state" (Kroeber 1925:474).

In speaking of the Indians in general, is another statement by Kroeber (1923:188) "Finally, still further away, in Central California, the Yokuts now and then show a culture trait reminiscent of the Pueblos: Grooved arrow straighteners, perhaps, or occasional rudely made pottery vessel. These are suggestive bits, fragments that have been whittled away or toned down. Pueblo culture as a whole has vanished at this distance. In its place the Yokuts possess quite different arts and institutions and beliefs."

Narrowing down to the *Tulamni*, the following statement (Kroeber 1925:46) is of some interest. "The Yokuts division that settled about Buena Vista Lake showed greatest variation from the average Yokuts to speech. The people located here were the *Tulamni*, whose main village was on the western shore of the Lake, where water extended nearly to the hills, and their settlements ranged westward as far as Wogitin, a village in the vicinity of McKittrick." I feel that the following quote (Kroeber 1925:542) is indicative of his belief that the Yokuts, and more especially, the *Tulamni* were rather high in their primitive level of civilization.

> Equally impressive, however, are the features distinctive of the civilization of the Yokuts, or rather the group composed of themselves and their smaller and less known Shoshonean neighbors on the immediate east and south. These specialties include the regulated functions of transvestites, the coordinated animal pantheon, the eagle-down skirt, the constricted coiled basket, a distinctive pottery, and the communal house, to mention only a few points. It seems that the Yokuts were a nation of considerable individuality. It appears throughout California that the dwellers in the larger valleys, though they were first to crumble at the touch of the Caucasian, elaborated a more complex culture then the hill tribes, and the Yokuts were a lowland people in a greater measure than any other stock in California.

The following, it seems to me, would lead one to believe that these Indians were, in the greatest sense of the word, "mound builders," and that their civilization and culture was far superior to those of other parts of this state. This article, dealing directly with the *Tulamni*, casts an interesting possibility for these people.

> In Buena Vista Lake region of south San Joaquin Valley of California uncovered the first mound builders known in the state. A race dating back probably three thousand years, mere children to the Age of Man, yet leaving traces of a civilization far beyond that of the other known Indians of this section of the Pacific Desert [Dunn, quoted Roy Chapmen Andrews, Sunset Magazine March, 1926; also refer to Appendix 2].

In further consideration of the culture of the Yokuts, and more especially *Tulamni* culture, some authors have inferred that the *Tulamni* were an exceedingly low type of Indian, and that this characteristic, coupled with a low cultural advancement was probably due to their environment. A good example of the influence of environment on civilization, and cultural advancement is given in the following statement.

> Extreme poverty was apparently an important cause of the low social and political organization of these Indians. The Maidus of Sacramento Valley were so poor that, in addition to consuming every possible vegetable product, they devoured all birds except the buzzard, and ate badgers, skunks, wildcats and mountain lions. They even consumed the bones of salmon and the vertebrae of deer.
>
> Finally, in the far south, on the peninsula of Lower California, the tribes were probably the lowest culture of any Indian in North America, for their inhospitable environment which made them wanderers was unfavorable to the foundation of even the rude and unstable kind of government found elsewhere [Huntington 1925:104-105].

We do know that no such conditions of starvation need to have existed among the *Tulamni*, for there was an abundance of river mussels, suckers, minnows and trout. And this fish diet could easily be supplemented by sage seed, and the pollen, seed, and root of the tule. Furthermore, there was an abundance of bird life; the California sage sparrow and the California horned lark; the sage and LeConte thrashers, and the Brewer sage sparrow.

In addition, near the lakes there were large numbers of waterfowl. Among these were the white pelican, killdeer, snowy plover, Bonaparte and California gulls, herons, and black terns; ruddy, fulvous tree, pintail, shoveler, redhead, and teal ducks; western grebe, geese, snipe and sandpipers. Beside the bird life, we find that there was also an abundance of mammal life present; rats, mice, ground squirrels, gophers, jackrabbits, cottontail rabbits and even antelope and tule elk, not to mention bears and raccoons (Gifford and Schenck 1926:18-19).

It is possible, in the light of the contention of Huntington (1925:106) that "natural advantages of habitation are sometimes an impediment rather than an incentive to progress." If this were true of the *Tulamni*, then we might garb our opinion of these Indians in the dark robed belief that these people were of a civilization far below that indicated by the cultural indications found in our study of artifacts on and about Pelican Island (Kroeber 1925:46).

It seems to me that the Yokuts have, along with other Indian tribes of the United States, suffered enough injustice from the inconsiderate white man; without being placed on record, by some hypocritical person who has never seen the existing indications of their relatively high culture, as being "the lowest, culturally, of any Indian group in the United States." To me, it seems that the following statement (Jackson 1881:intro) is a due consideration of the former treatment of the Indian by the white man.

> Every human being born upon our continent, or who comes here from any quarter of the world, whether savage or civilized, can go to our courts for protection -- except those who belong to the tribes who once owned this country. The cannibal from the islands of the Pacific, the worst criminals from Europe, Asia, or Africa, can appeal to the law and courts for their rights of person and property -- all, save our native Indians, who-above all, should be protected from wrong.

On May 15, 1933, I interviewed Mr. F. F. Latta (Appendix 2). He stated at that time that the Yokuts, he believed, had a civilization equal to most of the other tribes of Indians in the United States. When questioned regarding the *Tulamni*, he said that they were a "good type of Yokuts tribe." The fact that the *Tulamni* do not leave many indication of an exceedingly high type of culture might be clarified by a reference to Kroeber (1925:542).

Huntington's (1919:23) Pulsatory Hypothesis embodies the fact that a higher degree of civilization and culture is apt to exist where there is a considerable variation in climate and temperature. There was certainly a sufficient temperature variation in the Buena Vista Lake region to be conducive to a high type of culture (Gifford and Schenck [1926:17] stated that the temperature variation is from 118 F. to 13 F., a variation of 105 F.).

Where a factor of uncertainty in daily life enters in there is also believed to be a better chance for advanced cultural achievements. Most certain it is that such a factor was involved in Indian life on Pelican Island, for our excavations on Pelican Island showed definite traces of it having been flooded. Probably the factor that did enter in to the extermination of most of the *Tulamni*, who lived on Pelican Island, was multiple in number: plague, hostile invasion, and the fact that the Yokuts were evidently on the whole a peaceable people (Kroeber 1925:497). This is shown by the fact that scalping customs were of relatively little moment in Yokuts life (Kroeber 1925:498).

Regarding the Indian life on Pelican Island, as shown by various authors, or not shown by them, I feel that the statement by Kroeber (1925:543), as previously quoted in this paper, is quite applicable. However, by far the most complete account of these Indians, that we were able to find, was that by Gifford and Schenck (1926), who I have already quoted quite frequently.

ABORIGINAL SITES

The following **(Table 2)** is a listing of aboriginal sites in the Lake Region (partly from Gifford and Schenck 1926). I have previously mentioned the method employed in my attempt to gather data on Pelican Island and its former inhabitants, the Indians; I have treated, to a minor degree, with some of our findings on, and about this location; and I have considered the habitat; history; and possible cultural status of the Yokuts, and more especially of the *Tulamni*. Further, I have listed the known camp sites and burial grounds, as presented by Gifford and Schenck (1926), and have added to them new sites discovered, or substantiated in this thesis. I next will consider data concerning artifacts, and excavations made in Pelican Island. This will be followed by additional data on other locations, principally in the vicinity of Buena Vista Lake.

EXCAVATIONS AND ARTIFACTS ON PELICAN ISLAND

Having previously mentioned the excavations we made on Pelican Island, I will now show in Table 3 the composition of the site **[this is very similar to the information collected by Gifford and Schenck (1926:42) on the same subject]**.

STRUCTURAL HISTORY OF PELICAN ISLAND

The following is an account, based on available data, concerning the possible structural evolution of Pelican Island. Probably, before the beginning of the evolution of Pelican Island, its present location was, for the most part, slightly lower than that of the surrounding lake bottom (refer to Table 3). Flood waters from Kern River deposited sand in this depression, almost leveling it with the surrounding country. As the current subsided clay was deposited, and was followed by a thin layer of silt. The level of the surrounding lake bottom had also been raised by the deposit, so the present location of Pelican Island was as yet slightly below that of the surrounding land surface. Due to the clay bed of this depression, water probably remained here when a shortage of water in Buena Vista lake left the surrounding country dry.

Table 2

LOCATION OF SITES

SITE NO.[1]	LOCATION AND REMARKS
1 **[CA-KER-30]**	E shore of Kern Lake **[see Gifford and Schenck 1926:44]**
2 **[CA-KER-31]**	E shore of Kern Lake **[see Gifford and Schenck 1926:44]**
3 **[CA-KER-32]**	N shore of Kern Lake **[see Gifford and Schenck 1926:43-44]**
4 **[CA-KER-33]**	NE shore of Buena Vista Lake; site at Pelican Island **[this report]**
14 **[unknown]**	cemetery near Buena Vista Lake; described by N. C. Nelson **[excavated by Nelson in 1909, see Gifford and Schenck 1926:41, 49-50]**
15 **[unknown]**	cemetery near Buena Vista Lake; described by W. D. Strong **[see Gifford and Schenck 1926:41, 50-51]**
16 **[unknown]**	E and S shores of Kern Lake; reported by Hollis Parker **[see Gifford and Schenck 1926:45]**
32 **[CA-KER-59]**	NE shore of Buena Vista Lake; site north of Pelican Island **[this site, while apparently recorded by Gifford and Schneck (1926:Table 5) was not investigated by them]**
33 **[CA-KER-60]**	SW shore of Buena Vista Lake; site of Buena Vista or *Tulali* or *Tulamniu*; **[Wedel (1941) excavated at this site (his site No. 2) and did not believe it to be an ethnographic village]**
34 **[CA-KER-66, 67, etc.]**	N shore of Kern Lake; area of much archaeological evidence. Reported by Pryor, Dumble, and Allen, a shellmound 100 ft. in diameter, according to Allen, *Loasau* and *Woilo* reported by Zalvidea and Kroeber were along the north shore **[see Gifford and Schenck 1926:43]**
35 **[CA-KER-62]**	E and S shores of Kern Lake; much archaeological evidence reported by Dumble and Allen. This is probably the location of *Pohalin Tinliu* reported by Zalvidea and Kroeber.
37 **[unknown]**	near Bakersfield-Taft road; reported by W. W. Hill, G. M. Stirling, W. L. Warner **[see Gifford and Schenck 1926:Table 5; this site is located near in the general vicinity of a number of recorded sites but its identity is not clear. It apparently is not the Elk Hills cemetery (CA-KER-64; Walker 1947) since that site was not "discovered" until after the UCB work]**
38 **[CA-KER-65]**	N of Kern Lake; burial ground on McKittrick Ranch, reported by J. V. Stevens **[see Gifford and Schenck 1926:51]**
2[2] **[unknown]**	this site is a burial mound **[located about 0.5 mi. NE of CA-KER-32; see Gifford and Schenck 1926:44]**, according to William Slay, a Kawaiisu Indian
-- **[unknown]**	burial site N of Kern Lake; discovered by K. Leek, Gerald and Harold Estep.
-- **[unknown]**	site discovered by A. Luitjens and H. Estep
-- **[unknown]**	camp site discovered by A. Luitjens and H. Estep

[1] temporary site numbers from Gifford and Schenck (1926); [2] not a Gifford and Schenck site

Table 3

THE PRESENT COMPOSITION[1] OF PELICAN ISLAND

Layer	Thickness	Estimated content:
A	2 inches	60% sand; 10% humus; 30% fine shell fragments
B	6 inches	35% sand; 65% shell fragments
C	4 inches	80% sand; 20% shell
D	9 inches	90% shell, with coarse shell at bottom of layer
E	8 inches	80% coarse sand; 20% coarse shell fragments
F	5 inches	40% sand; 60% shell
G	2 inches	50% sand; 50% shell fragments
H	8 inches	90% sand
I	12 inches	whole shell
J	10 inches	yellowish sand covering black adobe clay
		.425 shell

[1] We arrived at the above indications by a careful study of the composition of the strata through which our excavations passed. Samples from the above mentioned layers are now in the K.C.J.C. [?] Historical Museum. **[Layer designations were added to match Fig. 5.]**

About this time fresh water mussels were planted here; possibly by birds, that doubtlessly were abundant in this vicinity (Gifford and Schenck 1926:49). However, the mollusca thrived, leaving a considerable layer that brought the former depression to the level of the surrounding country. A subsequent flood covered this lake. Due to the porous nature of the shell layer, sand was deposited here, forming a considerable layer. Probably one portion of this former mussel bed, doubtlessly what is now the northeast edge of the island, was left unburied beneath the thick deposit that elsewhere enveloped and devastated it. The mollusca here rapidly increased despite the ravages of pelicans and other birds.

Due to the large number of birds apparent at this place Indians investigated. This led to their establishment of a camp site on the Island during the dry season. For during the wet season this Island was submerged. However, after a few years, during which the Indians added to the height of the Island by dumping mussel shells from which they had eaten the content; the Island was no longer generally covered by flood waters for any length of time. Finally, as the Island continued to be built up it was definitely established as an island, and as the residence of many Indians during most of the year. At this time . . . when Pelican Island was the habitation of Indians, during practically the entire year, it was somewhat higher in elevation than it is at the present time. This is due to the fact that a continued erosion and decomposition of the shell masses underlying the present surface, is tending to compress this under structure there by causing a decline in the elevation. Again Pelican Island may sink to an elevation where it may more readily be submerged beneath flood waters, and a new deposit of silt and sand added to its surface. At a depth of more than one foot below the present surface of Pelican Island, we discovered indications of former camp sites of the Indians who had once lived here.

This would seem to indicate periodic habitation on this Island during the dry season of the year. The amount of sand in the top stratum would seem to indicate that Pelican Island had been submerged not so many years before its termination as an Indian camp site (Gifford and Schenck 1926:31).

EXCAVATIONS ON PELICAN ISLAND

Definite excavations made on Pelican Island were 11 in number. A reference to the map (Fig. 2) charting locations **[of the excavations]** on the island will give some idea of the locations referred to as follows. At Location No. 1, at a depth of six inches below the surface, we found a pottery bead (Fig. 3a; Gifford and Schenck 1926:55).

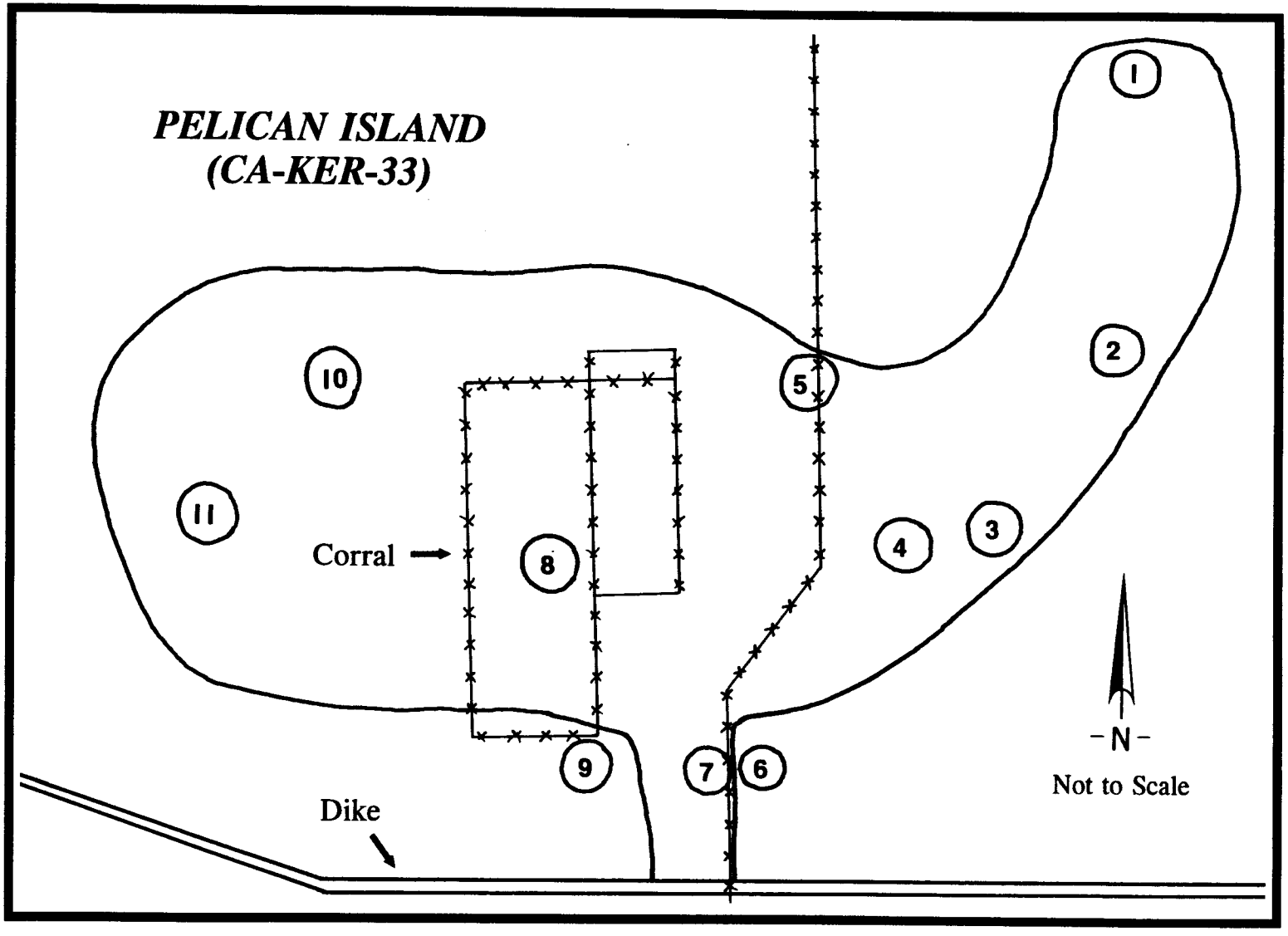

Fig. 2. Map of Pelican Island (CA-KER-33). Locations of the 1933 excavations are designated by small circles, labels correspond to text.

This bead was a convex-sided spindle whorl-shaped disc made of clay and gave indications of having been fired. The fact that we did not find other beads of this type on the surface, coupled with the fact that Mr. William Van Evert recovered a specimen of the type of bead from the surface of Pelican Island, would seem to indicate that the people who possessed the bead found below the surface were direct ancestors of those who left the bead on the surface (see Luitjens 1933:17). **[Similar beads were reported (Gifford and Schenck 1926:55) from other sites in the southern San Joaquin Valley, including several sites near Kern Lake.]**

At a depth of two feet we recovered an arrowhead (Fig. 3b). This was of the round-pointed type **[perhaps a Cottonwood Triangular lanceolate type dating to within the last 1,000 years]** used probably to cripple or stun game without actually killing it. This type of arrowhead seemed to be the rule, rather than the exception, in this locality. However, in this case, the size of this arrowhead was somewhat larger than most of this blunt-pointed type found elsewhere. This arrowhead was not uniform in color, being of gray flint with darker stripes. The top of this arrowhead was sharp, while the point was blunt.

At a depth of four feet, in this same excavation **[Location No. 1]**, we found a bone (Fig. 3c) that gave indications of having been used by the Indians. This bone was about three inches long, and had notches on the broken section. It gave indication of having been fired and polished, and was probably used, before it was broken, for some purpose by the Indians. The hollow in this bone extended from the broken section, inward about an inch. This hollow, it seemed to us, was somewhat too smooth to have been natural. The fact that this fragment of bone was but slightly above where the shell content of the Island ceased was also of interest to us. **[This may be a fragment of a scapula saw.]**

At Location No. 2, we found an arrowhead (Fig. 3d) of a different type **[a concave base Cottonwood Triangular, likely dating to within the last 1,000 years]**, at a depth of one foot. This was of the "sharp pointed" type, and was probably used to kill rabbits and other small game.

In Location No. 3, we found a reel-like object (Fig. 3e **[the drawing does not resemble other "reel-like" objects reported for the region, cf. Gifford and Schenck 1926:Plate 21; Wedel 1941:Plate 34] but actually looks like a point of some sort**) at a depth of one foot (see Gifford and Schenck 1926:73). This is made of steatite, and is a perfect specimen. Probably due to the fact that this type of artifacts is rather fragile, the five of these recovered previously on Pelican Island are reported to be more or less fragmentary. These **[reel-like]** artifacts are somewhat plentiful, comparatively speaking, and I have known of several being recovered on Pelican Island. At this same location we also found several pieces of obsidian at a depth of about 14 inches.

Our decision to make an excavation at Location No. 4 was influenced by our discovery of a number of beads lying on the surface of this location. Most of these beads were of "half shells" of a small gastropod **[most likely *Olivella biplicata* Split-Punched (Class D; Bennyhoff and Hughes 1987:125) that generally date to the Middle-Late transition]**. These shells were brown in color, and some of them were obviously polished (Bead A; Fig. 3f). This was especially true of the bead (Bead B; Fig. 3g) made by drilling through the closed end of a complete shell **[likely an *Olivella biplicata* Spire-lopped, Type A1; Bennyhoff and Hughes 1987:117]** of the same that the "half shell" beads were made from.

A rather unusual bead (Bead C; Fig. 3h), showing a considerable amount of workmanship was also recovered at this same location. This bead, was of smooth-cornered rectangular shape on the outside edge, that is, around the edge, and oval opening in its center **[the identity and classification of this bead is unknown]**. The walls of this bead were smoothly-finished. Undoubtedly this bead was much prized by its owner at some time (Gifford and Schenck 1926:63, Plate 16). At this same location we excavated to a depth of 4'3", but found only the entirely decomposed fragments of some bones. No other artifacts were found in this excavation). It might be well to mention at this time that a tooth, that of an Indian, was found at a depth of about six inches below the surface midway between locations 2 and 4.

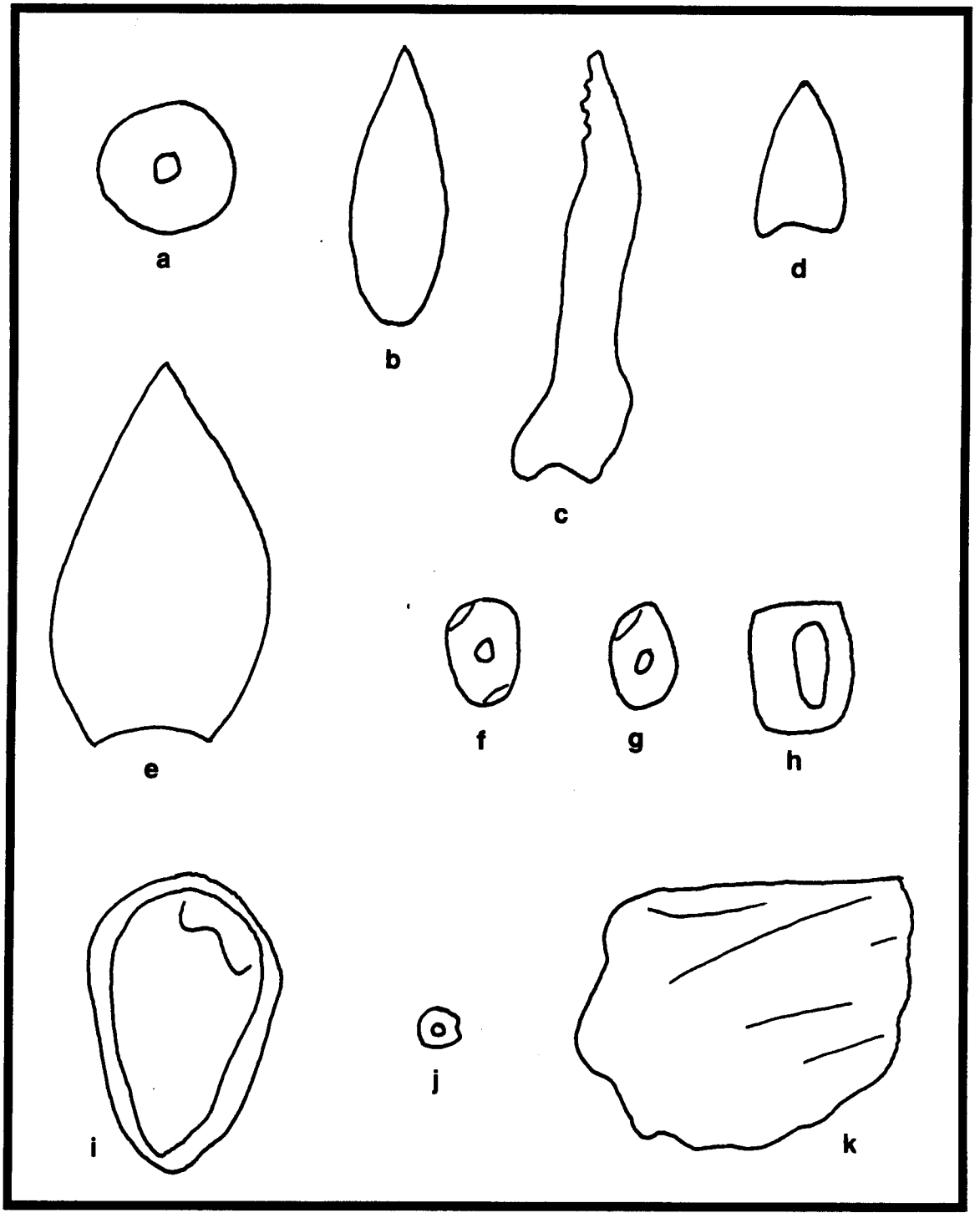

Fig. 3. Artifacts from the 1933 excavations at Pelican Island (CA-KER-33): a) pottery bead; b) Cottonwood Triangular point; c) modified bone; d) Cottonwood Triangular point; e) "steatite reel-like artifact;" f) *Olivella* bead; g) *Olivella* bead; h) unclassified shell "bead;" i) "steatite reel-like artifact;" j) black steatite bead; k) "knife" (no scale).

In Location No. 5, we found no artifacts, but took samples of the strata to a depth of 4'3". (The indications of depth in Table 3 are not indicative of the total depth of the excavations, but the depth to which we took definite samples of the soil.) However, about one foot to the west of this excavation we did find another of the reel-like objects (Fig. 3i **[again, the drawing is confusing]**) previously found in Location No. 3. This one, like that found previously, was made of steatite, but was not so symmetrical, nor as perfect. This artifact was not more than two inches below the surface, and had probably been buried by the shuffling of feet over this spot in a search for beads. In this immediate vicinity we found a number of small shell beads. These were mostly white in color, although some of them were almost black, and yet others were pink in color; depending upon the shell from which they were made. We also found several black steatite beads. These were, for the most part, somewhat larger and thicker than were the shell beads that we found. The average size of most of the shell beads that we found is shown in Figure 3j. The absence of trader **[glass]** beads on Pelican Island is noticeable. I found no mention in any of the references on this subject, confirming the recovery of any trader **[glass]** beads here.

Location No. 6 was, I believe, our most productive excavation. Here we unearthed numerous bits of steatite. At a depth of six inches we unearthed a perfect flint knife (Fig. 3k). The blade of this implement was very smooth, and polished by long use. It was exceptionally sharp, and well-made. The color of the blade was of red-brown and gray combination, while the other surface was of a more uniform red-brown color. It might be well to mention that on the surface of this location we unearthed an arrowhead (Fig. 4a) that was covered over by debris that was left when high water receded. This arrowhead was of the "sharp-pointed" type, but the point was slightly broken **[this specimen appears to be a Rose Spring series point, dating, perhaps, between 1,500 and 1,000 years old]**.

Another find that we made on the surface, about four feet southeast of Location No. 4, was a flint blade, resembling that in Figure 4b. This might have been used either as a knife, or as a saw. This was a perfect specimen, and was of mottled white-light brown, red-brown color pattern. The "handle" of this blade is of smooth, perfect workmanship, and is a perfect fit for the hand. This location is at the very "lake edge," and had probably been preserved by the array of cockleburs and tule by this spot.

Location No. 7 is but a few feet due west of No. 6. Here we unearthed pieces of steatite vessels, at a depth of six inches. Due to the nature of the soil these were rather poorly preserved. At a depth of one foot we unearthed skeletal fragments. Most of these were badly decomposed; however, we were able to recover one piece of jaw bone (Fig. 4c **[apparently a mandible fragment]**). The teeth in this were rather well-preserved, and in such a condition that we estimated the Indian buried here to have probably not reached an age greater than 30 years.

At this same spot, at a depth of about eight inches, we unearthed an arrowhead (Fig. 4d; **[perhaps a Cottonwood Triangular lanceolate type dating to within the last 1,000 years]**), that, we determined, might have been buried with the previously mentioned skeletal remains. This was of the blunt pointed type. The shoulder was sharp. The color of this arrowhead was black-brown, and it was made of flint. About 20 feet due north of Location No. 7, we found a little pestle (Fig. 4e). This bore signs of having been used to grind light substances, probably medicines or paint. The unusual element entering into a consideration of this artifact is that it is of what appears to be a partially baked clay, and is constructed in layers, one upon the other. This material has softened to some extent, due to weathering, and at one place the outside layer has dropped off, revealing the construction of this remarkable little pestle. **[No pestles of clay were noted in the region by Gifford and Schenck (1926), perhaps this piece, if ceramic, is a pipe.]**

At this same location **[No. 7]** we also recovered three tiny pestle-shaped artifacts. All of these were but partially complete and all of them were of different material: one (Fig. 4f) was of what appeared to be bone, one (Fig. 4g) of steatite, and the third (Fig. 4h) of clay **[see note above]**. None of these, we concluded could have been accidental, so they were probably used by the Indians for some purpose. Maybe the Indian children used them to play with. At this same location we also found an egg-shaped piece of clay (Fig. 4i), that we also concluded was too perfect, and too well preserved to have been formed "accidentally."

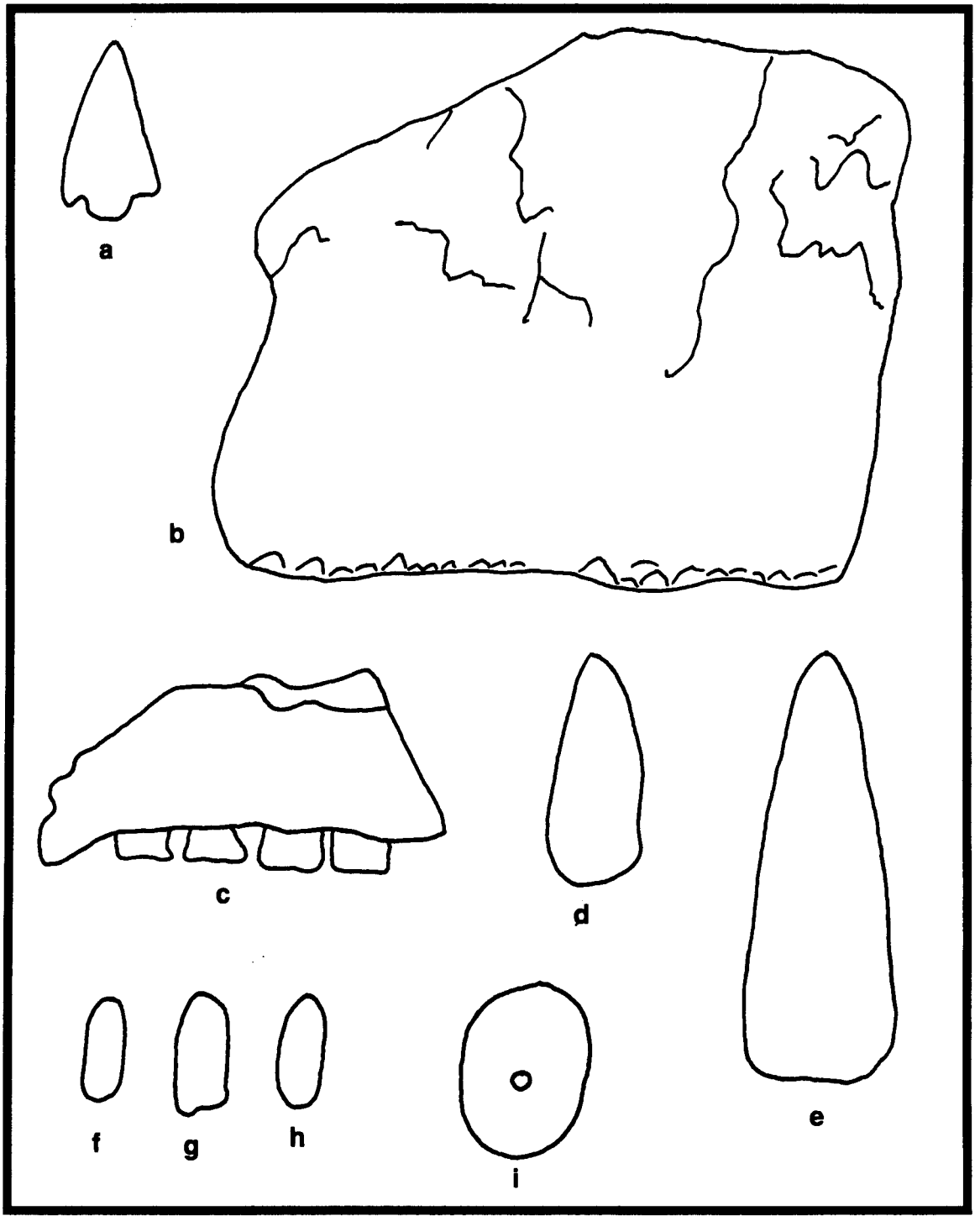

Fig. 4. Artifacts from the 1933 excavations at Pelican Island (CA-KER-33): a) Rose Spring series point; b) large "knife" or biface; c) human jaw fragment; d) point, perhaps a Cottonwood Triangular; e) ceramic "pestle;" f) small bone artifact; g) small steatite artifact; h) small ceramic artifact; i) egg-shaped ceramic artifact (no scale).

Location No. 8 was of special interest, for the manner in which the strata were laid above what appeared to have been an excavation made by Indians **[appears to have been a hearth or roasting pit]**, or invaders of Pelican Island long before it had been built up to the present level. In this hole the structure was regular until we reached a depth of 19 inches. From this level, the strata cease to conform, showing that a hole about three feet in diameter had been made (Fig. 5). An excavation of this disturbed stratum revealed ash, burnt shell fragments, and pieces of charcoal at a depth of three feet. This, we agreed was an indication that a fire had been built in the bottom of this hole. Evidently, in filling this hole full-sized shells were first scraped into it. These were followed by broken shell fragments and sand, as shown in Figure 5. Due to the manner in which this penetrated the regular stratification of the sand and shell, and was then covered over to a depth of 19 inches by a stratum that conformed with that elsewhere about this location, we concluded that this was clearly indicative of habitation, that was followed by the absence of the Indians for some time, because on other parts of Pelican Island artifacts were to be found generally within the upper 14 inches, leaving thereby at least five inches of material covering the hole, probably as the result of flood waters (Luitjens 1933:15).

At Location No. 9 we made an excavation. This was in the from of a trench three feet deep, two feet wide, and 10 feet long. At the western end of this excavation, at a depth of about eight inches, we found fragments of steatite vessels and charcoal, indicating that here had once been a camp site. About 30 feet south east of this location, we found an arrowhead (Fig. 6a) **[this may be a knife or biface rather than a projectile point]**. This was of the general type of "blunt" pointed arrowheads, but was sharp, and much larger than the average arrow used to cripple, and not to kill an enemy, or game.

In Location No. 10 we found no indication, below the surface, of habitation, although we dug to a depth of more than four feet. However, 12 feet due south of the above mentioned location, we recovered an arrowhead (Fig. 6b). This arrowhead was blacked, and of fine workmanship. It had been broken near the shoulder **[apparently the base was missing and it cannot be classified]**, but even so it was much larger than most of the arrowheads previously recovered, and was definitely of the "sharp-pointed" type. Near where we found two others. These were somewhat shorter to length than the one previously recovered. The first (Fig. 6c) was very similar to it, but the second (Fig. 6d) was of a type used mostly by "mountain tribes," in the northern part of California **[this specimen does resemble a Northern Side-notched point]**. At this same spot, within two feet of where these other arrowheads were found, we picked up the fragments of what must have been a beautiful large arrowhead (Fig. 6e) **[this appears to be an Elko series point (Gypsum Cave type ?), dating between 4,000 and 1,500 years ago]**. This was of yellow flint, striped with yellow-brown. Had it been complete and unbroken it would have been [as fine as] any of the specimens we found on Pelican Island.

Location No. 11 was very similar to No. 10. We found no definite artifacts below the surface, so I will use this as a reference point from which to locate artifacts found on the surface of Pelican Island. Fifteen feet due east of this location, we found several more fragments of arrowheads. These were of both blunt and sharp-pointed types and were all found on the surface. As shown, one can readily see that in this group are represented four definite methods in making arrowheads. The first (Fig. 6f) represents the round shoulder, blunt-pointed type and is of black obsidian **[this may be a biface or knife rather than a projectile point]**. The second (Fig. 6g **[perhaps a Rose Spring series type]**), also obsidian, represents a type of arrowhead used to kill small game and birds. This type is chiefly found among Indians inhabiting mountainous regions, as are the third (Fig. 6h; yellow flint **[a Cottonwood Triangular type]**) and fourth (Fig. 6i; pink-colored flint **[an "Elko-looking" form]**) types.

About midway between locations 8 and 10, we found several other fragmentary arrowheads. These were, like the above, of varying type. There were nine of these fragmentary arrowheads found, that I have not considered specifically. These were, for the most part, found on the western, and southwestern portion of the Island. The fact that most of these arrowheads were found in the same region, we decided, was due to the fact that most people enjoy hunting for beads in the soft shell and sand fragments on the eastern portion of the Island, rather than defy the cockleburs and weeds in this location in an attempt to find arrowheads.

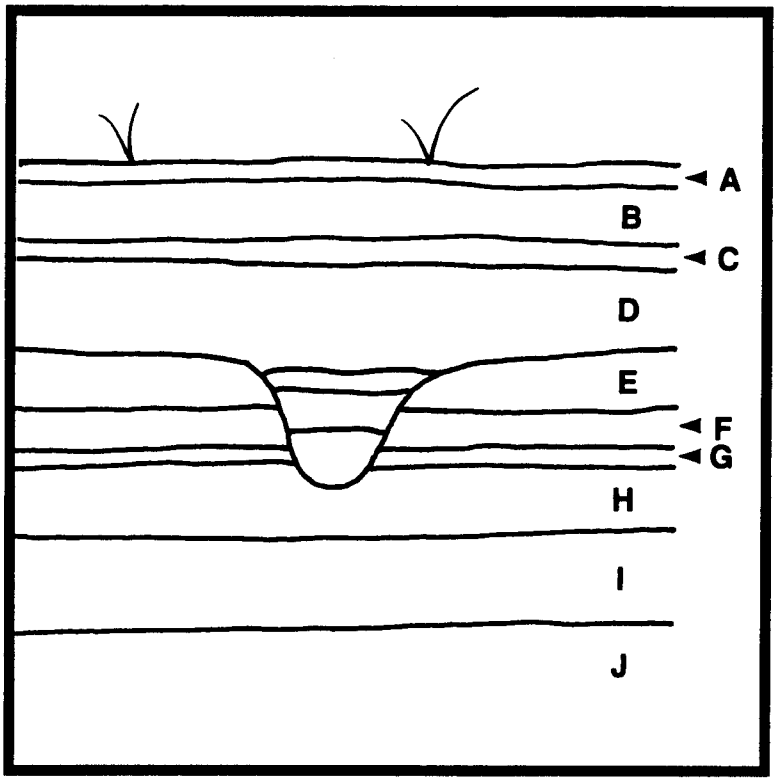

Fig. 5. Soil profile (not to scale) of the east wall of excavation pit No. 8 showing "hearth" feature, CA-KER-33 (compare to soil descriptions in Table 3).

About a year ago **[in 1932]** we found a fragment of jaw bone approximately mid-way between locations 5 and 10. This was at a depth of about eight inches; and was but one more fragment in the story of the [Indians] who once lived here. In this same portion of the island we found many fragments of steatite vessels. In fact, we recovered about 100 pounds of these fragments from the surface of the Island. Among these were many pieces that had been drilled. Most noticeable of these was one found near Location No. 4. This sherd (Fig. 6j), in addition to having two drilled holes in it, had a groove around the unbroken side, that would possibly indicate that this had once been used for the same purpose as had the reel-like pieces of steatite previously considered.

Between locations 3 and 4, at a depth of about six inches, we unearthed a piece of abalone shell **[illustrated in the original report but omitted here]**. We could not determine whether this had been left here by someone who had visited the Island, or by Indians, who had carried it from the coast. If this latter was true, the remainder of this shell was probably utilized in the manufacture of beads, pendants, or other articles of adornment. It was very evident, due to the large number of steatite sherd found on the Island, that steatite was used very extensively as a material of the culture of these Indians.

OTHER SITES

Having given a rather complete consideration to our findings on Pelican Island, I will next review, and add to my previous consideration of other locations definitely visited while I was gathering data for this paper.

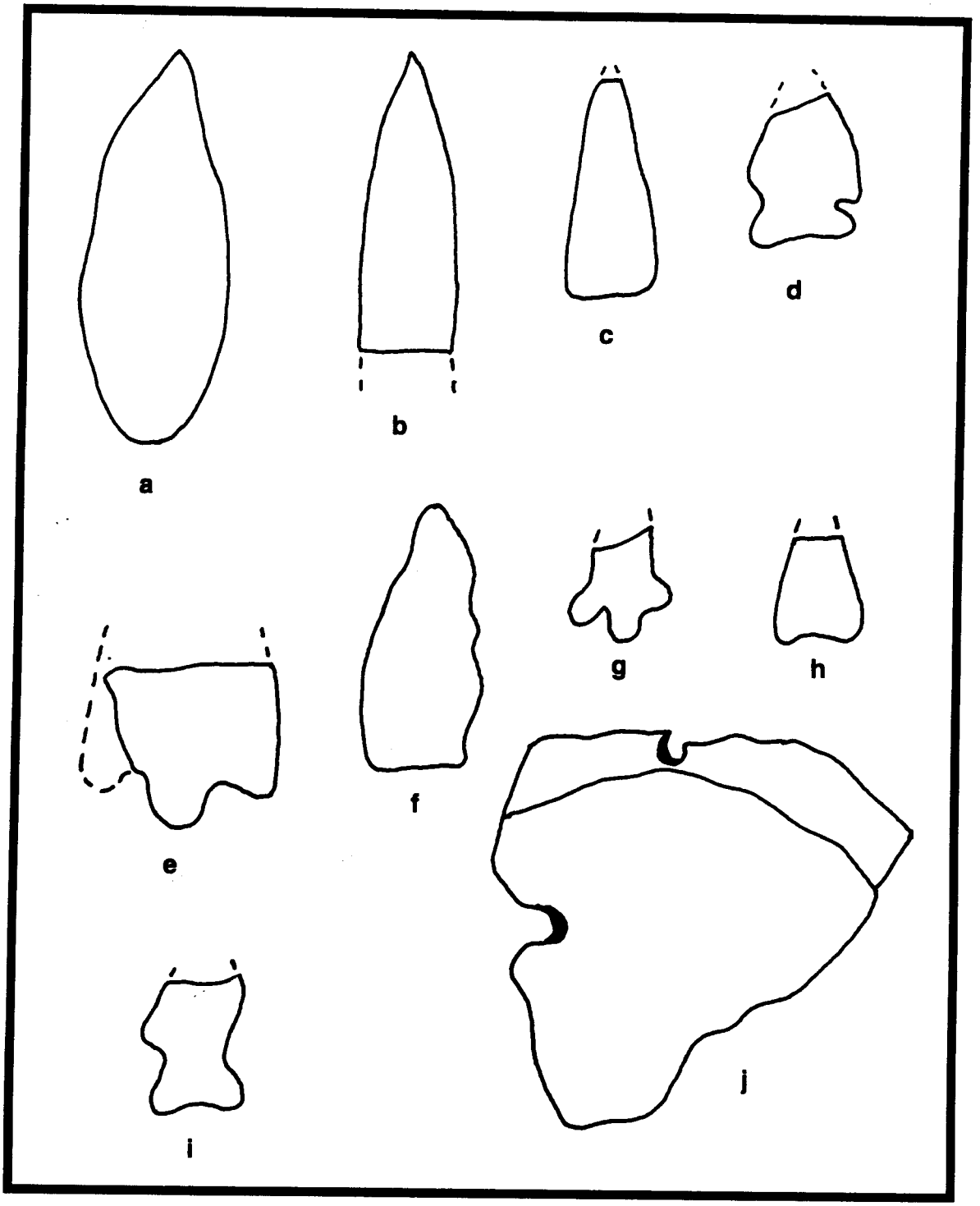

Fig. 6. Artifacts from the 1933 excavations at Pelican Island (CA-KER-33): a) biface; b) unclassified point; c) unclassified point; d) Northern Side-notched (?) point; e) Elko series point; f) biface; g) Rose Spring series point; h) Cottonwood Triangular point; i) "Elko" series point; j) steatite vessel fragment (no scale).

CAMP SITE

Having previously mentioned the abundance of artifacts that we noted to what I have previously referred to as a large camp site **[not recorded]**, due north of Pelican Island, I will now detail some of our findings. As previously stated, we were astonished at the great array of steatite sherds, pieces of flint, and even of artifacts that gave definite indications of having been drilled, or used by the Indians.

Artifacts Found in the Eastern Portion of the Site

My first discovery of any special significance, after we had noted that we were trodding the ground where the [Indians] had previously lived, were two arrowheads. These were both perfect specimens. The first (Fig. 7a **[a Cottonwood Triangular concave-base type]**) is of a dark red-brown flint; very finely-tapered and having exceedingly fine notches along its edges. The second (Fig. 7b **[a Cottonwood Triangular lanceolate form]**) is of what appears to be black slate, and is equally as well-built, in shape, as the first, but the notches along its edges are not so fine. This is not a "blunt pointed" arrowhead, despite its general likeness in appearance.

Within about 15 feet of where we found these arrowheads, we found a reel-like object of steatite (Fig. 7c). This was the first of this type that we had found, so we renewed our efforts in an attempt to discover other artifacts that would give a definite indication of the culture of the *Tulamni*. We inspected each piece of steatite for definite indications of having been used by the Indians. Almost all of them give indications of having, at one time been utilized for something by these "campers." Again we found arrowheads, this time two broken ones. The first (Fig. 7d **[this appears to be a Desert Side-notched form]**) was of black obsidian, and was of workmanship equal to those previously mentioned. Traces of what appeared to have been pitch, or some such substance, still adhered, in places to the underside of this remarkable specimen where it lay on the ground.

The other arrowhead (Fig. 7e **[a Cottonwood Triangular lanceolate type]**) was even more fragmentary, and has of the "blunt pointed" type. This arrowhead was nearly white, but gave indications of having been bleached by its long exposure to the elements. About this same locality we found several chips of arrowheads, but not giving indications that would more definitely enable us to associate these Indians with those on Pelican Island. However, to the southwest-ward, we discovered, and recovered two of the shuttle-like pieces. The first (Fig. 7f) was of soft steatite, and the second (Fig. 7g) was of a somewhat harder similar substance. In the latter example there was indications of a drill having been used, and also grooves. Not far from where we found these, but slightly to the west, we found what appeared to be a very large "bead," or ornament of some kind (Fig. 7h). However, this might well have been used for some purpose by the Indian, with which we do not associate its shape. This was of steatite. It was about 3/15-in. in thickness.

Near this same place, we recovered a piece of steatite that had been nicked all over (Fig. 7i), along the edges. This was apparently done by using this piece of steatite as an agent with which to wear down small strings of buckskin, or possibly other cord used by these Indians. Another piece of steatite (Fig. 7j), was perfectly smooth on its sides. This appeared as if it had been the center of a piece of steatite of uniform thickness (5/16-in.), and had been removed by being carefully sawed or cut. In general, of the things previously mentioned, it is difficult for an estimate to be placed on their value as indication of a previous culture, because we know nothing of their use, we have nothing as a basis upon which to draw a comparison. The above are but a few of the many artifacts found in the eastern portion of the site. Space and repetition, I feel would be unjustified, and intolerable to the reader of this thesis, should I consider all of the interesting artifacts recovered in this section.

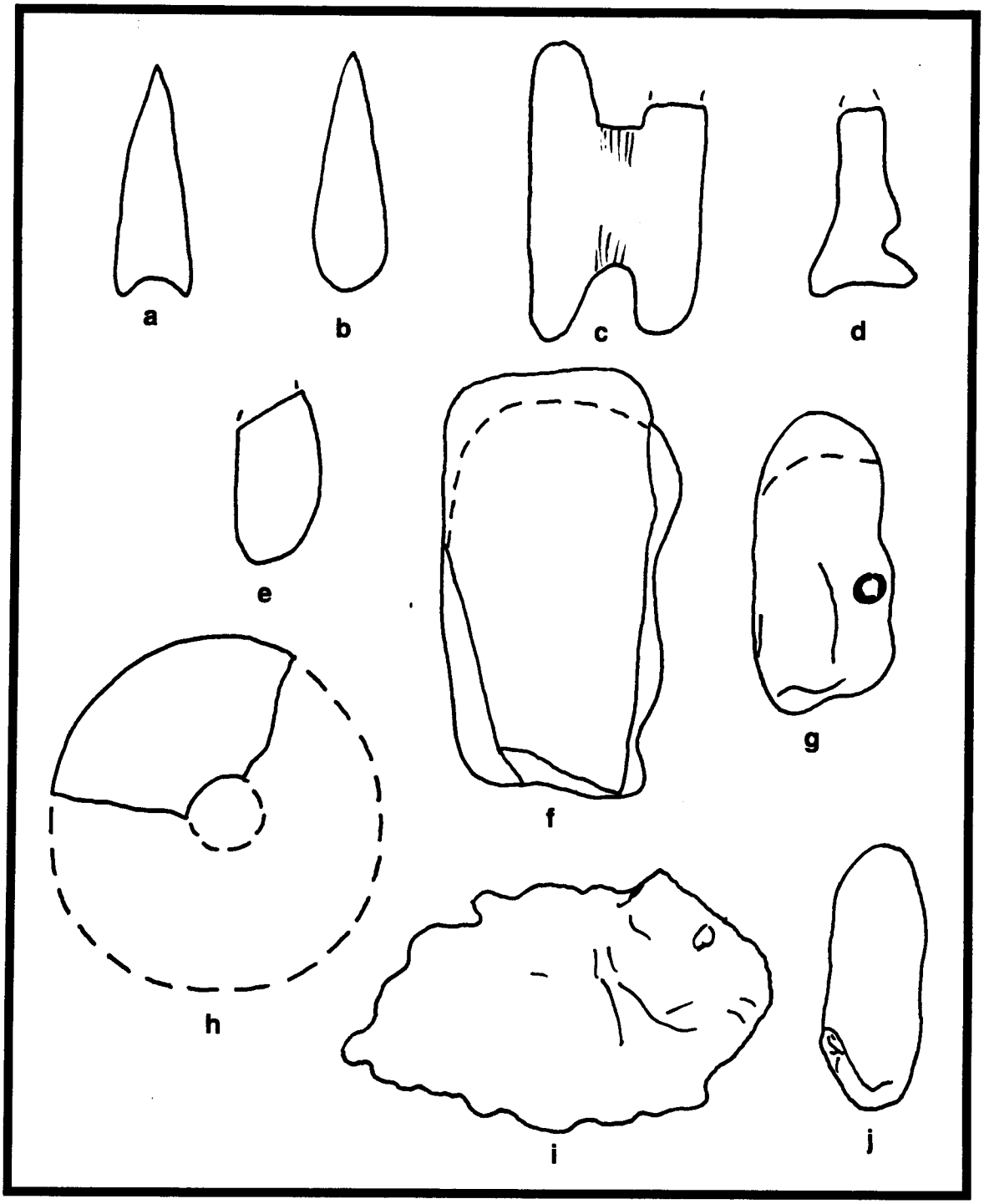

Fig. 7. Artifacts from the eastern portion of the unrecorded camp site west of CA-KER-59: a) Cottonwood Triangular point; b) Cottonwood Triangular points; c) "reel-like" artifact; d) Desert side-notched point; e) Cottonwood Triangular point; f) steatite artifact; g) steatite artifact; h) steatite ornament; i) steatite artifact; j) steatite artifact (no scale).

Artifacts Found in the Western Portion of the Site

In the western portion of the "camp site," we found much the same type of artifacts previously discovered in eastern portion. The preceding arrowheads found, and considered, were much the same as several found in the west (Fig. 8a and 8b **[both apparently Cottonwood Triangular forms]**). However, we did find some red paint pigment, and some knives of flint. These were exceedingly sharp, and indicated, by their burnished cutting surfaces, that they had received much use. These (Fig. 8c and 8d) are of the same material, and general construction of cutting edge, as that found on Pelican Island. We also found what I believe to be a "charmstone" (Fig. 8e). The number three seemed to have some religious, or mystic meaning to the Indians of this locality, for they buried their dead, three in a place, back to back. The "charmstone" has three sides, and gives indications of having been used a great deal. It is of a steatite-like material, and, I feel, is very significant.

About 20 feet to the westward of where we uncovered the skeletal remains (in the mound discovered by Mr. Luitjens and myself), we found a clay bead. This was of the identical type found at Location No. 1 on Pelican Island, but was slightly smaller, and somewhat the worse for weathering. In this same location we found several perfect, and several imperfect arrowheads, and numerous flint knives, and steatite sherds. One knife (Fig. 8f) was of black flint, and was exceedingly sharp, and the edge was burnished from long use. We also found several fragments of what might have been pottery, but it was in such a state of decomposition that it was unrecognizable, definitely, as pottery.

BURIAL MOUNDS

Aside from the skeletal remains found on Pelican Island in Location No. 7; we also visited burial mounds to the north **[Estep and associates conducted work at one site recorded by Gifford and Schenck (their site No. 32, now CA-KER-59) and discovered and investigated several other sites nearby. None of the other sites are formally recorded]**.

[CA-KER-59]

In mound U.C. No. 32 **[CA-KER-59]**, we found many skeletal remains that were mostly in a bad state of decay. Despite the extreme hardness of the soil, it was honeycombed in all directions by decaying plant roots that left the soil porus, and thereby permitting water, which ordinarily could not penetrate this soil, to expedite the decay of the remains.

Burials in this mound were of two types: those made with very little regard for the person buried; where the body was literally thrown into a shallow hole and covered over; and those where three persons were buried "back to back," with the arms and legs drawn up against the chest.

In this latter type of burial, we concluded, the second and third burials were either simultaneous with the first, or, at least to the memory of those attending the first and second, so that they could be made in direct relationship with the first one. All skeletal remains had, apparently, been left without adornment, of beads or other possessions of the deceased, for we found but one bead with the twelve skeletal remains uncovered. This bead (Fig. 8g **[an unidentified form]**) was somewhat larger than those generally found on Pelican Island, and it was polished smooth, had a slight indication of a rather brownish yellow stripe, and was yellow with age. This bead had more of the appearance of ivory, than of shell. Not far from this mound, we found three other beads. One of these was of the "half shell" type **[most likely *Olivella biplicata* Split-Punched Class D]**, another of the small type found on Pelican Island, and the third (Fig. 8h), an unusual **[and unidentified]** type, due to its flat surface, roundness (where it was not broken), and due to the regularity of the hole through its center.

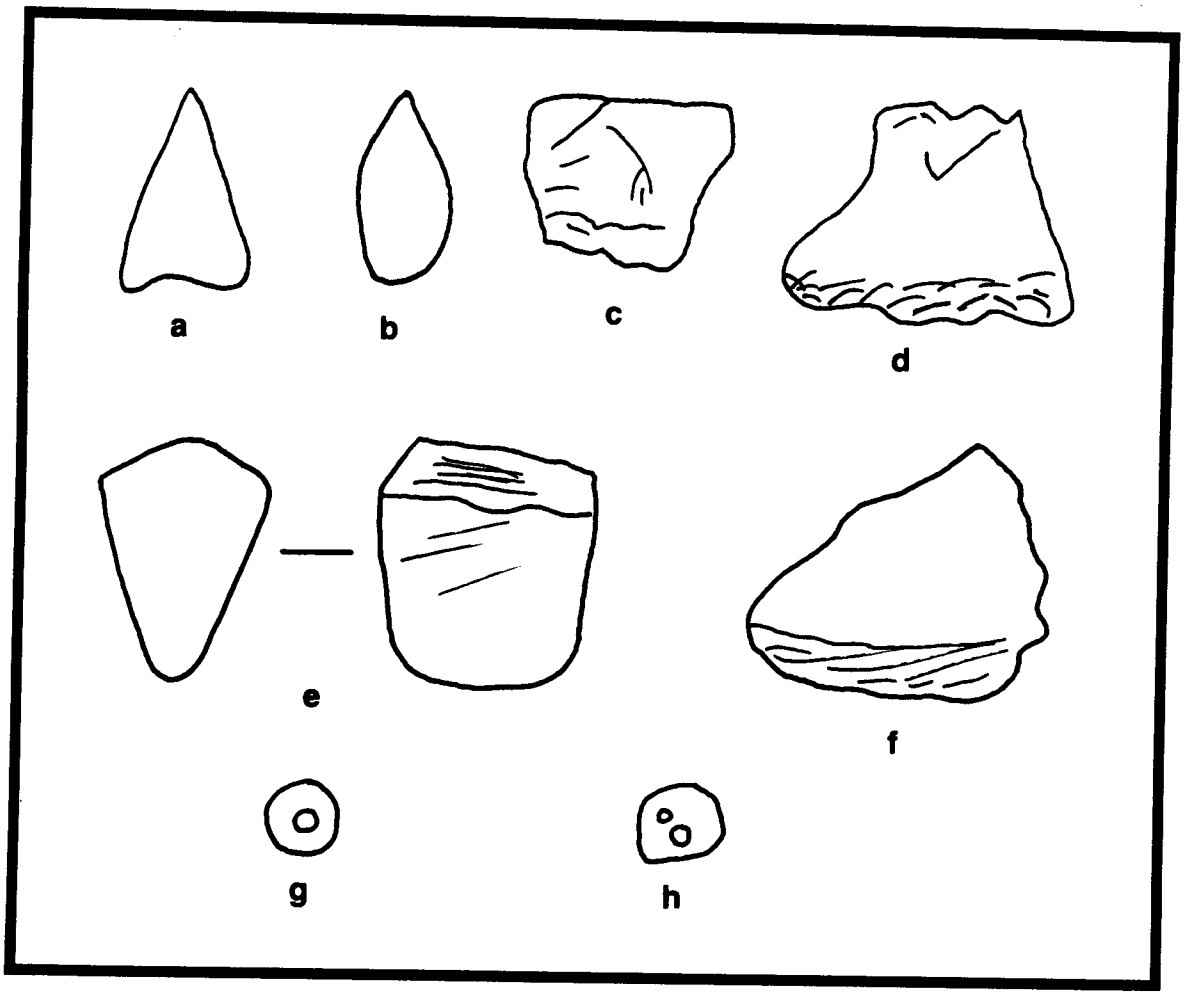

Fig. 8. Artifacts from the western portion of the unrecorded camp site west of CA-KER-59: a) Cottonwood Triangular point; b) Cottonwood Triangular points; c) "knife;" d) "knife;" e) "charmstone" fragment; f) "knife;" g) unclassified shell bead; h) unclassified shell bead (no scale).

[UNRECORDED SITE]

This mound, discovered by Mr. Alvin Luitjens and myself, was in decided contrast with site U.C. No. 32 **[CA-KER-59]**, because the soil here was soft, sandy loam, whereas that at the other mound was hard black clay. On this mound there grew several bushes, whereas the other mound had been barren of all such vegetation. The six skeletal remains uncovered on this mound, like those in site U.C. No. 32 **[CA-KER-59]**, had not been adorned in beads for burial. However, there was an indication that the bodies had been wrapped in tule before burial.

In direct contrast with the burials in site U.C. No. 32 **[CA-KER-59]**, those in this mound were not buried in a sitting position, or "thrown" into theIr final resting places; but had been buried lying on their backs, shoulders slightly elevated, and heads to the south. In this mound we were interested to find that the dead had been buried in "tiers," one above the other. All of these burials were much the same from top to bottom. All of the skeletal remains were in such a state of decay that when the supporting surface was removed the bone immediately crumbled. We took several pictures of one of the skeletal remains in this location, but these did not do justice to the subjects.

OTHER MOUNDS

I have previously mentioned other mounds in which remains were uncovered, thus establishing these mounds as burial places. Since these are not in the Buena Vista Lake region, and are out of the definitely established territory of the *Tulamni*, I do not feel that I would be justified in giving them further consideration at this time. However, we noted that these remains, especially in regard to skeleton size, and shape were, as near as we could ascertain, very similar to those uncovered in the mounds previously mentioned.

CONCLUSION

The artifacts found to the north of Pelican Island; beads, arrowheads, paint, knives, and clay beads; were similar to those that we found on Pelican Island. Then too, the skeleton size and shapes exposed in other sites we examined are much the same as those exposed at the site north of Pelican Island. Therefore we can, I believe, feel justified in drawing the conclusion that there was a definite relationship existing between the Indians who lived at the campsite north of Pelican Island and those who lived on Pelican Island. Moreover, from the artifacts recovered; clay beads, that might be classed as pottery, pottery that gave definite indications of having been fired, and was thinner and of a more polished finish than that from another state (that is in the Kern County High School collection); well finished articles of steatite, and flint; I felt that I am justified in concluding that the Indians of Pelican Island represent a comparatively high degree of civilization.

[The excavations undertaken at Pelican Island provide some interesting data. No glass beads were recovered. Most of the temporally sensitive artifacts (points and beads) date to within the last 1,000 years or so, although there are several points (Rosė Spring and Elko series) that may indicate some greater time depth. Glass beads, and other items of European manufacture, are known at many sites in the southern valley, including nearby sites (Wedel 1941; Walker 1947) and their absence at Pelican Island would seem to indicate that the site was not occupied, for whatever reason, during the Protohistoric. The large number of steatite vessel fragments reported for the site and adjacent areas may suggest that the processing (e.g., cooking) of some resource was an important activity there. Such resources might include fish or other marsh products. The discovery of a "hearth" in the site might supports such activities.

PICTURES

[None of the photographs included in the original report are reproducible and so are not included herein. However, the captions are retained as some information is conveyed.]

The picture on the title page of this thesis is that of a skeleton excavated, and removed from site U.C. No. 32 **[CA-KER-59]**. With this skeleton are the leg bones from the same skeletal remains. Invariably, it seemed, when we were on the verge of removing a skeleton intact, some part of it would crumble, making it impossible in this location, or at the mound to the west to get a picture of a complete skeleton. This skeleton was similar in shape to that excavated in the mound **[possibly]** located north of Kern Lake, although smaller in size than some of the skeletons found in this mound. Following is a side view of the same skeleton.

In considering artifacts found on Pelican Island, I have previously spoken of a "knife, or saw" that we recovered near Location No. 6. This blade, that I have previously illustrated **[Fig. 4b]**, was on of the finest specimens of the artifacts of the [Indians] who lived on Pelican Island, that we recovered.

The following photographs, although badly shadowed, may convey some additional facts concerning these interesting artifacts. Neither of these pictures do justice to these artifacts.

The following pictures are of some of the artifacts collected on Pelican Island by Mr. William Van Ewert. In the back row, are represented three pieces of steatite. The one to the right is definitely curved, and was,

undoubtedly used by the Indians. When it was part of what was then a rather large vessel of some kind, probably used in cooking. To the left of this is a steatite sherd that had been drilled by the Indians, and next to it is another piece of steatite that also had been, at one time a piece of a vessel of some kind.

Next, in front of the large pieces of steatite, a string of beads--one of them of pottery. Ahead of these are arrowheads of varying sizes and shapes. On the front of the board are three more sherds of steatite bearing traces of having been used by the former inhabitants of Pelican Island.

The following picture is of some of the beads, knives, and arrowheads recovered while gathering data for this thesis. This picture is so badly blurred that identification of the individual artifacts is impossible. I hope, to soon be able to replace this picture with one of more definite value. However, I am enclosing this picture with the belief that what escapes my observation, might yet prove of value to others.

At the rear of this picture is what I believe to be a knife, found on Pelican Island. In the next two rows are arrowheads. Next is a string of beads found on Pelican Island. This is followed by beads found at the camp site in sections 14 and 15, and in section 3; T32, R.27. Having previously considered the types of beads and where found, I do not feel that further reference to this picture is necessary.

In my consideration of the various excavations made on Pelican Island, I gave a good deal of space to that made at Location No. 8, due to its possible significance. I did not mention, however, that in this excavation we found the jaw bone of probably what had been a dog, or coyote, and beside it a vertebra of some much larger animal; larger than man. The following photograph will, I believe, give an idea of the appearance of these aboriginal remains.

APPENDIX 1

The following is a statement of fact made by Mr. Kenneth Leek, for Harold Estep, Bakersfield, California, March 14, 1933.

On March 14th, 1933, I accompanied Gerald and Harold Estep, and directed them to a burial ground with that I have been familiar since 1927 **[CA-KER-59 ?]**. Here we unearthed several skeletal remains. All were buried three skeletons in a place, back to back, and in a sitting position, out with the legs and arms drawn up closely to the chest. In the SE extremity of this mound, was clearly defined the imprint of an extremely large skull that was removed from this mound by Clyde Cierley the day previous.

We also went to a place where I had previously been, in what appears on a map to be **[located near Kern Lake]**. We picked up nearly a foot of shell, and trader **[glass]** beads. To the SSE of where we picked up the beads, we unearthed several skeletal remains. All of these remains were fragmentary, and very badly decayed due to the action of the water, for this burial ground is now being eroded by the action of water that has cut a narrow course beside it. Near the Buena Vista Lake Canal we picked up several fragments of Indian pottery. We found more beads, and several arrowheads, some fragmentary, some perfect, at another shell mound with which I also have been familiar since 1927 **[site location omitted]**.

The following is a statement of fact made by Mr. Kenneth Leek, for Harold Estep, Bakersfield, California, April 2, 1933.

On April 1, 1933 I accompanied Messrs. Gerald and Harold Estep to Pelican Island. We made an intensive search, first on the Island, and then of the surrounding country, in an attempt to definitely establish Pelican Island as a former habitat of the *Tulamni*, and to gather artifacts. We believed that the artifacts would possibly give an indication of the cultural achievements of these people. We found a number of beads on the surface of the Island, and made a number of excavations through the shell, to the conforming earth below. In several of these excavations

we found artifacts, and charcoal, indicating habitation. Artifacts were found, for the most part within about one foot from the surface. I prepared a map, that is to be incorporated in the report made by Mr. Harold Estep **[this paper]** concerning our findings on, and about Pelican Island. On this map are listed locations where excavations were made. At Location No. 7, Mr. H. Estep unearthed the jaw bone, and some other skeletal remains of an Indian, and fragmentary artifacts.

At Location No. 6, Mr. Estep unearthed considerable artifacts, and about five feet from this excavation, he recovered an Indian knife, or yellow-brown flint. The fact that this had not previously been recovered is probably due to concealment afforded it by a profuse growth of tule, and cocklebur about where it lay almost hidden from view.

We spent the night on Pelican Island, and the following morning accompanied Mr. Alvin Luitjens to what was reported to be site U.C. No. 32 **[CA-KER-59]**. This we found without difficulty. Excavations made through the exceedingly-hard formation of the mound revealed a number of skeletal remains. These remains were in a rather poor state of preservation. (About half-way between locations No. 2 and 5, I unearthed one tooth of an Indian, about six inches below the surface.)

The absence of beads was noticeable on and about the immediate vicinity of this mound. However, running somewhat to the eastward, and then running to the westward in what appeared to be an oval shape, we found what appeared to be a camp site. All about the ground were fragmentary pieces of steatite vessels, flint arrowheads, and other artifacts. Although we did not measure the exact size of the campsite, we estimated its size to be about one mile from east to west, and one-half mile from north to south boundaries.

While about one mile from site U.C. No. 32 **[CA-KER-59]**, we found what appeared to be another burial mound. Excavations at the eastern and of this mound revealed nothing. However, we did find several fragments of flint arrowheads, and of steatite artifacts. We returned to Bakersfield, where we recorded the results of our stay on, and in the vicinity of Pelican Island.

(Since the above was written, I understand that this mound has definitely been established as a burial mound. K.L.)

APPENDIX 2

Questions asked of Mr. F. F. Latta.

Q--Are there indications of a really ancient Indian civilization in the region of Buena Vista Lake?
A--Not more than the ordinary Indians of California oldest on Los Banos Creek, California.

Q--What are the most ancient indications of Indian culture in this locality?
A--Authorities disagree.

Q--About how old, in years?
A--Practically none less than 100 yrs of age, certainly not less than 75 yrs. Nothing to more than 300 yrs of age.

Q--Would you say that the *Tulamni* Indians indicate a higher degree of civilization than do other linguistic groups of the Yokuts?
A--Good type of Yokuts tribe.

Q--Do you believe that there is an indication of relationship existing between the Yokuts and the "mound builders."
A--None in regard to indications.

Signed, F. F. Latta, May 15, 1933

ACKNOWLEDGEMENTS

In writing this thesis, had I depended entirely upon available material already in publication, I would have had little to write. However, with the whole-hearted cooperation of my friend and co-partner, Mr. Alvin Luitjens, the counsel and advice of Mr. William Van Ewert, and the untiring efforts of Mr. Kenneth Leek, and my brother, Mr. Gerald Estep, I feel that I have been fairly successful in the object of this paper; to give a better understanding of the Indians who lived on, and in the vicinity of Pelican Island long ago.

Harold Estep, Bakersfield, California, May, 1933

[I appreciate the enthusiasm and cooperation of Mr. Harold Estep, the Pheobe Hearst Museum of Anthropology, the Archaeological Research Facility at UC Berkeley, and M. Steven Shackley in making this information available. The Southern San Joaquin Valley Archaeological Information Center cooperated with access to their records and a draft of the annotated paper was reviewed by Gerrit L. Fenenga and Richard H. Osborne.]

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SLIDES, SLICK ROCKS, AND THE REDISCOVERY OF *CHEE TOW 'TIK NOW*

Mary Gorden, Lemon Cove
Gay Weinberger, Anthropology, Porterville College

Slides are an archaeological feature whose existence has been infrequently mentioned in the literature. Although slides are known at several Tulare County sites, their presence generally has not been included in the site records. The purpose of this paper is to identify and locate slides in Tulare County. In addition, slides were examined to determine their physical characteristics as well as their archaeological context.

Slides are characterized as polished tracks on sloping rock surfaces, whose function, as defined in this paper, is recreational. Slides are natural features, modified by human use (Meighan MS:1).

> The rocks selected for slides must be of the right slope, and some if not all may have been already somewhat smooth and polished by natural forces. Indeed, many may have been discovered by children at play who found them a good place to slide down the rock. Once utilized, however, the slide surfaces would become more smooth and slick as they were used.

Untanned deer hide with the hair side down would have been sat on by the children as a means of using the slide at a time when children wore no clothing (Bill Horst, personal communication 1992). In addition to animal skins, Meighan (MS:1) noted that basket fragments may have been used. These sorts of pads would have provided a speedier and more comfortable ride.

Known slides in Tulare County are clustered in the territory of the Gawia, Yokodo, and Koyete along the Sierra Nevada foothills. The Gawia occupied the area north of the Kaweah River to Auckland (Gayton 1948:55-56; Latta 1977:188). The Yokodo inhabited the area west and south of the Kaweah River from Lime Kiln Creek to Lindsay (Gayton 1948:58; Latta 1977:188-189, 319). Koyete territory encompassed the lower foothills near Porterville south to Fountain Springs (Gayton 1948:3, 4, 48; Latta 1977:5, 197). Not many Yokuts place names could be matched with the sites. *Chee tow 'tik Now* and *Halau* were the only names that could be identified with any certainty. It is likely that CA-Tul-313 is *Trawoiu* (Latta 1977:197).

> East of Porterville about four miles, and northeast of Alta Vista School (1924) is a large rocky hill, on the lower slopes of which once was located a granite quarry. Nearby a gulch leads to the level land below. On this gulch was located the Koyete Yokuts village of Trawoiu (Traw-oi-oo).

Table 1 gives information on 17 recreational slides which have been identified at twelve sites. Three additional sites contain slides of questionable identity. Weinberger (1981:5-6) observed that slides occur at large occupation sites in the foothills at low elevations. In addition, she indicated that all are situated in close proximity to bedrock mortars in areas where the use of the slide could be easily viewed by the women as they worked. These factors are present for the additional slides found in Tulare County, as well as those listed by Meighan (MS:1) and at Carneros Rocks (Kay Sanger, personal communication 1993).

Kern County Archaeological Society Journal 4:31-40 (1993).

Table 1

SLIDES AND SLICK ROCKS IN TULARE COUNTY

SITE	ELEV.	WATER[1]	NO. SL	LENGTH (m.)	PE[2]	CUP[3]	GR[4]	PI[5]	MF[6]	OC[7]	AR[8]	PLACE NAME, COMMENTS	TRIBE
Tul-17	400	sp	1	2.79	yes	200+	yes	yes	yes	yes	yes	historic initials	Gawia
Tul-31	500	sp	1	5.35	yes	59+	yes	yes	yes	yes	--	--	Gawia
SM1[9]	550	sp	1	2.95	no	50+	yes	yes	yes	yes	yes	--	Gawia
Tul-26	600	sp	1	0.81	yes	500+	yes	yes	yes	yes	yes	weathered	Yokodo
Tul-803	700	cr	1	3.00+	no	50+	no	yes	yes	yes	no	--	Yokodo
Tul-804	700	cr	1	5.00+	no	3	no	yes	yes	yes	no	--	Yokodo
K1[9]	1,000	sp	2	0.65+; 0.65+	no	50+		yes	yes	yes	yes	very short	Yokodo
Tul-313	580	ri	1	0.80+	no	216+	no	yes	yes	yes	yes	Trawoiu	Koyete
Tul-326	1,000	ri	1	1.50+	yes	49	yes	yes	yes	yes	--	--	Koyete
SD1[9]	700	ri	3	6.00+; 4.50+; 3.50+	no	1	no	no	yes	yes	--	SL. east to west	Koyete
Tul-32	755	sp	2	3.50+; 3.50+	no	300+	no	yes	yes	yes	--	Halau	Koyete
FS1[9]	630	cr	2	3.65; 2.20	no	8+	no	yes	yes	yes	yes	Chee tow 'tik Now, lichen	Koyete
A1[9]	1,510	cr	?	--	--	--	--	--	yes	yes	--	Slickrock Cyn.	Wuksache
Tul-4	900	ri	?	--	no	60+	no	no	yes	yes	no	Slick Rock, Pahdin	Yokodo, Wuchumne, Padwisha
L1[9]	650	sp	?	--	no	200+	no	yes	yes	yes	no	weathered rock	Yokodo
			?									slickened rock	

[1] sp = spring, cr = creek, ri = river; [2] petroglyphs; [3] cupules; [4] grooves; [5] pictographs; [6] milling features; [7] occupations site; [8] artifacts; [9] unrecorded site

Tulare County is not well-known archaeologically. Excavations done at Terminus Reservoir on the Kaweah River along the ethnographic boundary between the Wukchumni Yokuts and Potwisha Mono exposed protohistoric elements, as well as historic ones (Moratto 1984:330). The only published date available from these excavations is from Greasy Creek with the estimated appearance of pottery at circa A.D. 1300 (Pendergast and Meighan 1959). Based on projectile points found at CA-Tul-326, Ptomey (1990:7) concluded that the site could be dated between approximately 1,000 and 2,000 B.P., and due to the absence of contact artifacts, CA-Tul-326 probably was not inhabited into either the protohistoric or historic eras.

The slides at CA-Tul-326 (Fig. 1), SD1, and CA-Tul-313 are on the same hill within a mile or so from each other. The polish and amount of weathering that has occurred to each of these slides varies widely. Lichen covers the north facing hillside at SD1, which contains three to five slides. In this case both weathering and lichen obscure two of the tracks which, rather than being used as slides, may have been made by the countless people climbing up the bedrock to reach the top of the slides. The slides at SD1 and FS1 face northwest, meaning that they are not only more shaded but face into prevailing winter storms. The slides at CA-Tul-313 and CA-Tul-326 lie in more protected areas. While the slide at CA-Tul-26 is roughened by weathering, it is not enough to stop gravity from propelling one down the surface of the rock. Of course, the hardness or degree of decomposition of the granite would have a direct bearing on the time required for a slide to loose its slick surface through weathering. It would be helpful to know if more continuous use into recent times has contributed to a slide staying in good condition.

What characterizes a recreational slide? Physical characteristics include length, pitch, a smooth track, and location. In Tulare County slides are found on granite, a rock capable of achieving a high gloss. The slides at CA-Tul-17, CA-Tul-31, SM1, CA-Tul-313, CA-Tul-326, and SD1 are on bedrock. The remainder are on boulders. All of the identified slides have good views of the immediate area, and most have panoramic views of the surrounding countryside. Weathering is evident on slides at CA-Tul-17, CA-Tul-26, CA-Tul-32, and SD1, and appears in the form of lichen at SD1 and FS1 (Fig. 2). The historic inscription, "T. B. Newman 1886," has caused chipping to the surface of the slide at CA-Tul-17. Slides appear at large village sites near bedrock mortars, pictographs, and cupules. The slide at CA-Tul-26 is in direct association with bedrock mortars. The one at CA-Tul-313 is in direct association with bedrock mortars, pictographs, and cupules. Slides at SM1 and SD1 have a single cupule ground into their polished track. While the slide at CA-Tul-804 is on a separate boulder, it lies directly in front of a pictograph panel. One slide at FS1 (Fig. 3) has a feature in common with the one at CA-Tul-804 where a drop off of about 60 cm. occurs at the end of the slide. A drop off of this length would not have made a comfortable landing for a small child. However, erosion could have occurred at the base of these slides.

Several slick rocks have been listed in Table 1 as questionable because either their physical location has not been confirmed, or they differ in physical characteristics and ethnohistoric use from other slides described in this paper. In addition, the archaeological context of slick rocks may be another determining factor in the identification of a slide used for recreation or one slickened by nature or ritual use. Two slick rocks occur at L1 a large occupation site in Yokodo territory. A narrow streak is clearly visible on a long sloping surface. However, its surface is not highly polished. In this case a former slide may have become roughened by weathering, or the track may have been formed by water action. The slides at *Chee tow 'tik Now*, FS1, in Koyete territory are covered with lichen, indicating that weathering may obscure a slide in a relatively short time period. However, until more information is obtained, this track at L1 will remain enigmatic.

Several slickened areas differ in their archaeological context. At L1 one climbs over large boulders, to drop down into an enclosed rockshelter that contains pictographs. An exit may be made from the shelter by sliding down a slickened rock, and squeezing out at the foot of a large pictograph. That this exit was used by the Yokodo is confirmed by a pictograph on the ceiling of the slippery chute. This outlet was probably not used as an entrance because it is nearly impossible for even a small person to enter the rockshelter from this direction due to the narrow opening, and the slipperiness and incline of the chute. Similar examples to L1 occur elsewhere in California. In Riverside County a polished area forms the main entrance to a cavern that contains cupules (Dan McCarthy,

Fig. 1. A slide at CA-Tul-326: upper shows a "slider" for scale. Photographs by Gay Weinberger.

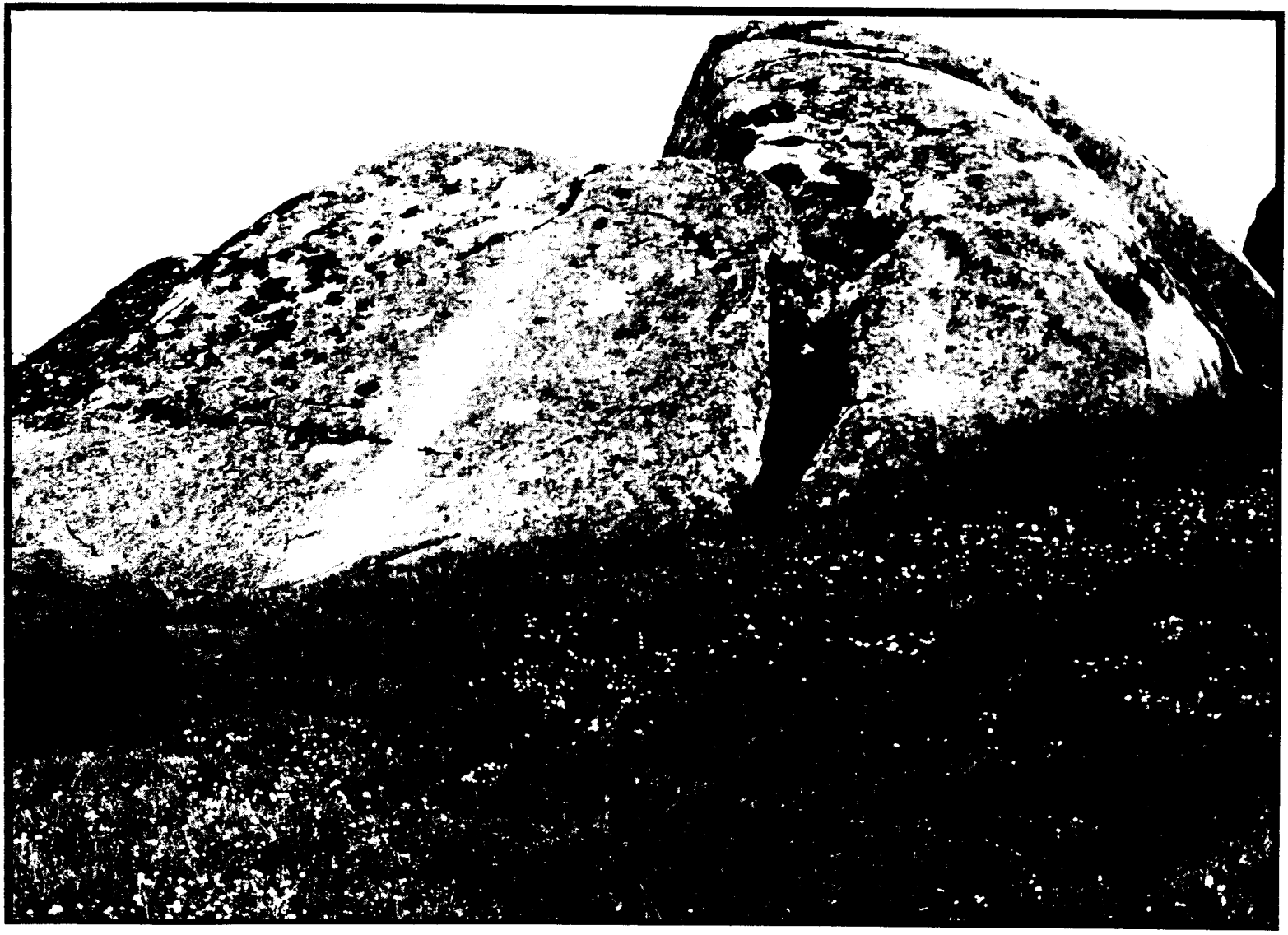

Fig. 2. FS1, *Chee tow 'tik Now*, the sliding rock. Photograph by Mary Gorden.

Fig. 3. Slides at Tul-32, Halau. Photograph by Juanita Delaney and Diana Baldrica Guy.

personal communication 1993). The example in Riverside does not appear as a narrow track as do the ones in Tulare County that McCarthy has seen. These two examples are in enclosed areas differentiating them from recreational slides which are located in wide open spaces. A third example, associated with Chemehuevi oral tradition, occurs in a rockshelter containing numerous cupules and petroglyphs (Laird 1984:303-305). A hole, which forms one access to this shelter, as well as the shelter floor and sides, has been buffed by numerous bodies passing over its surface. These examples indicate slickened areas are formed for reasons other than recreational ones.

Three more slides had physical characteristics that varied from the majority of the identified slides. At K1 two slick areas about 65 cm. long on adjacent boulders are in direct association with cupules and bedrock mortars. These polished areas are not flat like a metate slick, but follow the rounded contours over the top of the two boulders. These slides are somewhat different in appearance and are quite short, although hardly less so than the ones at CA-Tul-26 and CA-Tul-313. Thus, their inclusion as recreational slides, even though they are the most questionable of the group. Too steep and slick to climb with any facility, the slide at CA-Tul-313 is in direct association with pictograph panels, bedrock mortars, and cupules. Compared to slides known at the time by the authors when they rerecorded the site in 1990, the greater width and relatively shorter length of this slide did not seem to warrant its inclusion as a distinct archaeological feature. However, when compared to the length of the slides at CA-Tul-26, K1, and CA-Tul-326, width did not seem as great a factor, as its archaeological context. While width and length are important physical characteristics, they were not as important criteria as first believed. The inclusion of the slides at K1 and CA-Tul-313 as recreational slides seemed more reasonable than either the weathered track or enclosed chute at L1.

At least two locations in Tulare County are called "Slick Rock." There is a Slickrock Canyon north of Auckland, and Doctor (personal communication 1993) related that old timers spoke of a slick rock near the Badger Road, but that he has not seen it. In a list of families who lived between Aukland and Badger in 1878, the Sinclairs are said to have lived at Slick Rock (Griggs 1956:17). While a slick rock must exist in the area, whether or not it is a recreational slide is yet to be determined. The other location is Slick Rock, CA-Tul-4, on the Kaweah River (Fenenga 1952).

> Slick Rock . . . was called Pahdin, meaning place to go under. The water hole beside it was named Ahdit Wishu. It was thought that an evil spirit dwelt under Pahdin and pulled swimmers into the water hole and drowned them. Pahdin was the extreme upstream limits of both the Wuk-chume and the Yokodo [Latta 1977:190].

The description would seem to preclude any parent encouraging their child to play on this slide, and the slickness of the rock at CA-Tul-4 is due to the action of water, rather than being polished by children sliding over it. Indeed, in modern times it is not unusual for a drowning to occur at Slick Rock during the first hot days of summer at the time of the runoff from the Sierra snow melt. While a slide is a slick rock, a slick rock is not necessarily a recreational slide, and the distinction between them is not without its problems.

Outside of Tulare County, Meighan (MS:1, 3) identified one slide in Oregon and five in California. Of these, one is on basalt with the remainder on granite. Ron Good, Chairman of the North Fork Mono (personal communication 1993), related that a recreational slide is on Rock Creek at the spiritual ground where their Bear Ceremony is held. Latta (1936:93) mentioned a slide at Carneros Rocks in northeastern Kern County. Historic Chumash, Yokuts, and Salinan village sites lie within a 40 mile radius of this site (Sanger 1987:10, 12). The following description of the slide at Carneros Rocks is a summary of the information obtained from Sanger (personal communication 1993). The slide is on a very large sandstone boulder with the main concentration of bedrock mortars at its base. While the rock is steep, weathering in the form of cracks and lichen, make it impossible to slide down in a continuous run. The slickened area is not a narrow, polished track, as the slides are in Tulare County, some of which Sanger had seen previously. This feature was not recorded in her thesis (Sanger 1987) because she was unsure of its authenticity. The slides at Carneros Rocks, CA-Tul-26, FS1, SD1, and L1 illustrate that weathering can be a major factor affecting slide identification.

Cataimuk, is the name for a Yaudanchi "sliding game on smooth rock," which Kroeber (1963:216, 218) recorded in 1903. Gamble (personal communication 1993) did not have Kroeber's word *cataimuk* in his Yokuts dictionary, but he is familiar with the word. *Cataimuk* (šat^{h}ay mak') is a verb. The English spelling of the Yaudanchi word is *shatay mak'* which translates as "we, you, and me, slide" or "we two slide." The Yaulmani from the Tule Indian Reservation would say the word to slide as *Palay*. When Kroeber collected the word *cataimuk*, it is possible that he asked what the Yaudanchi were doing, and the reply was *cataimuk* (Gamble, personal communication 1993).

While there are five ethnohistoric references to slides in Tulare County, it is likely that all describe the same site. Neg. No. 2852-B2-20 in John P. Harrington photographs at the National Anthropological Archives in the Smithsonian Institution is identified as a sliding rock in Yokuts territory (see Fig. 2). *Chee tow 'tik Now*, a Koyete Yokuts place name, was written on the back of the photograph. *Chiteetiknawahsiw* (*c^{h}it^{h}it^{h}ik'nawasiw*) "a place where one slides" is derived from the Yawelmani/Koyeti verb *chithi·k'wiyi* "to slide" (Gamble, personal communication 1993). Gayton (1948:10) stated that ". . . the place was *Chiteetiknawahsiw* (*tsiti tik'nawa siw*," literally "sliding-place; place where one makes oneself slide; . . . this place is situated near Deer Creek)." The similar pronunciation and spelling indicate that *Chiteetiknawahsiw* is the same place name as *Chee tow 'tik Now* (David Whitley, personal communication 1992). Latta (1936:93) showed a cropped picture identical to Neg. No. 2852-B2-20. The caption provides both a place name and a site description.

> This Sliding Rock is southeast of Porterville about one mile below where the Hot Springs Road first crosses Deer Creek. The *Koyet'-tee Yokuts* village of *Chee-tee'-tik Now'-suh* was named for this sliding rock. In two places the granite has been worn smooth by the sliding bodies of Indian children. *Chah-am'suh* was born here about 1840 and slid down this rock when he was a small child [Latta 1936:93].

The initial difficulty in pinpointing the location of the slide occurred because the clues from Latta (1977:194) were used which places the slide on the ". . . north bank of Deer Creek, just below where the old Overland Stage Road crossed Deer Creek, site of old Wingfield, later the Tatman Ranch improvements." The area around the Overland Stage Road and Deer Creek crossing is bare of rock. Between the time Latta wrote the two accounts, he must have confused the Overland Stage Road/Deer Creek crossing for the one where the old Hot Springs Road intersects with Deer Creek. The two slides were rediscovered, several miles to the east where the old Hot Springs Road crosses Deer Creek. The background in the National Archive photograph was used to confirm the location because the slides are now covered by lichen (Bill Horst, personal communication 1993). As these things happen, the most accurate description of the slide's location given by Latta in 1948 was not examined until after the slides were relocated.

Weinberger (1981:6) believed that Mitchell's (1949:37) description refereed to the village of Halau, a Koyete village near Fountain Springs. *Halau*, or CA-Tul-32, south of Deer Creek near the Overland Stage Road, contains two slides (Fig. 2). Mitchell's (1949:37) noted that "There are several places in the county where you can see rocks which were worn smooth by the children. One is southeast of Porterville on the old Hot Springs Road." While Mitchell (personal communication 1993) grew up in the Hot Springs area, she was not familiar with this particular slide, but used Latta (1936:93) as her source. The new evidence indicates that Mitchell (1949:37), Latta (1936:93, 1977:194), Gayton (1948:10), and the photograph from the National Archives refer to *Chee tow 'tik Now* located near the Deer Creek/Hot Springs Road crossing.

The use of slides appears fairly straight forward. Most of the ethnohistoric references refer to the slides as play areas for children (DuBois 1908:159; Latta 1977:194; Meighan MS:1-2; Mitchell 1949:37; Riddell 1960:24; Weinberger 1981:6). One exception occurs in Oregon, where a slide is referred to as "the lucky slide." "The Indian who wants a chance at good luck, sits in the groove and slides down, feet foremost, a distance of about ten feet" (Meighan MS:1). In this reference children are not specifically mentioned, and it is probable that not only children would seek good luck. The distinction between slides used for recreation becomes blurred at SM1 and

SD1, where a single cupule has been ground into each polished track, and at several other sites where the slide is in direct association with rock art. While the meaning and function of cupules has not been determined, their implied functions have more practical and ritual elements than recreational ones (Gorden 1990). Yokuts sites with pictographs and cupules are commonly within meters, if not in direct association with bedrock mortars, and living areas.

Meighan (MS:2) concluded that the importance of recreational slides lie in their use, as they are one of the few examples of play among indigenous groups. The slides in Tulare County continue to be used by modern children. The slide at CA-Tul-326 was rediscovered by the boy shown in Figure 1. Not only are slides a good baby-sitting tool, but they can provide amusement for adults as well. Anyone who has visited a slide in Tulare County knows how irresistible they can be. Joe Doctor (personal communication 1992) told of taking Campbell Grant to one of these sites, and in Joe's words, "Campbell spent so much time sliding, I didn't think I was going to get him off that slide. He must have gone down 20 times."

Recreational slides are a more common archaeological feature in Tulare County than was previously apparent. These slides occur in large occupation areas with milling features in close proximity. The archaeological context was the one constant factor present for all the identified slides. Weathering was a factor in slide identification as validation from an additional corroborating source was needed for confirmation. Continued investigation may reveal still more examples of these archaeological features in Tulare County, as well as in other areas.

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ROCK ART OF THE WESTERN MOJAVE DESERT: A REEVALUATION

Albert Knight, Western Mojave Survey Association

INTRODUCTION

In 1982, Sutton published the *Rock Art of the Western Mojave Desert*, in which he briefly described the then known archaeological sites with rock art components in the general area of northern Los Angeles and southern-central Kern counties. Sutton also tentatively proposed the extension of Hedges' Southern California Rectilinear Abstract Style (SCRA) area, previously defined as being limited to territory south of the Mojave Desert, to include the Mojave Desert portion of the geographical area mentioned above. The current study, based on additional literature searches and on the author's own field observations, will show that portions of the information used by Sutton to reach his conclusions were inaccurate, and that there is no justification to extend the SCRA style area north of the San Andres Fault zone[1]. Sutton (1988:67) later made brief reference to these and other rock art (cupule) sites, but no new information on the pictograph or petroglyph (exclusive of cupules) sites was included with that paper. In writing this article, I have, for ease of comparison, generally followed the format of Sutton (1982).

THE ROCK ART SITES IN THE STUDY AREA

Sutton (1982) listed a number of rock art sites for the western Mojave Desert, defined as the area west of Highway 395, north of the San Andres Fault zone and south of the main passes of the Tehachapi and Sierra Nevada (the south flank of the El Paso Mountains was not included in the area discussed by Sutton). The location of the sites discussed in this paper are shown in Figure 1 and information on these sites is provided in Table 1 which includes the permanent trinomial, the popular site designation (if any), and the type(s) of rock art reported to be present. The sites with reported pictographs and/or other rock art components (exclusive of cupules) are listed and discussed by county and numerically by trinomial below. Sites discussed by Sutton are summarized and this information is followed with more recent observations. Sites not mentioned by Sutton also are discussed.

CA-KER-129

Sutton followed Price (1954) in stating that pictographs there represent two figures (possibly anthropomorphs) and two other elements (undescribed). The pictographs were apparently painted in red, black, and white. Numerous mortars were reported for the site (Sutton 1982:29). Sutton ascribed this rock art component to the Southern Sierra Painted Style area. Unfortunately, a field inspection of the site vicinity suggests that no rock component ever existed at this extensive prehistoric and historic site. There is very little bedrock present at Willow Springs, and therefore there are few places to make either pictographs or bedrock mortars. A site record on CA-KER-129 (Haenszel 1965) noted there are "pictographs in hills near spring" (my emphasis). An additional comment on the Haenszel site report is "Mr. McShan of Needles told me he had heard of 'some large, curvilinear pictographs that are decorative and quite unusual' here." Given these observations, it seems likely that these comments refer to the nearby Burham Canyon site complex, and in particular, to CA-KER-273. Willow Springs, still a relatively isolated area, was (is) the closest community, accessible by a through paved road, to CA-KER-273. It seems possible that anyone giving directions to Burham Canyon would first direct the traveler to the Willow Springs community, from where it is less than an hour drive to the springs at Burham Canyon. I visited and discussed both of these sites with Mr. Andy Greene, Kawaiisu Elder. Mr. Greene has been visiting this part of the desert for over 50 years, and he confirmed that there were never any pictographs at Willow Springs itself, and agreed that the place referred to had to be CA-KER-273 (Greene and Knight 1992a). The area of CA-KER-129 is private property.

Kern County Archaeological Society Journal 4:41-60 (1993).

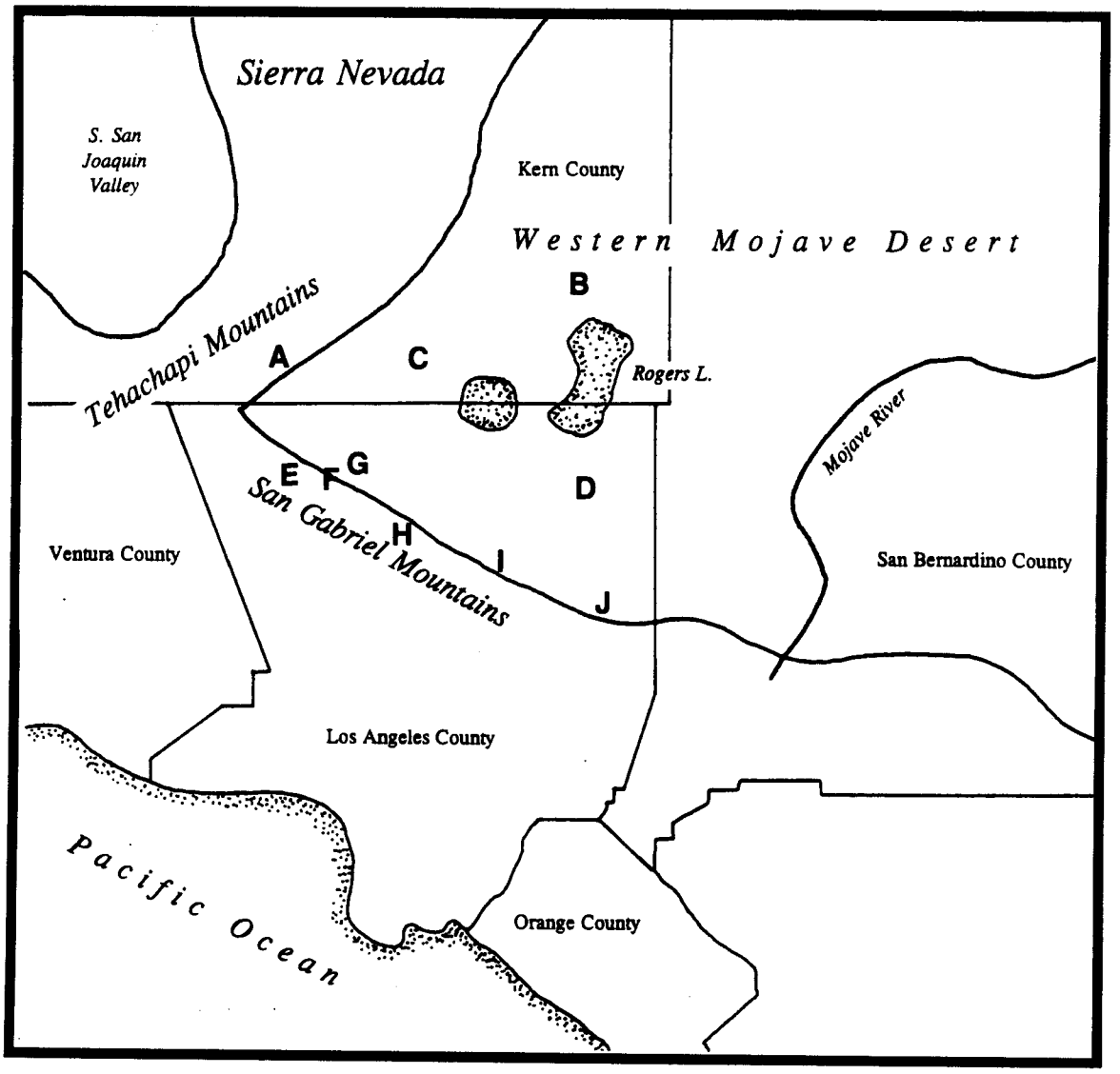

Fig. 1. Identification (GBP = Great Basin Pecked; SSP = Southern Sierra Painted; SCRA = Southern California Rectilinear Abstract) and location of rock art sites in the western Mojave Desert: A = CA-KER-273 and -1193 (SSP); B = CA-KER-137 (undetermined); C = CA-KER-302 (GBP); D = CA-LAN-1731 (SSP); E = CA-LAN-484 (SCRA ?); F = CA-LAN-721 (SSP); G = CA-LAN-298 (SCRA); H = CA-LAN-947 (GBP, SSP, and SCRA); I = CA-LAN-305 (GBP); J = CA-LAN-447/723 (SCRA).

CA-KER-130

Sutton (1982:29, 31) stated that the pictographs at CA-KER-130 are described as black pictographs on the roof of a rockshelter, and went on to say that CA-KER-130 and CA-KER-137 may be the same site. A field check of the reported CA-KER-130 site location (Knight 1990a) shows that the observations by Sutton are correct. Although a lithic scatter is present across the top of a small hill (the mapped site location), there are no rock formations of any kind present in the immediate vicinity. A site record (Haenszel 1964) referred to the site location being at Desert Butte. Desert Butte is located some miles to the west, and is the location of CA-KER-137.

Table 1

DESCRIPTION OF ROCK ART SITES IN THE WESTERN MOJAVE DESERT

SITE NO.	SITE NAME	DESCRIPTION
CA-KER-129	Willow Springs	polychrome pictographs
CA-KER-130	Desert Butte	black pictographs
CA-KER-137	Desert Butte	black pictographs
CA-KER-273	Burham Canyon	polychrome pictographs and cupules
CA-KER-302	Sweetser site	petroglyphs
CA-LAN-298	Fairmont Buttes	red pictograph
CA-LAN-447/723	Big Rock Creek	red pictographs
CA-LAN-484	--	red pictographs
CA-LAN-721	Shay's (or Shea's) Castle	red pictographs
CA-LAN-947	--	red pictographs, cupules, petroglyphs
CA-LAN-959	--	cupules (an additional unrecorded cupule site is located one mile south)
CA-LAN-1035	--	cupules
CA-KER-1193	Burham Canyon	red pictographs
CA-LAN-305	Palmdale area	petroglyphs
CA-LAN-1731	Paiute Butte	black, red, white, and pink pictographs
CA-LAN-1789/H	Fairmont Buttes	numerous cupules

CA-KER-137

As noted above, Sutton (1982) believed that CA-KER-130 and CA-KER-137 might be the same site (although he did not speculate which site was "real"). A field check of the reported location of CA-KER-137 confirmed the existence of a very shallow rockshelter, high on the south side of Desert Butte (Knight 1990b). Unfortunately, although a minor amount of smoke blackening was still visible, the shelter is very exposed to the elements, and no discernible pictographs exist there now. This high shallow shelter, with a very steep drop-off directly in front, seems an unlikely place to build a camp fire, at least to cook or warm ones self by, and the setting suggests that this situation also existed in the past. The location might have been used as a signaling place, or the smoke-blackening might be the remains of a background or a "canvas" for the placement of the no longer extant pictograph(s). The areas where CA-LAN-130 and CA-LAN-137 are located are quite accessible.

CA-KER-273

Sutton (1982:29) noted that "the main pictographs are located on a vertical surface of a large single boulder. The elements are painted in red, black and white," and are very elaborate. As noted above, this may be the actual "Willow Springs" site. There are a few pictographs present on other near-by boulders, including on a isolated boulder south of the main locus (Cawley MS). This smaller panel was illustrated by Sutton (1982:30, Fig.

2), and is now recorded as CA-KER-1193. The main panel is one of the most elaborate and well-preserved pictograph panels in southern California, and no black and white photograph or line drawing could possibly do it justice.

As noted by Robinson (1979) and Sutton (1982) there also are many bedrock mortars and cupules at the site. Andy Greene reported that this is where the women of at least three different Indian tribes came to have their babies. There are two vulva-shaped bedrock mortars in a small cave just below the main panel and the larger two of the pictographs are also vulvaform (or perhaps serpent-like) in appearance. Mr. Greene (Knight and Greene 1990) reported that the small cave is where Indian women came to give birth. The site is still considered to be a sacred place by local Indian people, who request that curious people NOT visit the area (Charlie Cook, personal communication 1991[2]). It is unfortunate that the southern Tehachapi Mountains are a favorite dirt-bike and ORV area, and on any given weekend with good weather, many motorcycle riders, etc., frequently roar through the area, including through the site itself. While the pictographs remain in good condition, the occupation area has been severely pothunted, and an entire bedrock mortar station has been ripped out of the ground and removed from the area. This site was field checked by Andy Greene and myself, and Mr. Greene was visibly upset by the desecration of the area. Although accessible, the site is definitely on private property.

CA-KER-302

Sutton (1982:27) quoted Glennan (1971:6) who describe "a large, roughly spherical boulder which is covered on two sides with pecked geometric design elements. . . . the surface of the boulder is quite weathered. . . . it is quite difficult to determine . . . the design elements originally present."

There actually are four boulders with petroglyphs present at this site (Knight and Greene 1992b). The largest boulder (the one described by Glennan) has three connected faces with relatively clear curvilinear petroglyphs (Fig. 2), although I would not hazard a guess as to what is being depicted. The west (blank) side of this boulder has been recently defaced with bright blue spray paint. One additional small boulder has a relatively recent-looking atlatl (this is the petroglyph in the best condition here), while two other boulders have very weathered petroglyphs. One petroglyph seems to have been positioned in a low smooth spot and used as a place to sit (directly on part of the petroglyph). All of the petroglyphs are oriented towards the east. There are no bedrock mortars or cupules at this site. The area is private property and casual visitors are definitely not welcome.

CA-KER-1193

As noted above, this is the "second rock art locus" at Burham Canyon. Sutton (1982:30, Fig. 2) illustrated it, but did not illustrate the main panel (at CA-KER-273). This site is on land administered by the Bureau of Land Management.

CA-LAN-298

Sutton (1982:30, Fig. 3) illustrated the single known extant red pictograph in the Fairmont Buttes area. The site is part of a large village complex that includes several other recorded sites. In 1989 all of the Fairmont Butte sites were consolidated under the new trinomial CA-LAN-1789/H (Love et al. 1989). The rock formations here are subject to considerable weathering and, given the large area of the site and the presence of many other suitable rock formations, it seems safe to assume that many other pictographs were probably present in the Fairmont Buttes area in the past and that perhaps some unrecorded elements may still exist today. Love, et al, also recorded many bedrock mortars and cupules at the Fairmont Buttes site complex. The area is private, but generally accessible.

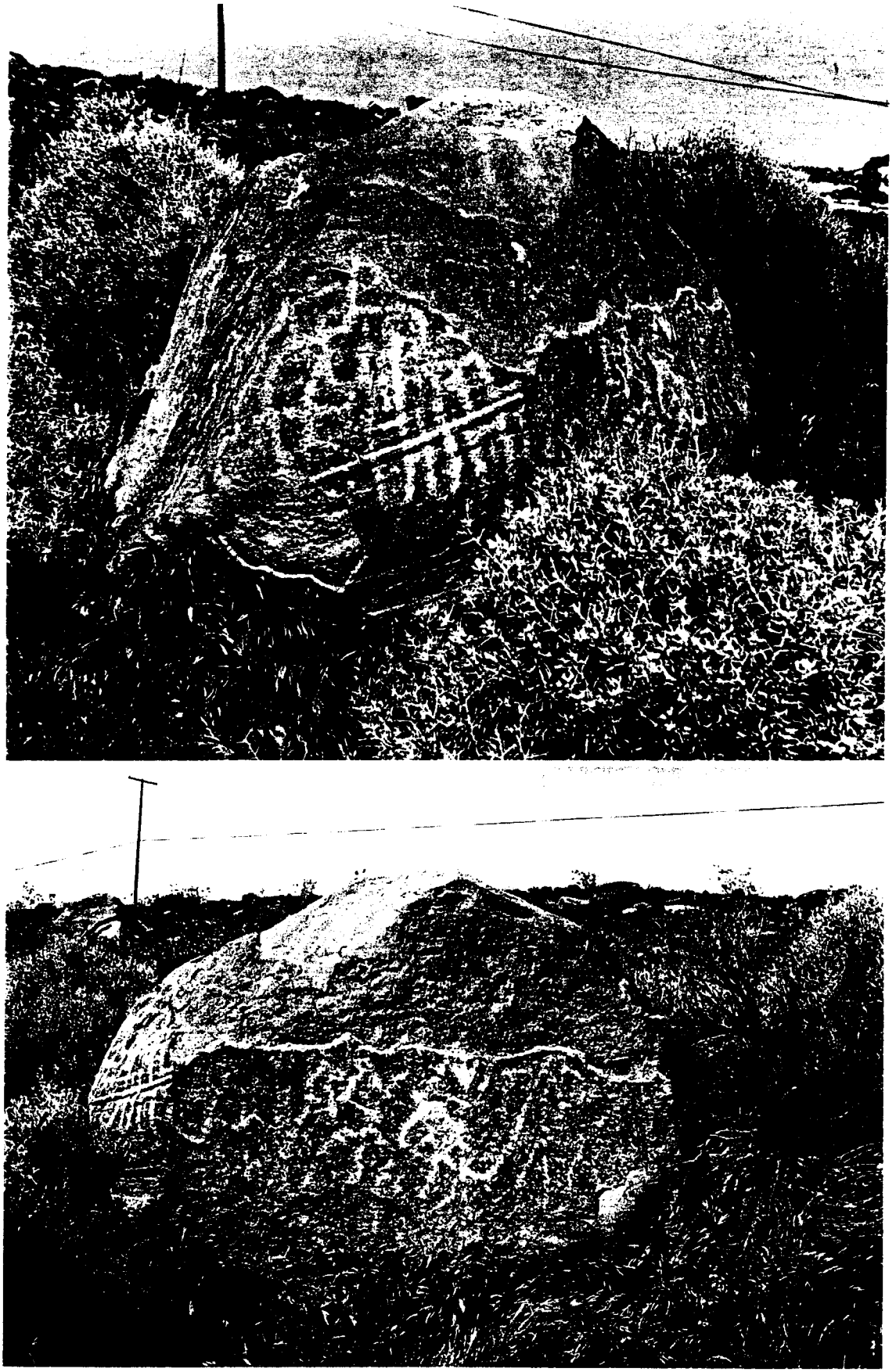

Fig. 2. The petroglyph panel (ca. 2 by 0.75 meters) at CA-KER-302 (photo by the author, 1992)

CA-LAN-305

This was the second known petroglyph site recorded in the western Mojave Desert. The petroglyph(s) are found (Becker 1990) on a single boulder and are very simple in composition, with no discernible pattern which might be called a rock art element or motif (Fig. 3). This petroglyph is found at a large site complex, in an area which is quite accessible. It is not impossible that additional petroglyph elements were present in this area in the past, but that they have been removed by vandals. The area is on private property, but is generally accessible.

CA-LAN-447/723

Sutton (1982:31) referred to this site as the Big Rock Creek site, and stated that it "is unrecorded." He illustrated it (Sutton 1982:33, Fig. 6) using a sketch from the Antelope Valley Archaeological Society (AVAS) Newsletter (Anonymous 1973).

Sutton was unaware that this one site has received two trinomials and that the illustration from the AVAS was: 1) inverted; and 2) did not show the various pictograph elements in their correct spatial relationships (Fig. 4). This pictograph panel probably represents (at least) a trail marker, as the ridge west of the site leads directly to the east edge of the famous and beautiful "Devil's Punchbowl" area, now a Los Angeles County Park. A small boulder with two shallow bedrock mortars and at least seven cupules is located about 10 meters south of the pictograph panel (Knight 1992, 1993a). The site is on private property.

CA-LAN-484

Sutton (1982:31) stated that "the rock art consists of red pictographs. The major element is a sun symbol located on an overhung face of a large boulder." No illustration was provided. Robinson (1968) referred to two small red and black pictograph designs being present at this site (Fig. 5). These pictographs are very similar to those found at CA-LAN-365, near Agua Dulce. The site is on private property.

CA-LAN-721

Sutton (1982:31) called this as the "Shay's Castle Site," (although it is usually spelled "Shea's"). Sutton (1982:31) stated that "The site is an occupation midden associated with red pictographs and about a dozen bedrock mortars" and included sketches of three elements said to be from this site (Sutton 1982:32, Fig. 4). An examination of sketches of the pictographs from this site by Bleitz and Sanberg (1976; also see Fig. 6a-c), and a field check of the site by the author (Knight 1993b), failed to confirm the presence of the pictograph elements as illustrated by Sutton (the possible exception being the left sketch as shown by Sutton 1982:Fig. 4).

However, the good news is that the rock art at this site is much more elaborate and extensive than reported by Sutton (Knight, site record in preparation). There are at least 25 red pictographs still visible (condition of pictographs is from very faded to good). Several of the pictographs are large (one is almost five feet in height), and the overall area of the two panels present here is approximately 10 meters square. With the exception of CA-KER-273 (which is actually in the foothills of the Tehachapi Mountains), this is clearly the most elaborate rock art site in the western Mojave Desert. The site is on private property, and trespassers are not welcome.

CA-LAN-947

Sutton (1982:31, 33, Fig. 5) noted that pictographs at this site "include a diamond net, several zig-zag lines, a large dot surrounded by nine other dots and three lines, and several areas (one quite large) of smeared red pigment." The area where this site is located was re-examined during the course of a recent survey (EIR). Multiple cupule loci and a Great Basin Pecked Petroglyph Style panel were recorded at and in the immediate vicinity of this site during the course of that study (Beth Padon, personal communication 1992). The site is on private property and trespassers are not welcome.

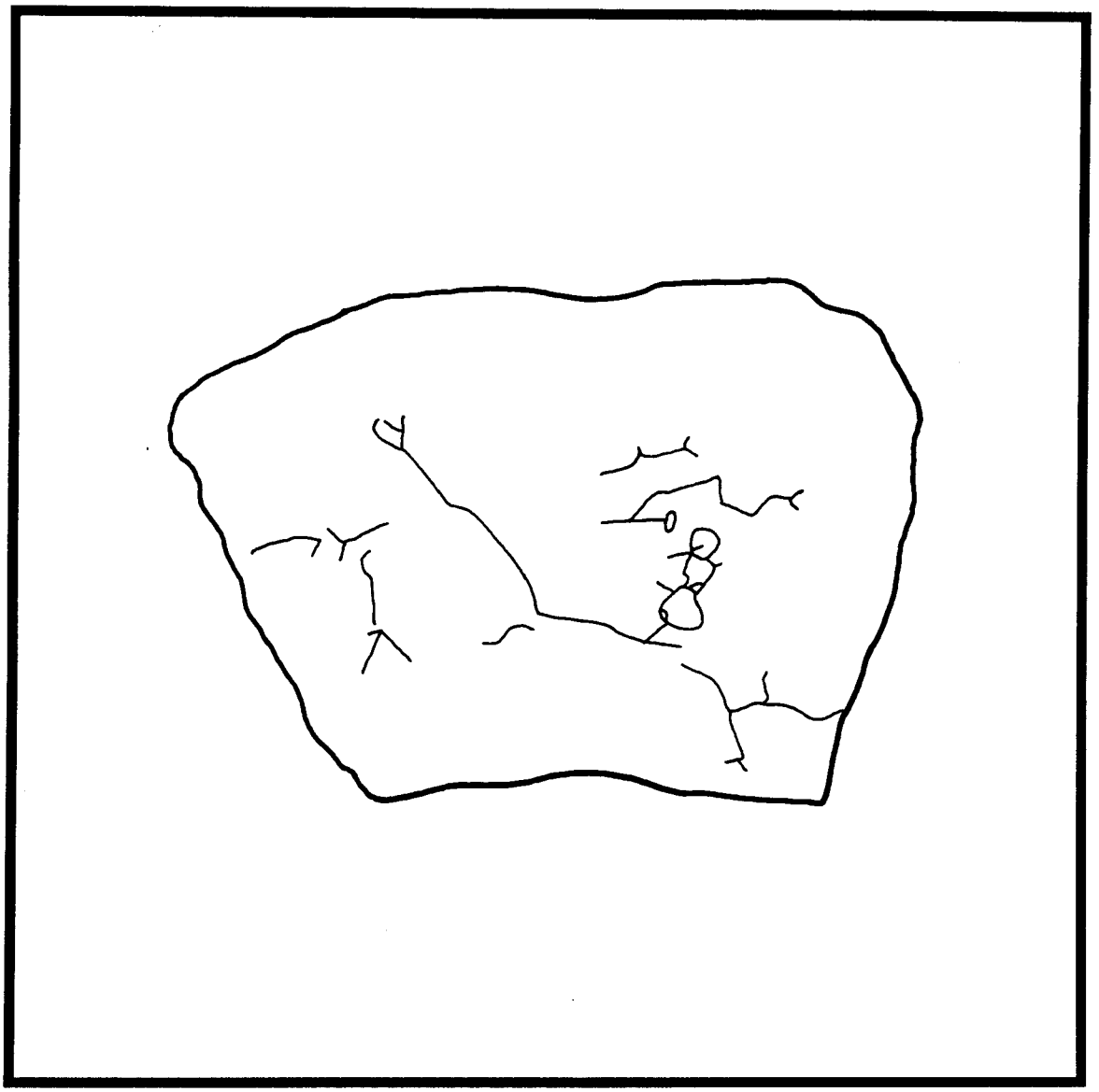

Fig. 3. The petroglyph panel (ca. 150 by 75 centimeters) at CA-KER-305 (from Becker 1990).

CA-LAN-1731

This site was formally recorded by Michael Sampson of California Department of Parks and Recreation (current owners of the area) in 1987. Two very faded red pictographs were recorded at the site at that time. In addition to the pictographs illustrated by Sampson, Redtfeldt (MS) recorded a number of other elements (Figs. 7-11) that may no longer be extant. While it is unfortunate that Redtfeldt's drawings are of relatively poor quality, and that he only sketched individual elements rather than panels (some elements are apparently shown in their actual spatial relationships), these sketches will probably remain the only "complete" record of this pictograph panel, as the more recent sketches by Sampson show that most of the paintings here have almost completely weathered away. The site area is the location of the Antelope Valley Indian Museum.

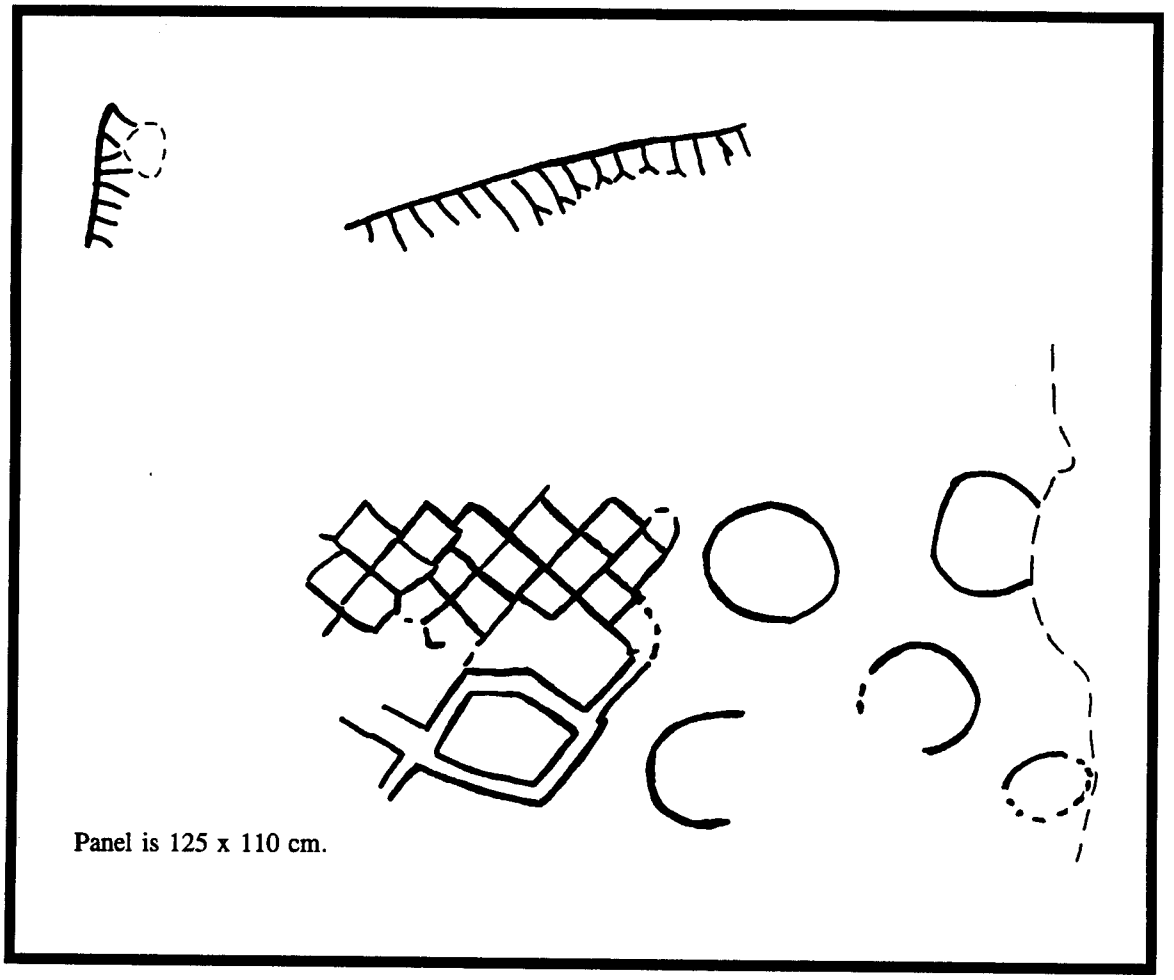

Fig. 4. Pictographs at CA-LAN-477/723 (after Knight 1993a).

ROCK ART STYLES IN THE STUDY AREA

GREAT BASIN PECKED STYLE AREA

CA-KER-302, CA-LAN-305 and CA-LAN-947 are the only Great Basin Pecked Petroglyph Style sites in the study area (with the exception of a few sites on the southern flank of the El Paso Mountains, an area excluded by Sutton). In any case, the largest boulder/loci at CA-KER-302 is a good example of the style, while CA-LAN-305 is a rather poor specimen in comparison. The petroglyph panel at CA-LAN-947 is not as elaborate as is the CA-KER-302 panel, but has at least 8 elements, each of which has more detail than that at CA-LAN-305.

SOUTHERN SIERRA PAINTED STYLE AREA

The fine polychrome panel at CA-KER-273 (actually located a short distance north of the western Mojave Desert) is definitely in the Southern Sierra Painted Style. The area where the site is located was ethnohistoric Kitanemuk territory, and it seems reasonable to attribute the panel's origin to that tribe. As discussed above, there is no rock art component at CA-KER-129 and extending the Southern Sierra Painted Style into the western Mojave

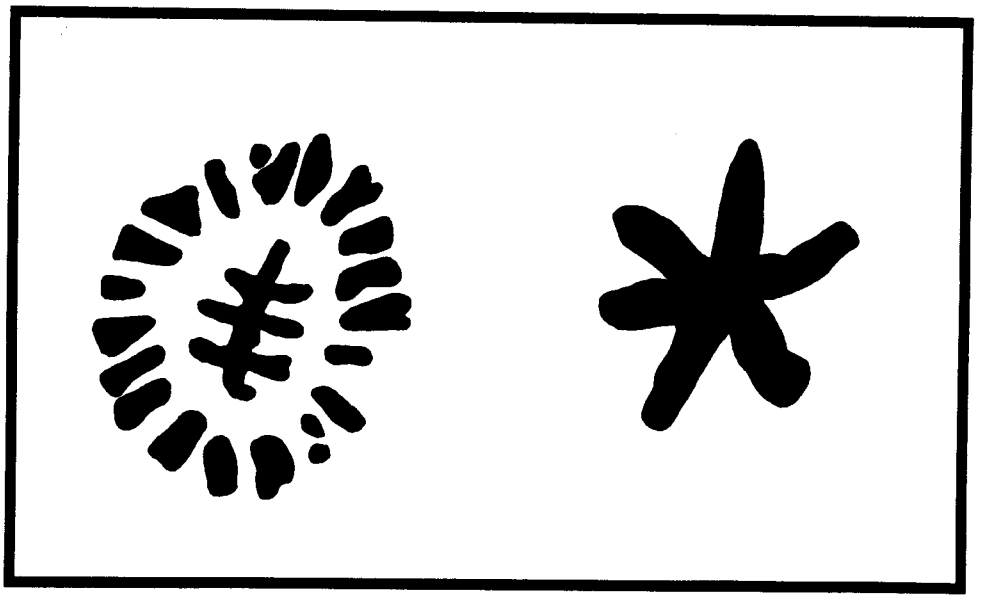

Fig. 5. Pictographs at CA-LAN-484 (after Robinson 1968). The element on the left is 12 cm. across.

Desert does not seem justified on the basis of the evidence cited by Sutton. However, CA-LAN-721, located at the southern margin of the western Mojave Desert does appear to be Southern Sierra Painted Style. Although various shades of red are the only colors still visible (some black is also visible, but none of this color can be distinguished as rock art motifs or elements and the black coloration may be from relatively recent campfires), the large size of most of the paintings, their overall appearance, the large panel(s), and the location of the site in the southern territory of the Kitanemuk, all suggest that this site belongs in this style area. Also, the large faded red mandala figure is very similar to the two polychrome "sunburst" elements seen at CA-KER-273. I suggest that black and white may also have been present as part of this CA-LAN-721 sunburst or mandala, but that these additional two colors have weathered away, leaving only the longer lasting red pigment.

While there are few elements which we may examine at CA-LAN-947, this site may also be an example of the Southern Sierra Painted Style. I propose this based on the large size of the red smear found at the right side of the panel (over a meter in length), and on the location of the site in Kitanemuk territory. The only other clearly defined motifs at this site are a small (less than 30 cm.) "sunburst," two parallel zig-zag lines and a net. All of these motifs are found across southern California, both to the west in Chumashan territory (Grant 1965:81, Fig. 70, shows motifs such as these from two sites in the Obispeno area), and in the western Mojave Desert and the mountains to the south. While such small motifs are found across a widespread area, larger elements, however vague, are essentially unknown in the areas where the Southern California Rectilinear Abstract Style is found, but they are common in the Southern Sierra Painted Style area.

It also seems safe to assign CA-KER-1193 (adjacent to CA-KER-273), where a sunburst or rayed disk is the dominant element, to the Southern Sierra Painted Style area (also see below). Although the evidence is less definitive, the red superimposed on white rayed disk motif(s) at CA-LAN-1731 are reminiscent of some of the motif elements at CA-KER-273 (note that in the 20 years or so between the sketches by Redtfeldt and Sampson, the white portion of the figure has completely weathered away). The other elements present are clearly not Southern California Rectilinear Abstract Style (see below), and are much more elaborate than the Great Basin Pictograph Style (the nearest style area to the east) As the site is located at the interface between the Kawaiisu and Chemehuevi, I suggest that this site may also be considered a representative of the Southern Sierra Painted Style.

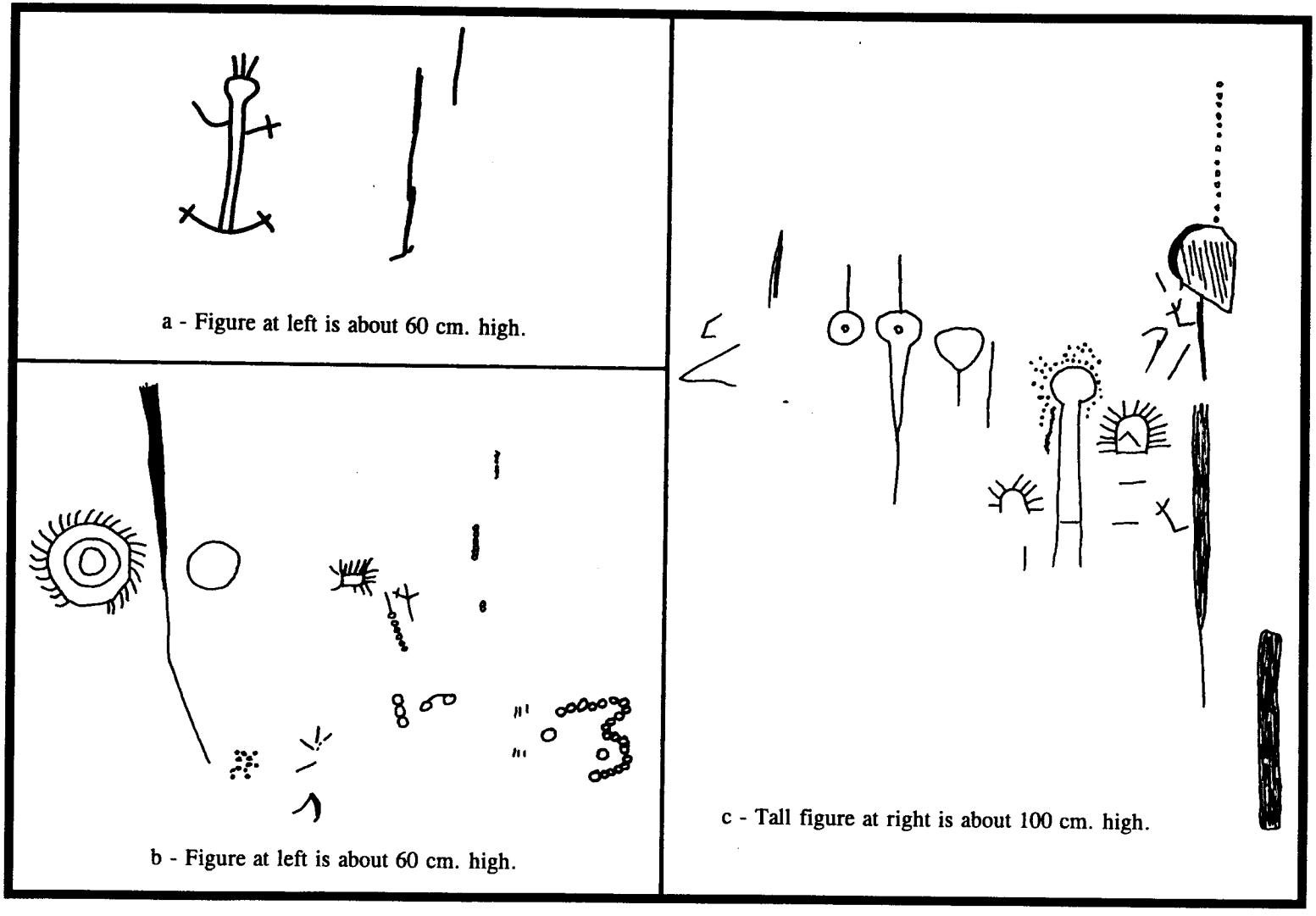

Fig. 6. Pictograph panels at CA-LAN-721 (after Bleitz and Sanberg 1988): a) at CA-LAN-721a; b) at CA-LAN-721b; c) at CA-LAN-721c.

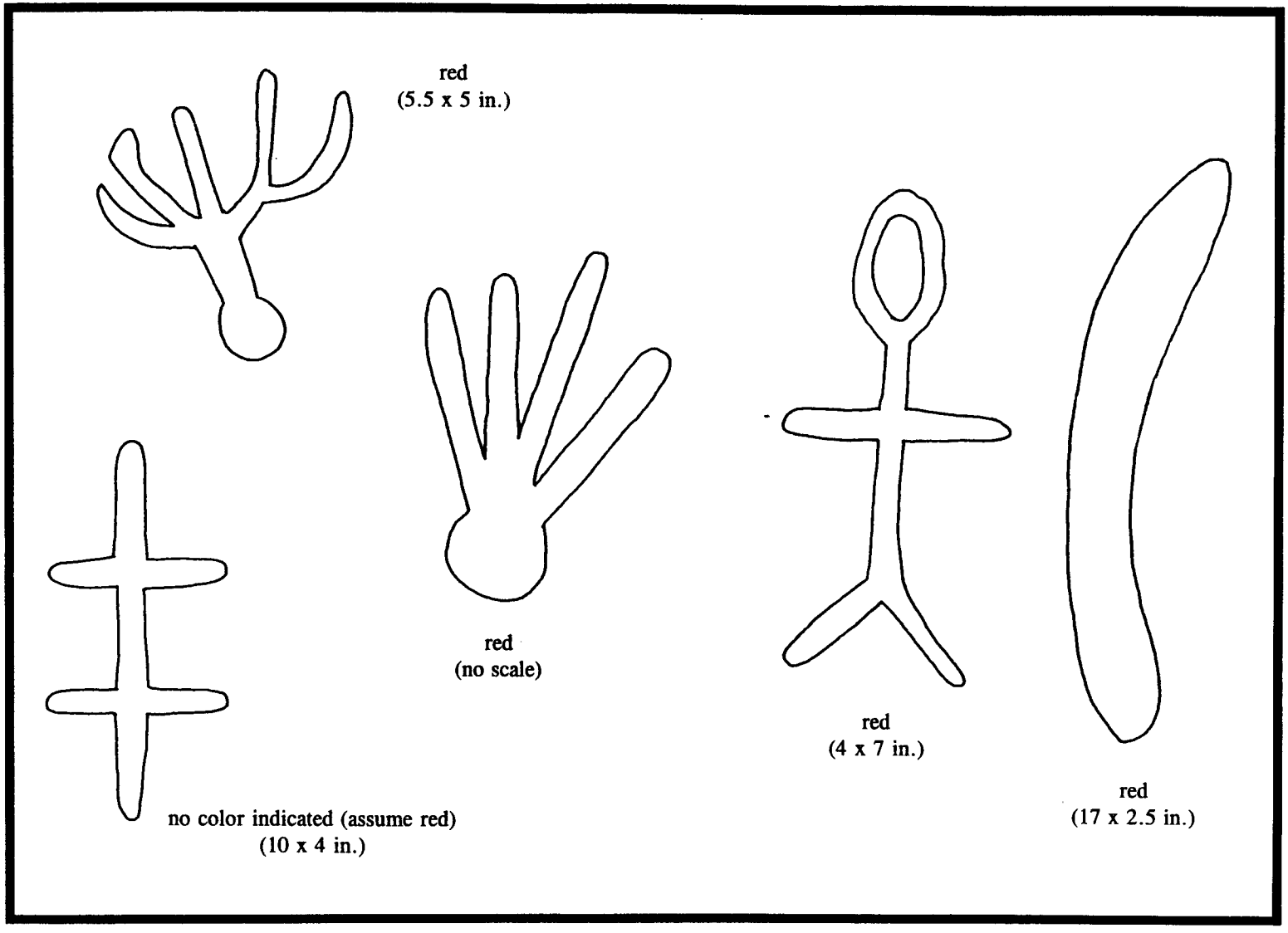

Fig. 7. Pictograph panels at CA-LAN-1731 (after Redtfeldt MS).

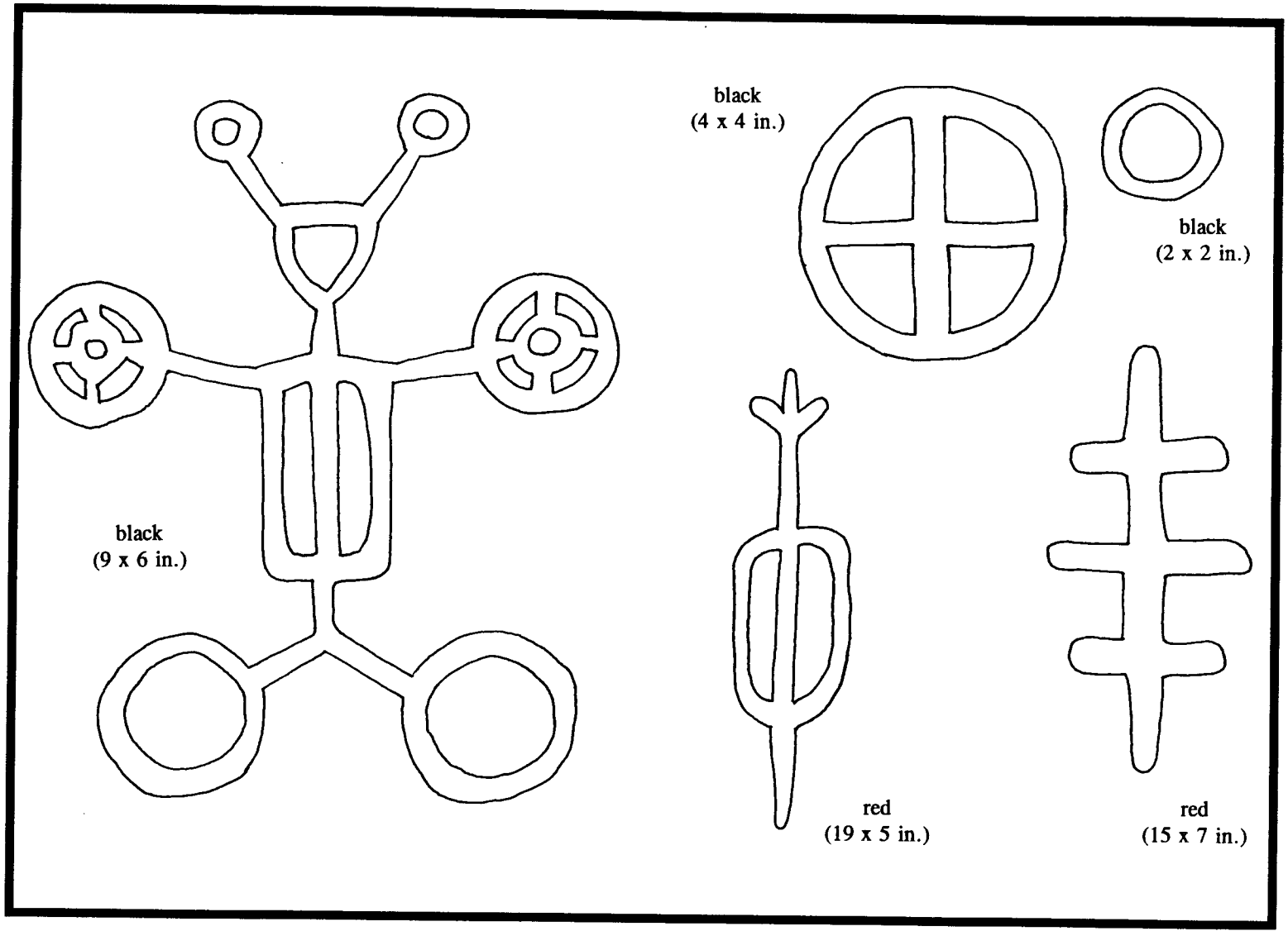

Fig. 8. Pictograph panels at CA-LAN-1731 (after Redtfeldt MS).

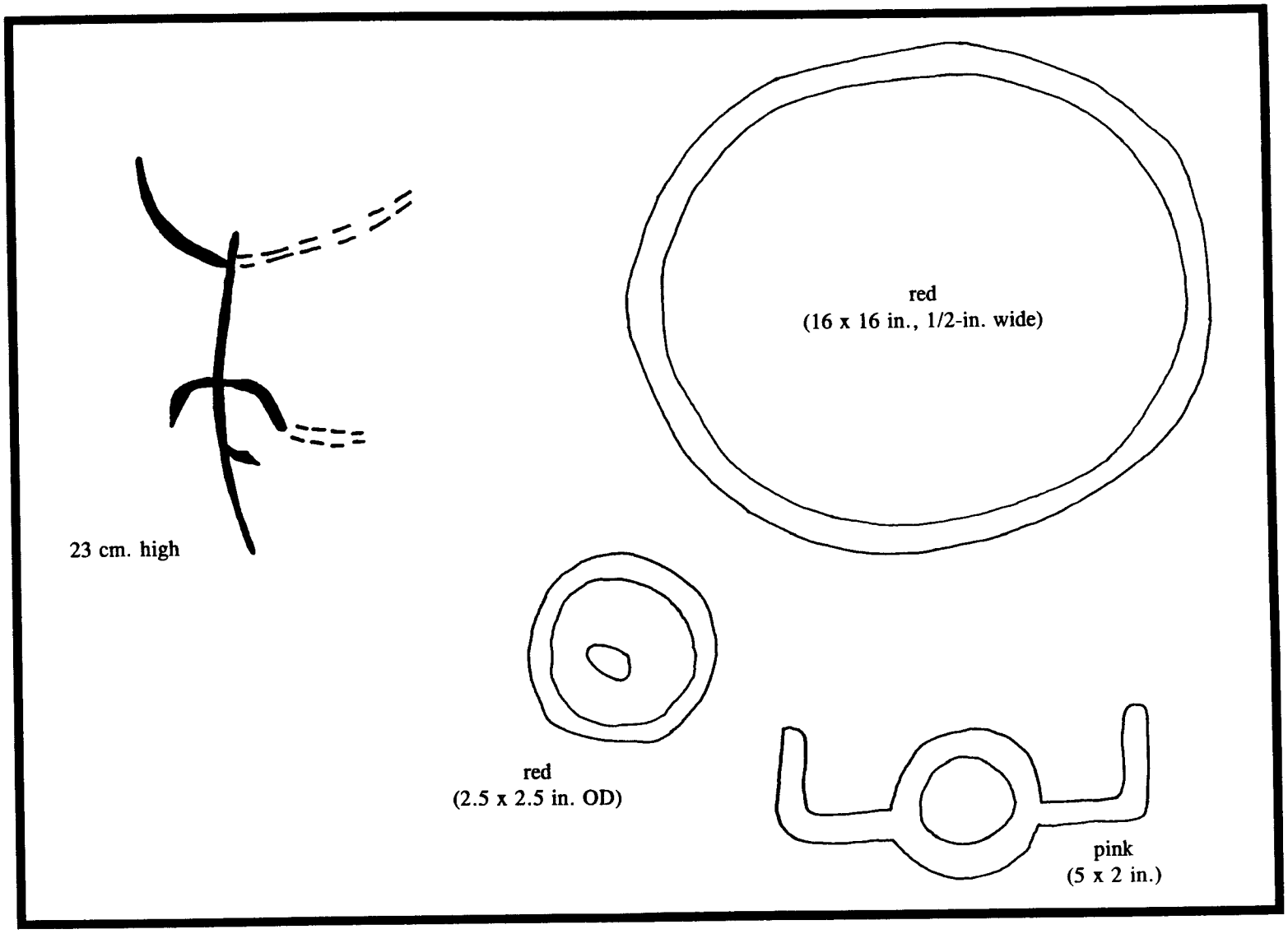

Fig. 9. Pictograph panels at CA-LAN-1731 (after Sampson 1987).

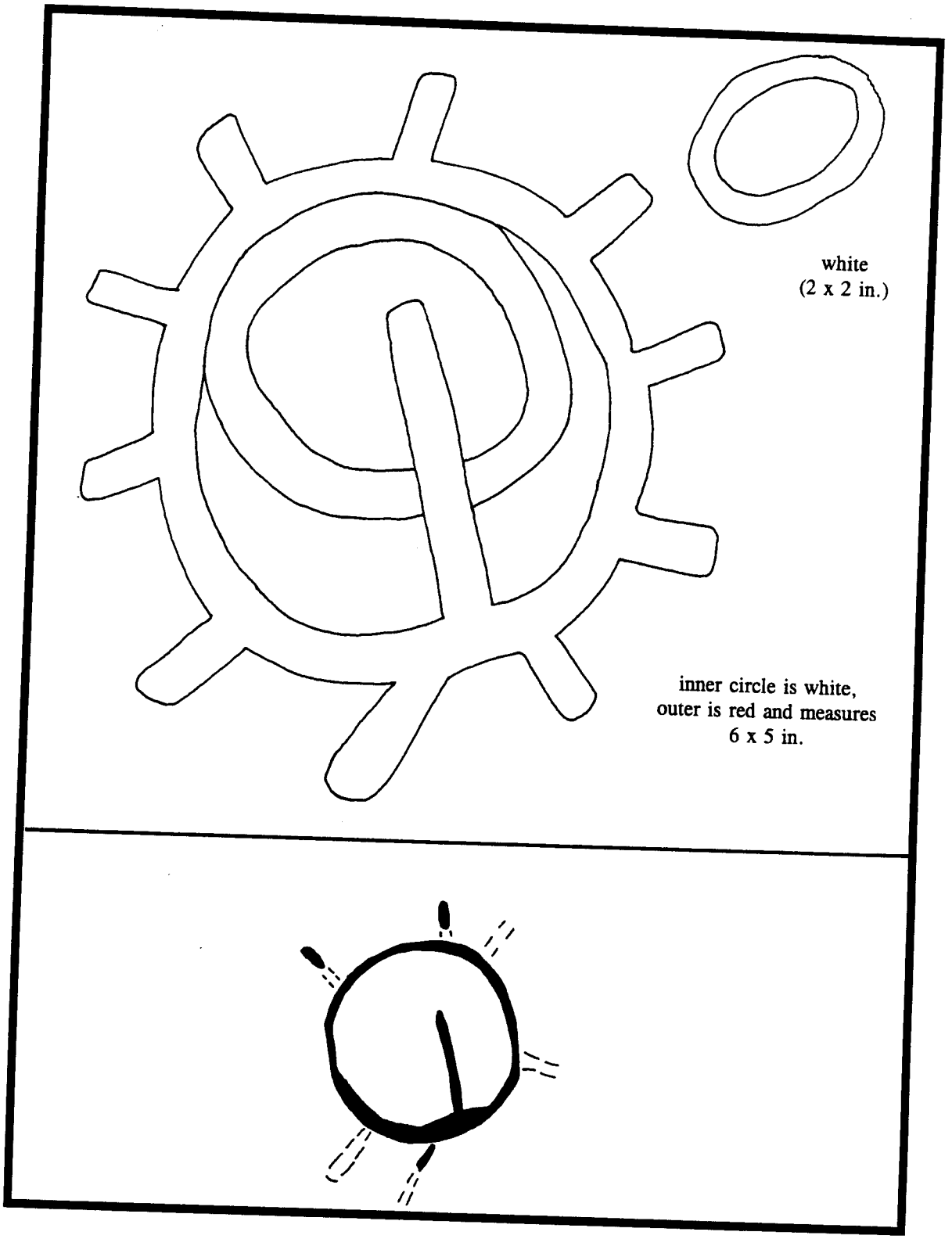

Fig. 10. Pictograph panel (same elements, different scales) at CA-LAN-1731: upper ca. 1960 (after Redtfeldt MS); lower ca. 1987 (after Sampson 1987); note weathering.

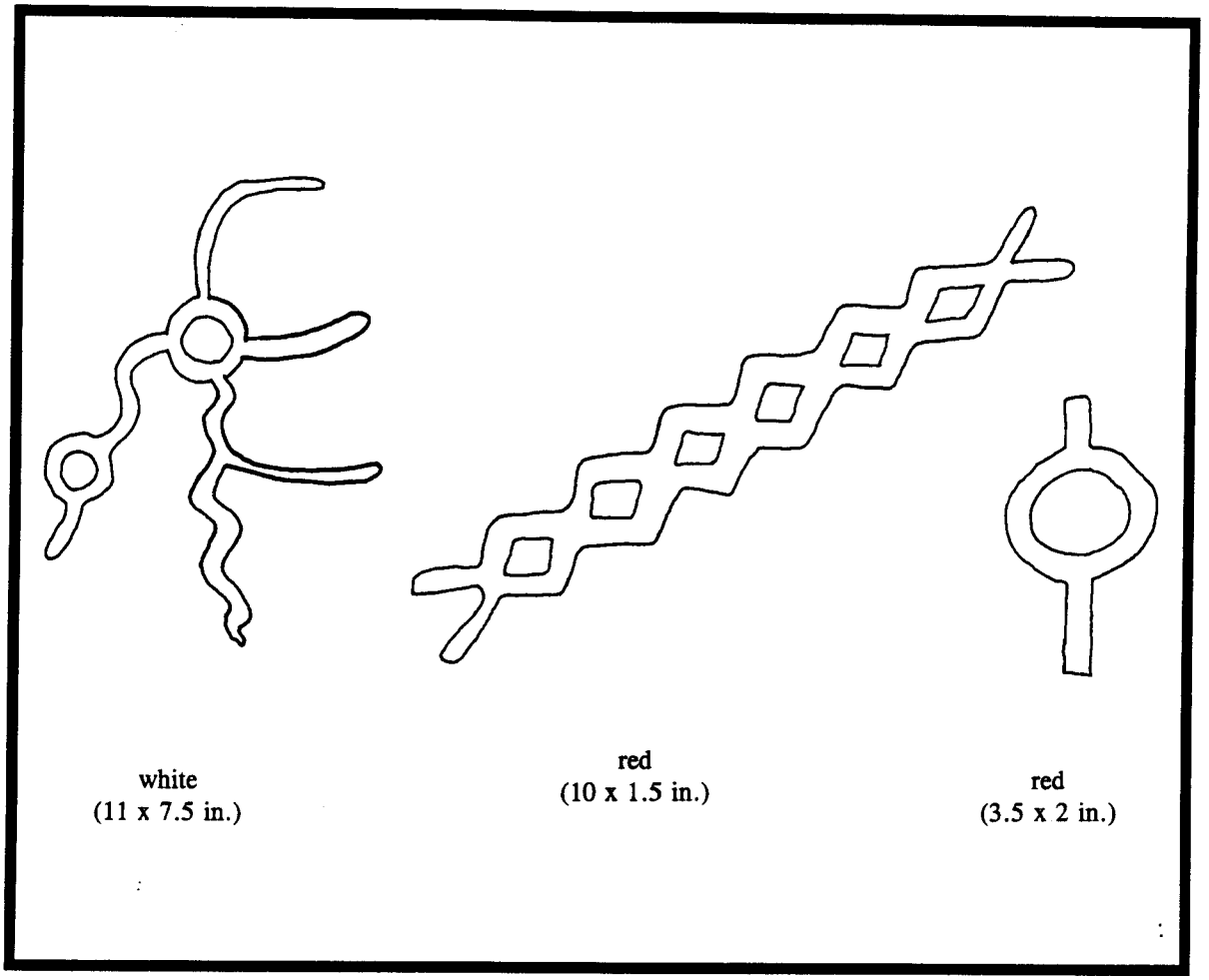

Fig. 11. Pictograph panels at CA-LAN-1731 (after Redtfeldt MS).

SOUTHERN CALIFORNIA RECTILINEAR ABSTRACT STYLE AREA

Sutton (1982:35) tentatively proposed that the Hedges (1973) definition of this style area be expanded to include the entire western Mojave Desert (Fig. 12). However, there is a problem with this, for Hedges himself was incorrect in extending the Southern California Rectilinear Abstract Style area into western and southern Los Angeles County, as the most westerly examples of this style are found in central Los Angeles County, and none are found in western or southern Los Angeles County. Even in central Los Angeles County, much of the pictographic rock art is more similar to the Chumash Painted Style[3], than to pictographs found in the areas to the east and southeast[4]. While some motifs that may be considered to be Southern California Rectilinear Abstract Style are found in central Los Angeles County and in the western Mojave Desert, almost all of these motifs are found both to the west (in Chumashan territories), as well as to the east and southeast. For example, the "rayed disks" found at CA-KER-273, CA-KER-1193, CA-LAN-298, CA-LAN-721, and CA-LAN-1731, are found at various sites with pictograph components (and petroglyph components) in central Los Angeles County (to the south), and in the El Paso Mountains and at Black Mountain (to the east). They are also similar (although simpler) to mandalas (or "sunbursts") found through out Chumash territory (to the west).

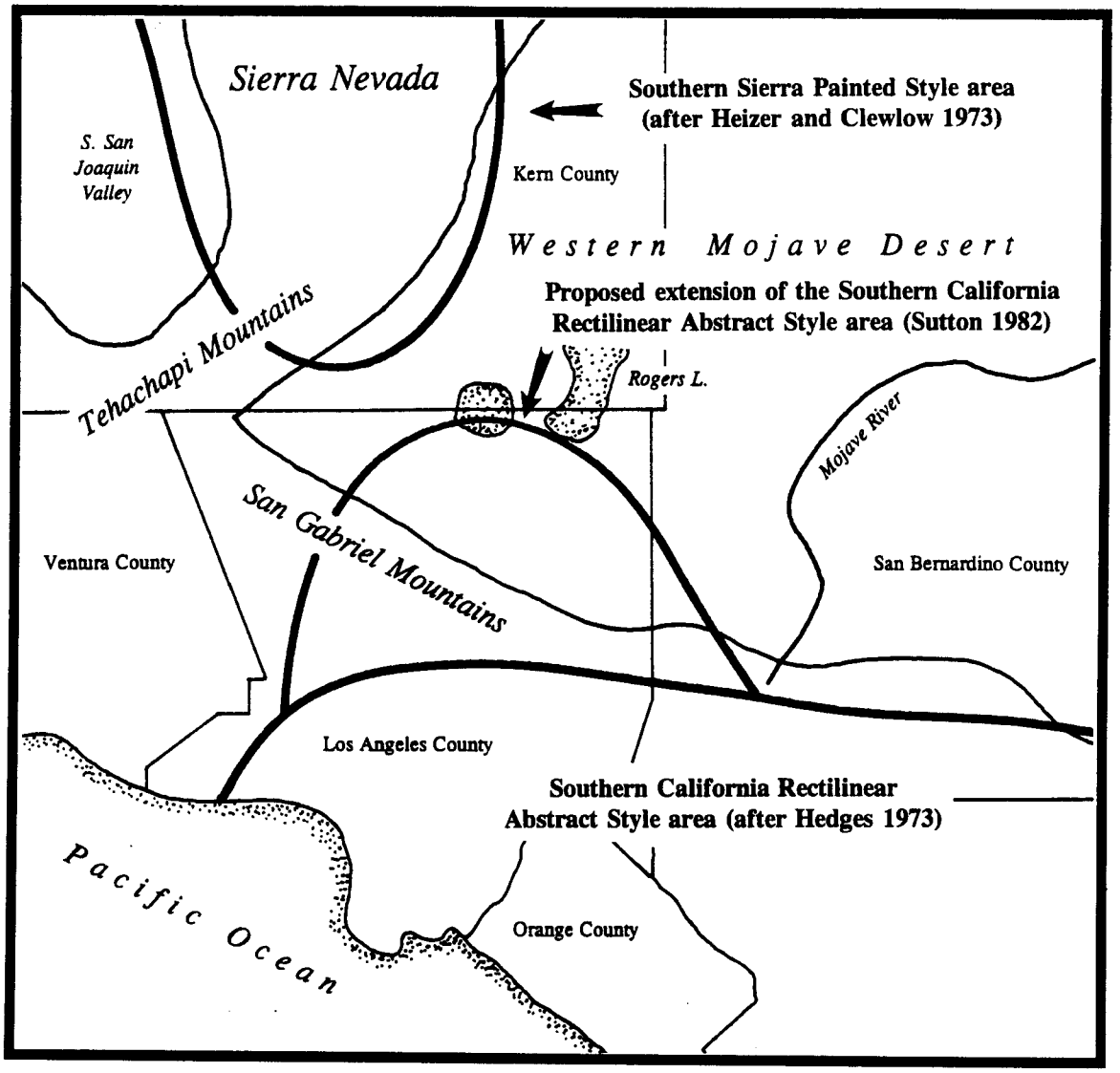

Fig. 12. Rock art styles in the western Mojave Desert as proposed by Sutton (1982).

Assuming that style areas are established by the presence of certain defined motif elements, and not by the absence of certain motif elements, finding motifs elements entirely restricted to the Southern California Rectilinear Abstract Style area, at least in most of Los Angeles County, is a somewhat difficult task. This problem can be seen when we examine the remainder of the pictograph sites (CA-LAN-137, CA-LAN-298, CA-LAN-447/723, and CA-LAN-484), in the western Mojave Desert, and attempt to decide which, if any, of those sites, might be definitely considered to fall within the Southern California Rectilinear Abstract Style area. The reported pictographs at CA-KER-137 were apparently never recorded, so that site cannot be assigned to any particular style area.

At the remaining sites with pictographic components, CA-LAN-298 has only a single rayed disk, while CA-LAN-484 has two "sunburst" or star-like designs. As discussed above, in the absence of additional data, assigning these pictograph sites to a particular style area, based on such an inadequate sample, is a shaky endeavor, at best. The remaining western Mojave Desert pictograph site, CA-LAN-447/723, has motifs which include:

circles (found almost universally across all of North and South America), a diamond chain or net and what may represent ceremonial feather banners. Again, these motifs are found across most of southern California, including in Chumash territories (e.g., Grant 1965:82, Fig. 72, upper right corner), and again, unless we wish to define style areas by the absence of certain motifs, instead of by the presence of particular motifs, the sample of elements at the sites discussed by Sutton is too small to make a definitive statement assigning these sites to particular style areas.

Having made this point, it must be stated that at least some of the sites found in the western Mojave Desert may indeed be assigned to the Southern California Rectilinear Abstract Style area, but if this is to be so, it will be necessary to make the assignment on the basis of negative information (e.g., on the absence of motif elements or other characteristics definitely assigned to other style areas: i.e., raked anthropomorphs, as found at certain Chumash Painted sites, or by Kachinas as found in the American Southwest). Consideration should also be given to the hypothesis that some rock art sites may not be assignable to any one tribe, culture or style area, and that at least some rock art sites were places where peoples from different tribes met, with each group making design motifs attributable to their own cultural group. For example, following the observation by Andy Greene that the Burham Canyon area was visited by peoples from at least three different tribal groups, it is possible that CA-KER-273 (Southern Sierra Painted Style) was made by the Kitanemuk, while the adjacent CA-KER-1193, might have been made by visitors from the southern side of the desert, and therefore might be attributable to the Southern California Rectilinear Abstract Style area (although I doubt that this is the case, at least in this particular instance).

Therefore, of the sites listed by Sutton (1982), the following sites may be attributable to the Southern California Rectilinear Style area: CA-LAN-298; CA-LAN-447/723 (Big Rock Creek); possibly CA-LAN-484; and CA-LAN-947. The rayed disk at CA-KER-1193 is very similar to the rayed disk at CA-LAN-298, but juxtaposition with the fine Southern Sierra Painted Style panel at CA-KER-273 argues strongly against including it with the Southern California Rectilinear Abstract Style area. Lastly, CA-LAN-721 is definitely much more elaborate than these other sites, and it should be deleted from the list of Southern California Rectilinear Abstract Style area sites, as proposed by Sutton (1982). I suggest that the actual distribution of pictographic style areas in south-central California be revised, as depicted in Figure 13.

CONCLUSION

Given the information and arguments presented above, it does not appear that the extension of the Southern California Rectilinear Abstract Style area into the western Mojave Desert is justified. Unless additional rock art sites are discovered in the study area (for pictographs, very unlikely at this point in time), or unless additional unpublished manuscripts (or other written information) showing pictograph designs that no longer exists (e.g., Redtfeldt MS), are discovered, we will probably never have the opportunity of knowing the exact boundaries of pictographic style areas, during the late prehistoric and early historic periods. And while advances are being made in the dating of petrographic rock art in southern California and elsewhere, we probably will never be able to do more than infer the possible antiquity of pictographic rock art styles in our study area.

NOTES

1. Sites where cupules alone are present will not be discussed in this paper. A considerable number of sites with cupule components have been recorded at and near the southern boundary of the study area in the last few years (e.g., at Ritter Ridge). These numerous sites are currently being examined by Beth Padon, Jane Rosenthal, and other researchers.

2. Charlie Cook is a Chumash Chief. Mr. Cook is an advisor to the State of California Department of Parks and Recreation Commission, and also works with the National Park Service. He can occasionally be interviewed at the Satwiwa Native American Cultural Center, located in the Santa Monica Mountains. Andy Greene informs me that Charlie's uncle and Andy "rode the range together," and both men frequented Willow Springs in it's (and their) "cowboy days" (Andy Greene, personal communication 1992). Charlie's uncle is buried at an undisclosed place near CA-LAN-273.

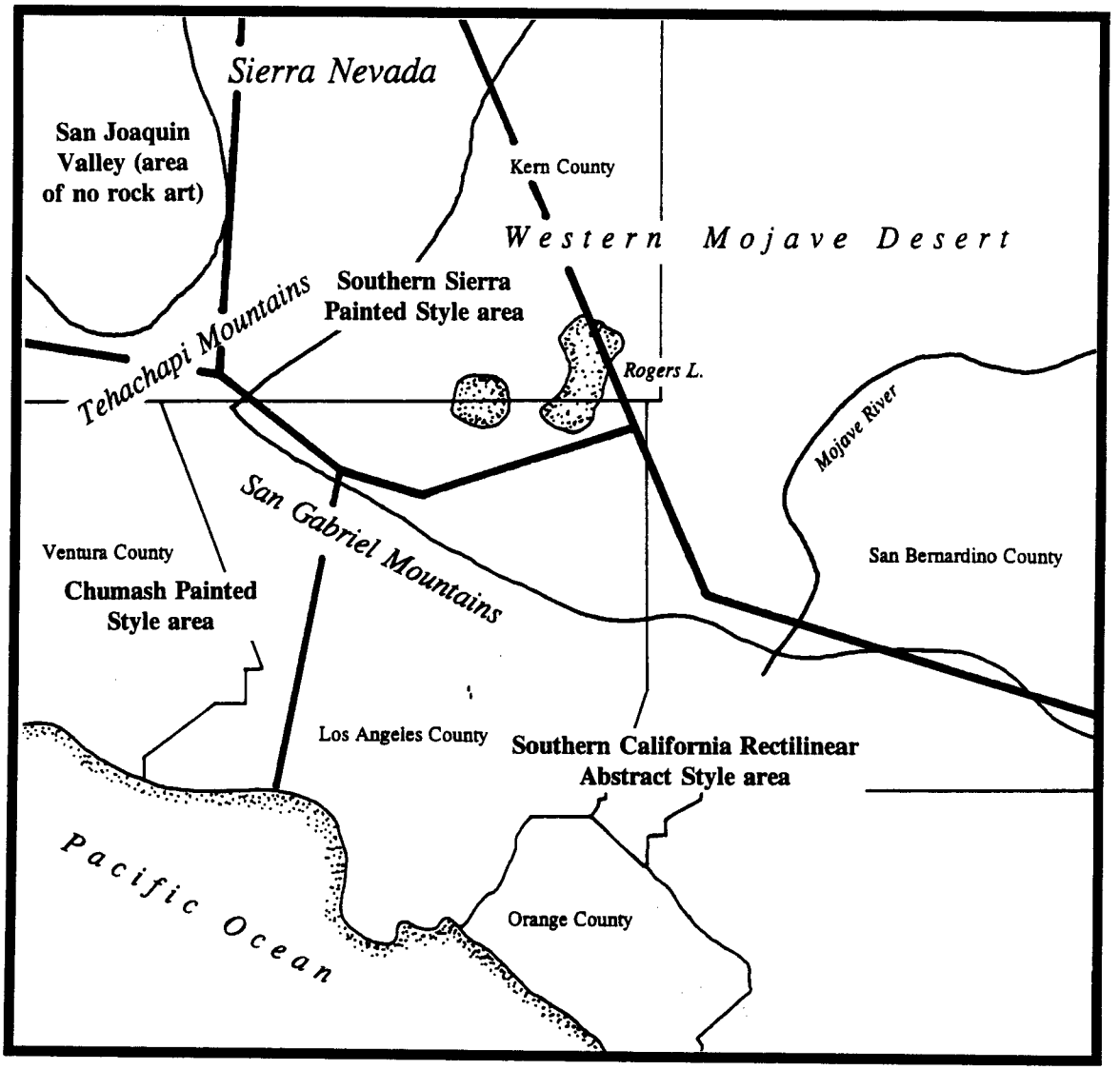

Fig. 13. Rock art styles in the western Mojave Desert as proposed in this paper.

3. Pictographs found in Chumashan territory usually are referred to as "Santa Barbara Painted Style." This term is entirely archaic and dates from a time when the Chumashan peoples were called "the Santa Barbara Indians," and Ventura County had not yet been separated from Santa Barbara County (this occurred in 1873, well over a century ago). Today, no one would even consider calling the Chumash "the Santa Barbara Indians," and it is equally absurd to used a similar term for the rock art styles made by those peoples and by some of their immediate, culturally influenced, neighbors. For example, the pictograph site that was used for the cover illustration of "Rock Paintings of the Chumash" (CA-LAN-717; Grant 1965), is located in Los Angeles County.

4. The rock art of central Los Angeles County will be the subject of a future paper by the author.

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ARCHAEOLOGICAL STUDIES AT CA-KER-3052H: A PROBABLE MINER'S CAMP NEAR ROSAMOND, CALIFORNIA

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During an archaeological assessment of 500 acres in Hidden Valley approximately two miles northwest of the town of Rosamond, California (Fig. 1), Yohe (1991) recorded a fairly extensive late historic habitation area (CA-KER-3052H) that was interpreted at the time to be a miner's camp dating to the period between 1915-1925. It was recommended that the site be further evaluated with the help of an historic archaeologist, and that an unusual rock feature that appeared to have the characteristics of a human grave be test excavated. On 23 and 29 November, 1991, site evaluation was undertaken by members of the Cultural Resource Facility, CSU Bakersfield. Test excavations of the rock feature were undertaken on 29 November by several members of the CRF staff. Below is a description of the findings of this study.

HISTORICAL CONTEXT

Rosamond developed as a direct result of the presence of Southern Pacific Railroad. Homesteaders moved into the area about the time of the railroad construction in 1876. Southern Pacific sold town lots beginning in 1887. The first school was established there in 1900 (with an enrollment of five students). Mining was originally one of the most important industries in the area for the first two decades in the Rosamond area, with ranching and agriculture gaining significance after 1920. The establishment of Muroc Army Air Field (later to become Edwards Air Force Base) in the 1940s added to the population growth in the area (Burmeister 1977).

SITE DESCRIPTION

The site is located on a slightly elevated area west of a drainage that appears to have been a road at one time. The site is roughly circular in plan view and covers an area of approximately 4,300 m^2 and consists of area relatively clear of vegetation strewn with historic refuse (Fig. 2). The spatial patterning of the historic material suggests several distinct activity areas, including tent areas, a possible corral, and a structure. Also noted were several hearth areas, a cobble "paved" area next to two concrete footings or pilings and a pile of possible kiln materials (burned limestone?). Also noted during the initial survey was a rock pile that resembled a "pioneer grave," being about two meters long and a little over a meter wide, and slightly mounded.

Based on the two "potholes" dug into the site (probably by bottle hunters), the test excavation of a single unit, and general observations, the occupation refuse appears to reflect a short-term habitation of the site. Evidence of both tent sites and perhaps one structure is present, with a minimum of three identified "living" areas and two additional activity loci. These have been designated loci 1 through 5, the relative locations of which can be seen in Figure 2. The remains of at least three separate wooden cots were identified, each within distinct living area (loci 2, 3, and 4). A large activity area (Locus 1) at the eastern edge of the site contains most of the site refuse, including fuel cans, large braided wire bundles, and domestic trash (medicine/condiment bottles, food cans, stoneware sherds, etc.). Much of the scrap lumber also occurred in this area as well at the north end of the site in association with the greatest concentration of posts. Dates of occupation seemed to bracket the period between 1915-1925 based on temporally-sensitive condensed milk cans (Don Simonis, personal communication 1991).

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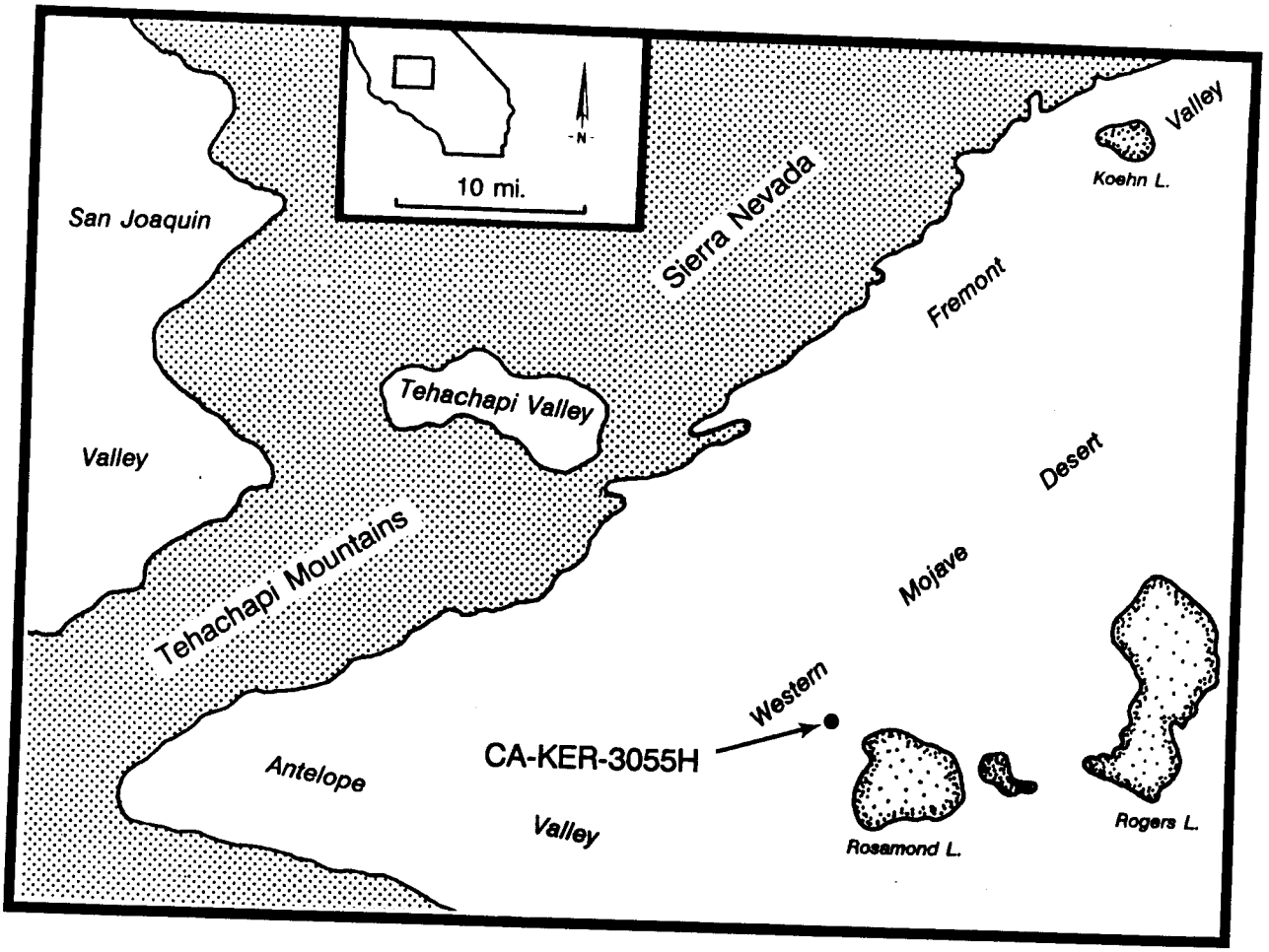

Fig. 1. Location of CA-KER-3052H.

FIELD METHODS

The two main objectives of the field phase of the evaluation of CA-KER-3052H were (1) to test excavate the rock pile that appeared to resemble a human grave, and (2) evaluate the surface structural remnants and refuse for significance. The first objective was accomplished by accurately mapping the feature then excavating a single 1 m^2 excavation unit on the eastern half of the rock feature. The second objective was met by using a transit to map in key structural remains at the site, then by characterizing artifact assemblage. A limited surface collection of selected artifacts was also undertaken.

RESULTS

Test Excavations

Prior to excavation, a detailed map of the feature (Feature 1) was made showing the position of all rocks (Fig. 3). Close inspection revealed that all the rocks were fire-affected, as though they had once been incorporated into a hearth. Interestingly, one of the rocks was a unifacial portable metate, probably gathered from nearby CA-KER-3033. Further scrutiny also showed that the feature was more of a rock ring than rock pile, with a greater accumulation of rocks on the south side of the mound. The feature is oriented true east/west, another reason for

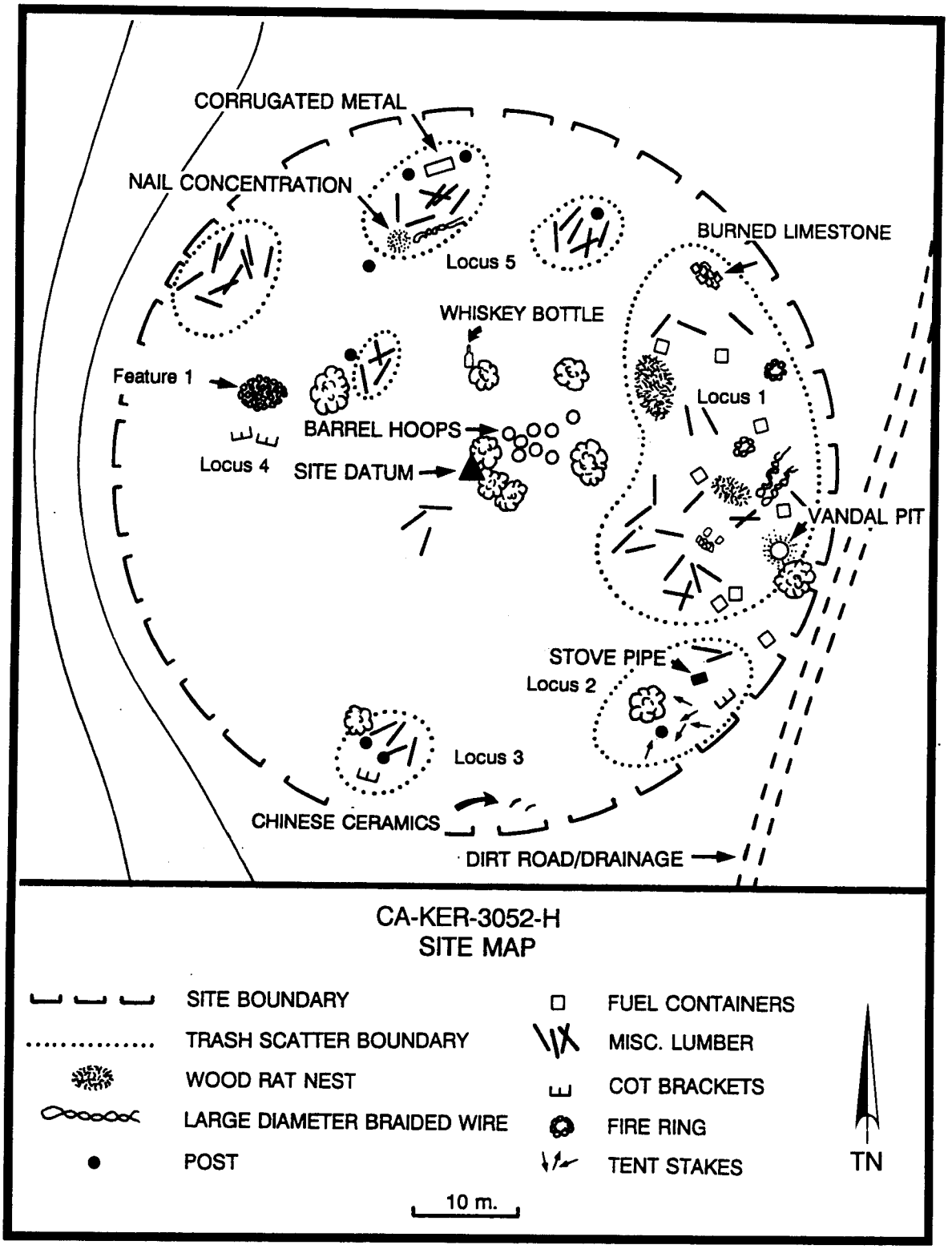

Fig. 2. Map of CA-KER-3052H.

Fig. 3. Feature 1 and TU-1 (stippled object is a small portable metate).

suspecting that it might be a grave (early Christian burials are traditionally positioned with the head to the west and the feet to the east based on the belief that on Judgement Day the dead can rise facing Jerusalem). Since the purpose of the excavation was to determine the presence or absence of a burial, only the east half was excavated. A single 1 m^2 (designated TU-1) was excavated in 10-cm. levels. All excavated soils were passed through 1/8-in. screen.

The soils comprising the small mound were yellowish-orange in color and gave the impression of being oxidized. A small amount of charcoal was recovered from the 10 to 20-cm. level. No cultural materials or bone fragments were encountered during the screening of the excavated soils. Excavation became increasingly difficult with depth; the soils were so compact that hand excavation was ceased at 30 cm. An auger was then used, but was only effective to the depth of a meter.

There was no clear evidence that the soils had been previously excavated; in fact, their compactness suggests that they were undisturbed. It is possible that the slight mound was a stand for an assay furnace or kiln. Burned limestone fragments in a pile on the east side of the site may also indicate these types of activities took place at CA-KER-3052H.

Limited Surface Collection and Artifact Inventory

An inventory of the materials present at the site was undertaken in an attempt to assess site age and function, task specific activity areas, ethnic and gender composition, and duration of occupation. Additionally, a selected number of artifacts were collected for further assessment. Below is a description of these materials.

Building Materials. Building materials, occurring mostly as lumber fragments, were a common constituent of the site surface. Most of this lumber was quite weathered, but appeared to be composed of predominately scrap material. Apart from the posts found in the northern half of the site, there were no standing structures present. The posts form an inverted L-shaped that may have been part of an enclosure. It does not seem substantial enough to have been a horse corral, but could have been an enclosure for sheep, goats, or chickens. However, faunal remains or scat indicating any of these animals are completely absent. Small linoleum pieces, a few shards of window glass, two concrete blocks, numerous nails (especially in the northern part of the site), two corrugated metal sheets (galvanized), and a small amount of chicken wire also were present. A structure may have been in the area of Locus 1 where the concrete blocks may have served as footings for a crude foundation. In front of these blocks was found a small pavement of imported rocks, measuring roughly 80 x 100 cm., perhaps part of an entry way.

A dense scattering of nails was recorded at Locus 4 and may represent either the spot where a keg of nails deteriorated in place or perhaps an area of construction. All nails are wire nails, the type of nail still manufactured today. No machine cut (square nails) were noted. Wire nails were used for all but a few special purposes after 1900 (Gillio et al. 1980). All are smaller than 8D size. A single windmill blade was noted during the site investigation. There are no clear indications that there was a well on the site. It is more likely that this blade, like much of the other material, was scavenged from elsewhere to be used for other purposes.

Cans. Numerous cans were observed during the surface artifact evaluation. Many of these cans were subsistence-related (sardine, meat, condensed milk, fruit/vegetable), others recreational (tobacco), and still others related to other activities (fuel, gunpowder). Table 1 summarizes the types and numbers of cans encountered at the site. All cans were knife opened, some with an "X" pattern.

Most of the cans were found within the confines of Locus 1, although all of the tobacco cans were found concentrated in an area between loci 2 and 3. The cans, along with presence of some amethyst glass, are among the best temporal indicators at the site. The upright, hinge-lid Prince Albert tobacco can was not produced until after 1908 (Rock 1987), and the small, condensed milk cans measuring 2 8/16 x 2 8/16 were only produced between 1915 and 1925 (Don Simonis, personal communication 1991). The mixture of solder-ring and drop cans with "sanitary cans" is indicative of this time period as well; sanitary cans became commonplace in the West by 1911 (Rock 1987:22). The "hole-in-cap" or solder-ring and drop type of can, first developed in 1810, was no longer generally used for most foods after 1920 (Gillio et al. 1980; Rock 1987).

Glass. Glass was another common component to the refuse observed at CA-KER-3052H. Most specimens represented containers for alcoholic beverages or medicines, but other types of containers (condiments, canning jars) were also noted. Table 2 summarizes the types of glass found at the site.

Like cans, bottles can be useful temporal indicators. The presence of amethyst glass indicates the use of manganese as a clarifying agent. Manganese was commonly used in American bottle manufacturing from 1880 to 1915 (Gillio et al. 1980). Aqua glass indicates other clarifying agents and was a frequent additive to glass from 1880 to 1920. In addition to color, the types of manufacturing technology can also be useful in dating bottles. Two of the collected specimens (1-003 and 1-009) were made by the "turn/paste mold" method, used in the American bottle industry from 1880-1920 (Newman 1970). Two others (1-002 [Fig. 4] and 1-005) were manufactured using the Semi-Automatic Bottle Machine that was in operation from 1880-1913 (Newman 1970). The "picnic flask" whiskey bottle bears a characteristic Owen Automatic Bottling Machine scar on its base. This machine was first used in the bottling industry in 1903 (Liddell 1953) and still remains in use today.

Table 1

SUMMARY OF SURFACE CANS, CA-KER-3052H

CAN TYPE	NO. OF SPECIMENS	COMMENTS
Solder-ring/drop	5	vegetable/fruit
sardine (key)	5	--
meat (rectangular)	1	--
lard pails	4	1-lb. size
tobacco tins	5	"Prince Albert"
fuel (kerosene?)	2	"STANDARD OIL CO./PEARL OIL"
fuel (kerosene?)	8	"WARDEN & OXNARD/ELAINE/PITTSBURGH, PA"
milk cans (condensed)	2	2 8/16" x 2 8/16"
milk can (condensed, raised cap)	1	"BORDEN'S CONDENSED MILK/EAGLE BRAND"
sanitary cans	5+	various sizes
fuse (?) can	1	--
gun powder can	1	--

Table 2

SUMMARY OF SURFACE BOTTLE TYPES, CA-KER-3052H

BOTTLE TYPE	GLASS COLOR	COMMENTS	NO. OF SPECIMENS
beverage (soda?)	aqua, amber	crown top	2
whiskey picnic flask	amethyst	Owens Automatic Bottle Machine scar	1
wine bottle base	dark green		1
whiskey bottle	brown	complete; semi-automatic machine marks	1
milk of magnesia	cobalt	--	2
condiment jar	amethyst	decahedron bottle	1
reagent bottle	brown	complete, with zinc threaded cap	1
reagent (?) bottle	brown	top, neck, and shoulder fragment	1
patent medicine?	amethyst	square or rectangular bottles	2
canning jar	aqua	Mason	5±
Mason jar lid liner	white	for zinc lid	2
salad/cooking oil	clear/amber	--	1

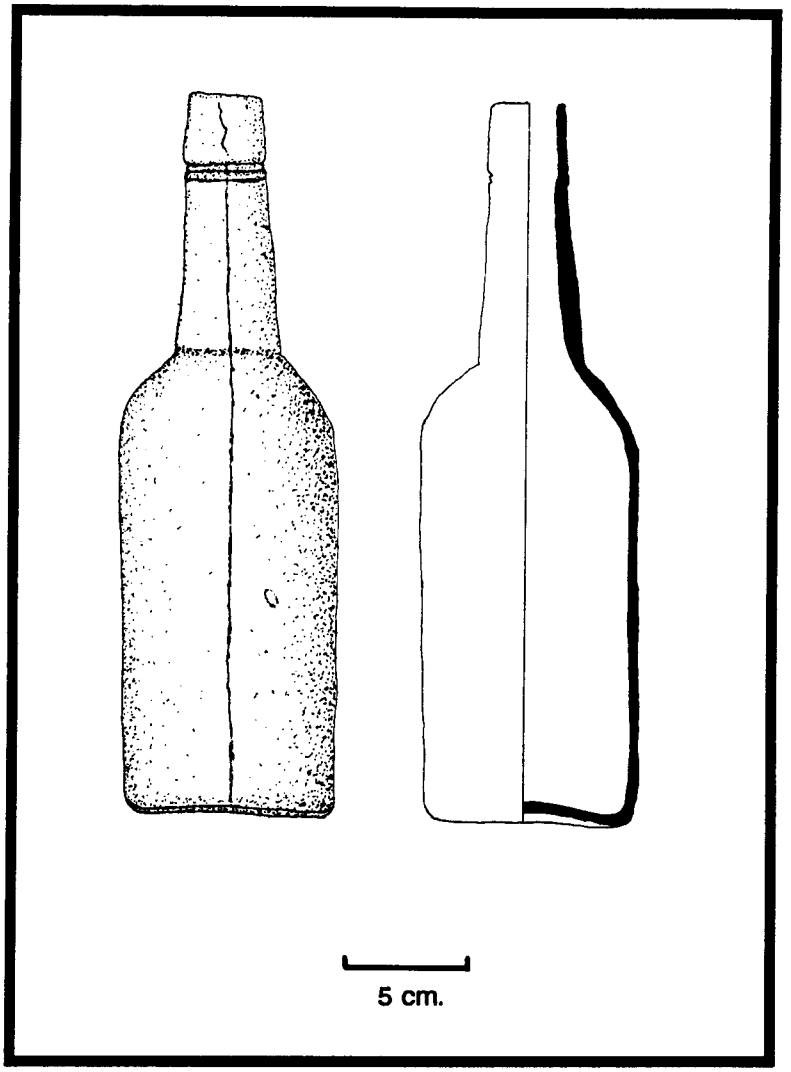

Fig. 4. Dark brown whiskey bottle (1-002) from surface of CA-KER-3052H.

Ceramics. Ceramic artifacts were found only in small numbers during the surface survey. Several sherds of a single stoneware ale bottle were noted in the area of Locus 2. Approximately 10 small, white stoneware sherds from plates or platters ("dinnerware") were noted, none possessing makers marks. Only one sherd from a stoneware plate had a transfer pattern, a pink, green, and gray floral design.

Of particular interest were two sherds of Chinese utilitarian stoneware that were encountered at the southern end of the site. These fragments are the characteristic dark brown commonly associated with Chinese storage vessels for soy sauce, liquors, and salted or dried foodstuffs (Pastron et al. 1981; Brott 1982). The thinness of the pieces (<5 mm.) suggest that they are part of a soy jar rather than a larger storage container. These two sherds by themselves do not indicate the presence of ethnic Chinese at the site, but it seems unusual that this type artifact would be brought to the site by Euroamericans in the first or second decade of the twentieth century. It is possible that an empty jar was collected by one of the occupants of the site as a curiosity or collected and reused as a vessel for oil or other fluids.

Apparel. Some items of apparel were observed, all from Locus 1. These include four hand-drilled shell buttons, one being 7/8-in. in diameter with two-holes and an "eye," the others being 1/2-in. four-hole buttons. The rather crude appearance of these buttons suggests their manufacture prior to the use of automatic button production devices after 1850 (Kirk 1974). Given the temporal indicators from the site, this seems curious, although it is not unusual for buttons to be recycled by families one generation to the next, or for buttons to be held in stock for several years. Another button, a stamped metal Z-hole type, 9/10-in. in diameter, was collected. It bears the inscription, "TOWERS/WIRE FASTENED." Another clothing item, a suspender buckle, also was noted.

Utensils. A single spoon handle with the inscription "X Wm ROGERS X 2" was noted. An unusual homemade cooking container comprised of a wire handle soldered to a can was collected, the handle being twisted and looped at the holding end.

Tools/Equipment. Some items that could be classified as tools or work equipment were observed. Most notable was a large wrench, 28 1/4-in. designed to be used on a 2 3/32-in. nut between Locus 4 and Locus 5. Also found was what appears to have been part of a broom handle with a binding of wire and metal strapping. The metal strap is embossed with stars and quarter moons. A small valve stem attachment with the inscription ". . . ADER UNIVERSAL VALVE BKLYN N.Y. USA." was found at Locus 1; its function is unknown. Also, what appears to be a fuel attachment tank for an assay oven or similar instrument was collected from inside a bush along with a reagent bottle.

Firearms. Evidence of the use of three different firearms are present at the site. these include a .22 caliber rifle or pistol, a .38 caliber pistol, and a 16-gauge shotgun. The .22 cartridges are both short ("F") and extra-long ("P"). The "F" cartridge was manufactured by the Federal Cartridge Company after 1917 (Berge 1980). This caliber of gun also is evidenced by expended shells at CA-KER-3033 and may represent recent hunting or "plinking" activities by locals. The .38 caliber shell noted had the following inscription on the base: "REM-UMC/.38 WCF." This shell dates to the period following the meager of Union Metallic Cartridge Company with Remington after 1911. A single shotgun shell base bearing the headstamp inscription "No 16 1901 REPEATER" The "1901" may represent a patent date.

Miscellaneous Artifacts. Numerous miscellaneous artifacts from various subcategories of material culture were recorded. Barrel hoops from two sizes (10-in. diameter and 25-in. diameter) of barrels were observed, many of them being in the center of the site. A galvanized wash tub, three stovepipes (crushed), what appears to be a very fine-meshed screen (mining sieve?), a mule shoe, wire bundles and loops of all sizes (including cable), a galvanized riveted bucket bale, a two-inch diameter metal pipe, and a wooden keg lid with faded red or orange paint.

Faunal Remains. The only faunal remain noted in the site artifact inventory was a small fragment of worn sea shell or possible cuttlebone (*Sepia* sp.?). The significance of this find is that cuttlebone, today commonly sold as a source of calcium for parakeets, are part of the skeletal structure of cuttlefish. This squid-like mollusk was used as food by the Chinese (Anderson 1988) and possibly medicinal purposes (Goodman 1987). What is significant about its location at the southern portion of the site is that it was found close to the Chinese utilitarian ware sherds described above. The Chinese presence in this region is not unexpected since Chinese are known to have settled in Mojave in the after the 1800s (Burmeister 1977).

The absence of animal bone suggest the ephemeral nature of the camp and the absence of a means of keeping fresh meats from spoiling. The presence of meat and fish cans suggest that most meat protein was obtained from canned sources.

DISCUSSION

A number of important discoveries resulted from both the analysis of the horizontal surface distribution of materials and the various categories of artifacts described above. The presence of distinct activity areas, occupation-specific artifacts, and a fairly large number of temporally-sensitive artifacts give indications of the period of site occupation, site function, and gender/ethnic composition of site inhabitants.

Temporal Indicators

Numerous artifacts recorded at CA-KER-3052H have temporally-specific manufacturing periods that indicate the span of time the site was occupied. A list of these materials and their temporal range is presented in Figure 5. Based on these data, the occupation of the site appears to have been between 1915 and 1925. Many of the items found at CA-KER-3052H that predate 1915 are materials that might be kept in stores for some years after their manufacture or kept by purchasers for several years (buttons, whiskey bottles, condiments). This period would coincide with the various mining activities in the region, especially the Tropico Mine approximately four miles to the north. The USGS 15' quadrangle for the area (Elizabeth Lake) surveyed in 1915 (printed in 1917) show two structures or mines within one-half mile of CA-KER-3052H.

Site Activities

The overall character of the material culture at CA-KER-3052H suggests that the site was both an habitation site and a locality where various work-related tasks were undertaken. The presence of tent stakes, cots, and domestic refuse clearly indicate habitation, while burned rock, burned lime, a possible fuse can, a large reagent bottle, and a fine metal sieve all point toward mining activities. The large metal wrench would have been used on large machinery such as a mine hoist, stamp mill, or other mining-related equipment. Numerous bundles of large-gauge wire found at the site are consistent with wire from cable often associated with mining activities (Karen Swope, personal communication 1991). An abandoned mine shaft is located less than half a kilometer west of the site. The absence of slag from the site suggests that blacksmithing activities were not being practiced here, but the large "furnace stand" and the burned lime suggest the use of intense heat for some purpose, possibly assaying.

Besides possible assaying activities and camping, the presence of a crude alignment of fenceposts may indicate an enclosure around the habitation area. This may have been erected to discourage range cattle from entering the camp while its occupants were away during the day.

Gender/Ethnic Composition

The material culture at the site is consistent with those items commonly found in association with all-male work camps. Many of the items are similar to those recorded at the 1897 Randsburg Railroad construction camps for the spur from Kramer to Johannesburg (Reynolds et al. 1987). Artifacts common to these camps include liquor bottles, tobacco cans, patent medicine bottles, and plain stoneware ceramics. Absent are those artifacts from this period that are gender-specific for women, such as toiletry bottles and cold cream jars. This may be considered a gross generalization, since the absence of such items does not always mean that the site occupants were exclusively male. Based on these rather limited criteria, the material culture suggests that the inhabitants of CA-KER-3052H were predominantly, if not entirely, male.

The intriguing discovery of two artifacts that suggest an ethnic Chinese component of the site are admittedly tantalizing, yet meager. Chinese were known from mining camps throughout the region, settling as close as the town of Mojave (Burmeister 1977). It is not unlikely that a Chinese miner may have camped with others (presumably Euroamericans) at the site.

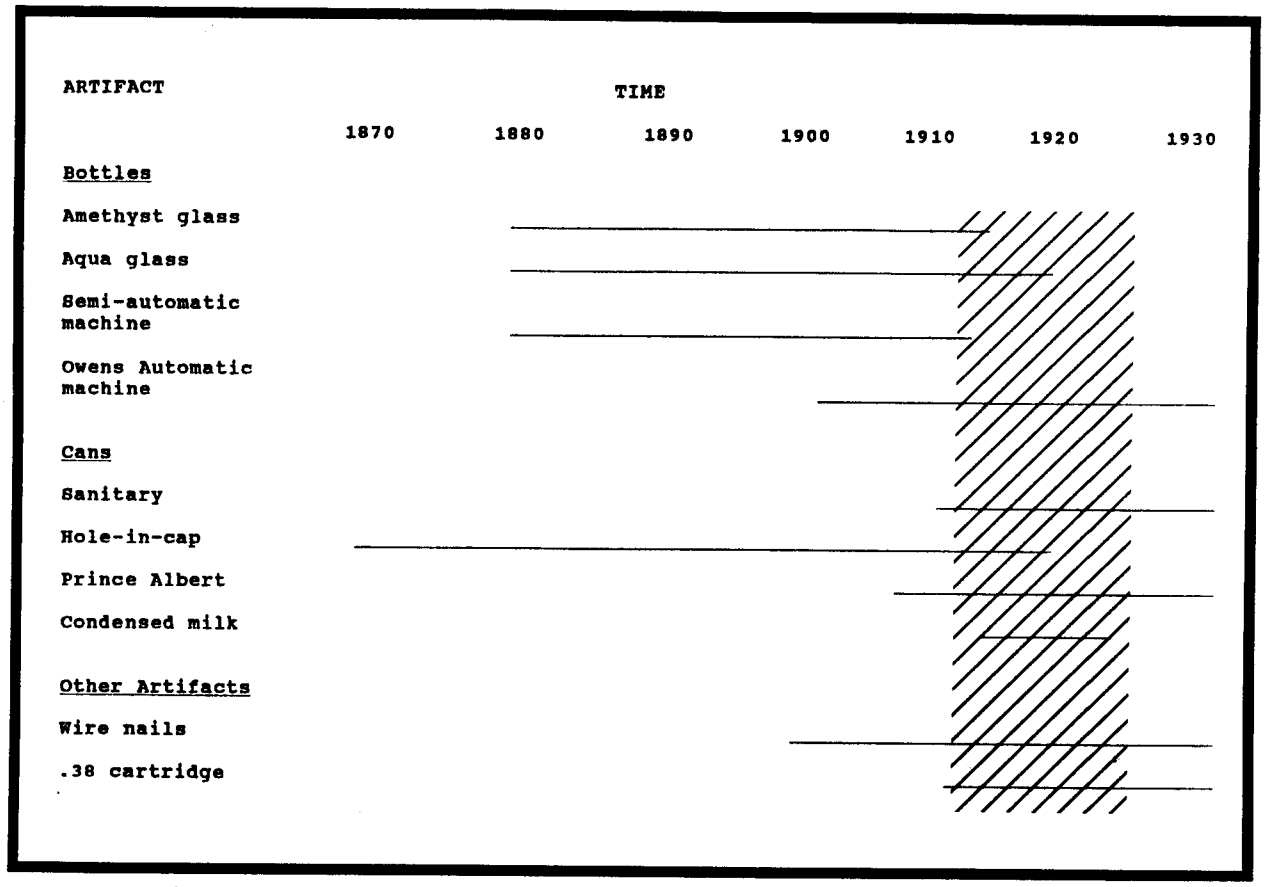

Fig. 5. Temporal ranges of time-sensitive artifacts, CA-KER-3052H. Cross-hatched area indicates most probably time range of site use based on these artifacts.

The number of individuals at the site appears to have been at least three, based on the presence of the remains of a minimum of three sleeping cots. The limited area of the site and the relatively small amount of refuse also suggests a small number of inhabitants for a relatively short period of time.

CONCLUSIONS

CA-KER-3052H appears to have been a small mining camp associated with local mining activities in the Rosamond area between 1915 and 1925. The occupation of the site appears to have been of fairly short duration owing to the relatively small refuse deposit. The current evidence suggests that the may have been at least one structure at the site, and that the camp may have been enclosed by a crude fence. Separate tent loci are obvious at the south end of the site.

It is unfortunate that not every detail of the history of a region can be recorded somewhere for future scholars to access. Archaeology is one of the tools that can be used to help fill in the gaps or at least augment the historical record. In Hidden Valley, we now know a little more about some of the historical land use of this area at the early part of the 20th century.

ACKNOWLEDGEMENTS

I thank Greg Clift, Scott Jackson, Peggy Murphy, Richard Osborne, and Karen Swope for their valuable assistance in the fieldwork. Karen Swope also assisted in the interpretation of the site and many of its artifacts. Greg Clift is responsible for artifact illustrations, and Richard Osborne produced the final drawing of the site map.

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ARCHAEOLOGICAL INVESTIGATIONS AT CA-KER-2852 IN ROSAMOND, KERN COUNTY, CALIFORNIA

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Several sites were tested and evaluated as part of an environmental study for a proposed residential development near Rosamond by California State University Bakersfield (Everson and Sutton 1990; Jackson and Yohe 1991). The results from the work at a small rockshelter (CA-KER-2852) are presented below.

SETTING

The rockshelter (CA-KER-2852) is located approximately two miles northwest of Rosamond in southeastern Kern County (Fig. 1). The site is located in a saddle of rocky, andesitic extrusion in the Rosamond Hills that forms a part of the western Mojave Desert at an elevation of 807.7 m. (2,650 ft.). The site primarily is in a Creosote Bush Scrub plant community. Ethnographically the Rosamond area was claimed by the Kawaiisu (for further information see Kroeber 1925; Zigmond 1986).

SITE DESCRIPTION

The CA-KER-2852 site (Fig. 2) consists of a small rockshelter, a place where overhanging rocks or rock outcrops could provide some shelter from the elements. The apron fronting the rockshelter also is part of the site. This site exhibits evidence of lithic reduction and possible quarrying activities, with most of the material consisting of rhyolite flakes. A few specimens of chert, chalcedony, jasper, and basalt also are present. The rockshelter itself is comprised of a southward-opening overhang of breccia bedrock jutting upward from a saddle. The adjacent slopes are covered with stable desert pavement and dotted with creosote and scrub brush. The site has been impacted by modern "campers." Two vandal pits were noted inside the shelter, and a number of items identifiable as modern trash were observed.

GENERAL FIELD METHODS

The site was mapped with the aid of a transit and stadia rod, compass, and meter tape. This included the recording of locations of important topography and cultural features. A datum was arbitrarily established and both test units and most collected surface artifacts were mapped from this point. All bearings were read from true north. A complete surface collection was made of the site in order to establish site boundaries. Only formed artifacts were collected and mapped.

Two test excavation units were established judgementally on the site. TU-1 was a 1 x 2 m. unit and TU-2 was a 1 x 1 m. unit. Both units were excavated in arbitrary 10-centimeter increments to bedrock. Excavation was by shovel and trowel. All material was screened through 1/8-in. mesh. TU-1 was placed in the central area of the rockshelter, under the dripline. TU-2 was placed in the western area of the rockshelter and also under the dripline. Both units were oriented true north (Fig. 2).

RESULTS

A total of 160 artifacts was collected from CA-KER-2852 and are summarized in Table 1. Two bifaces, four multidirectional cores, two of which are illustrated (Fig. 3), one "edge-modified" flake, one mano (Fig. 4), and 152 flakes were collected. A distribution and material of the debitage is presented in Table 2. The rhyolite debitage from TU-1 was classified into three groups i.e., primary, secondary, and tertiary (see Table 3).

Kern County Archaeological Society Journal 4:73-80 (1993).

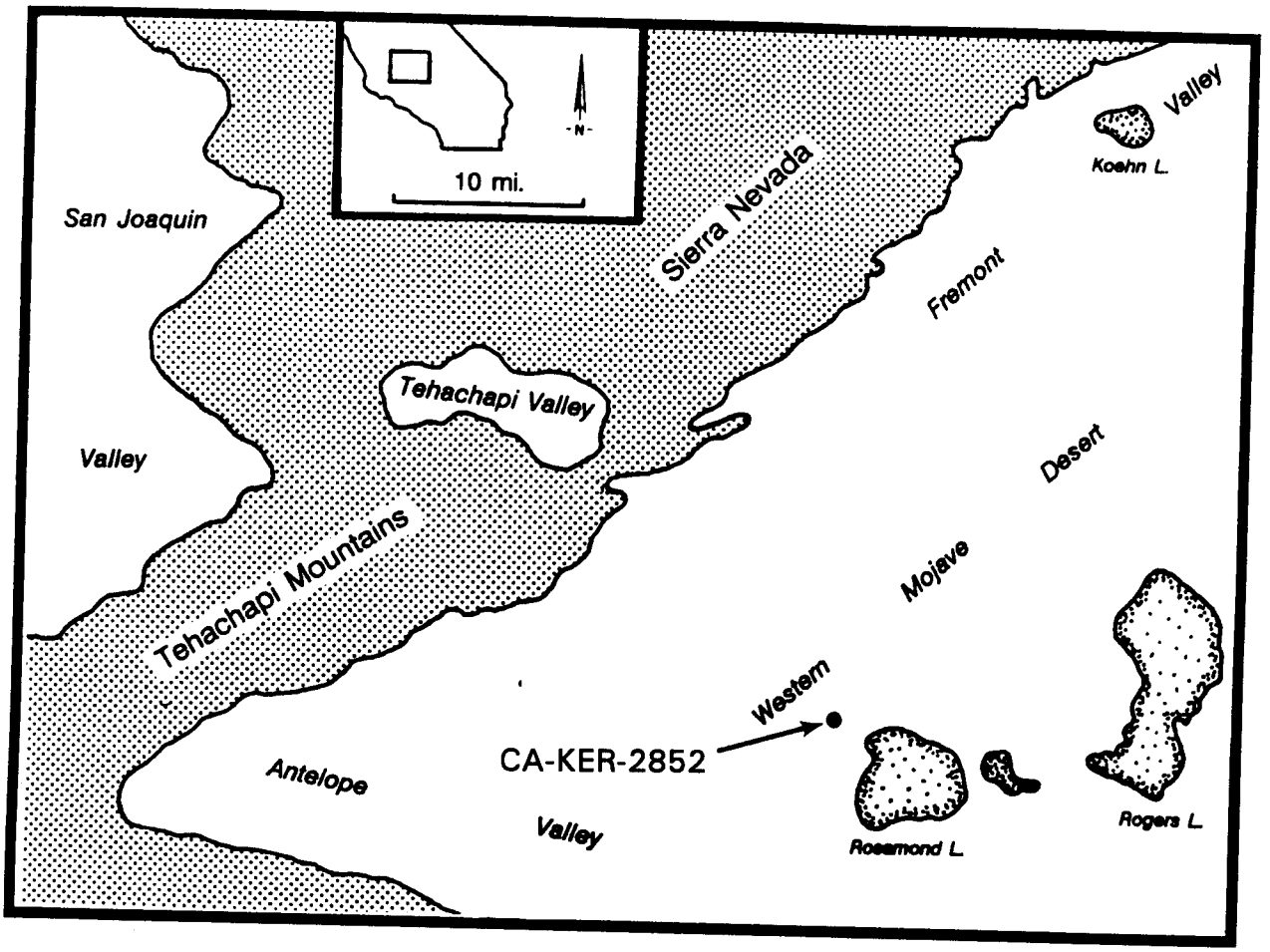

Fig. 1. General location of CA-KER-2852.

Six small unidentifiable (possibly small rodent) bone fragments were recovered. Four were unburned and two were burned and all came from the 0 to 10-cm. level of the test units.

In the 10 to 20-cm. level of TU-1, two hearth features were encountered (see Fig. 4). Both features were still present in the 20 to 30-cm. level. Soil samples were removed from both hearths for material analysis and a charcoal sample was taken from Hearth A. The charcoal sample removed from Hearth A was combined with charcoal recovered from the soil sample taken in the 20 to 30-cm. level and sent to Beta Analytic for radiocarbon analysis. An assay of 800 $\pm$ 80 radiocarbon years before present (RCYBP) was obtained (Beta-47544). There was not enough charcoal recovered from Hearth B for a standard radiocarbon assessment. Both hearths were sitting on bedrock, and the base rock exhibited burn marks.

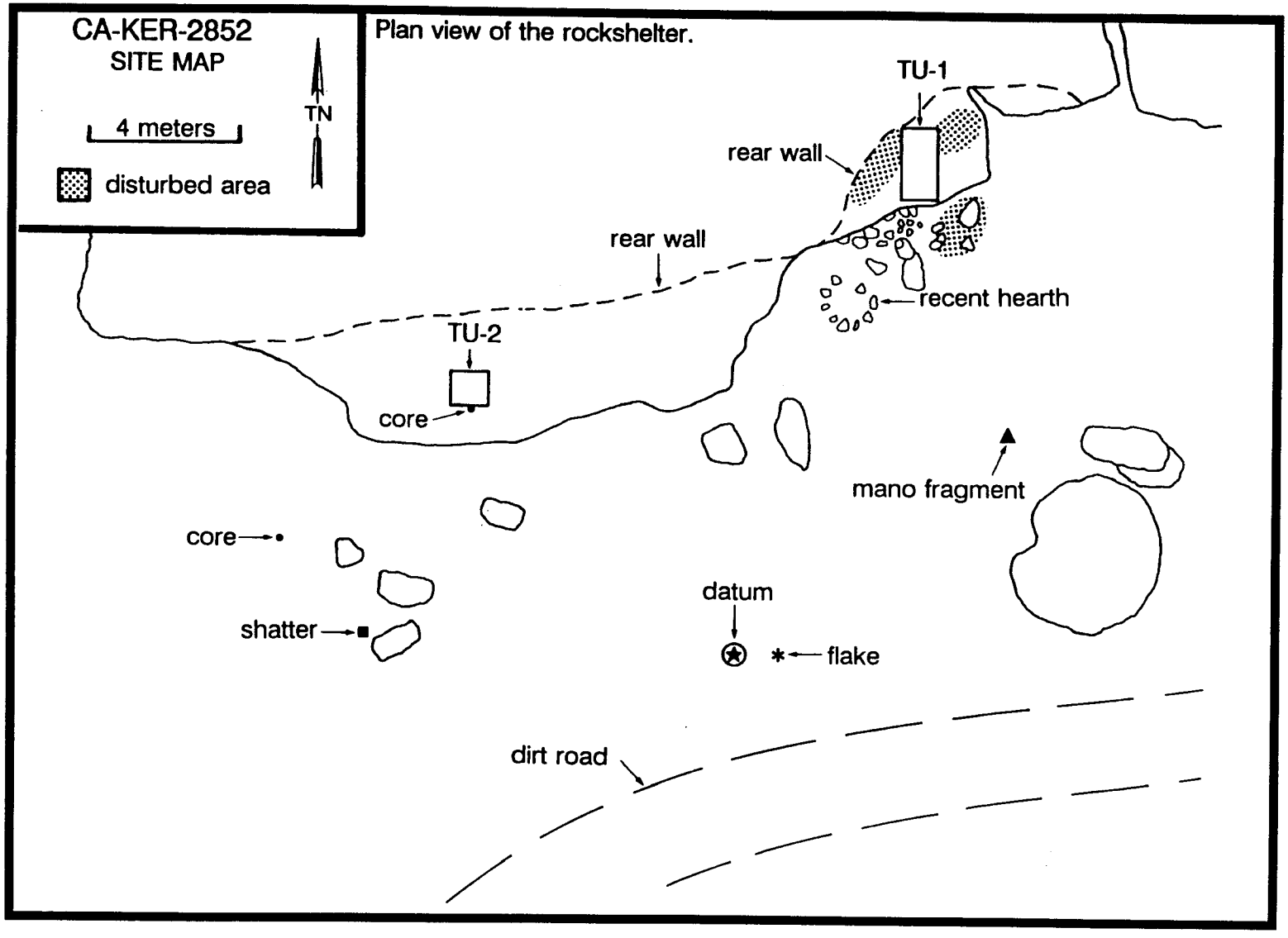

Fig. 2. Map of the CA-KER-2852 site.

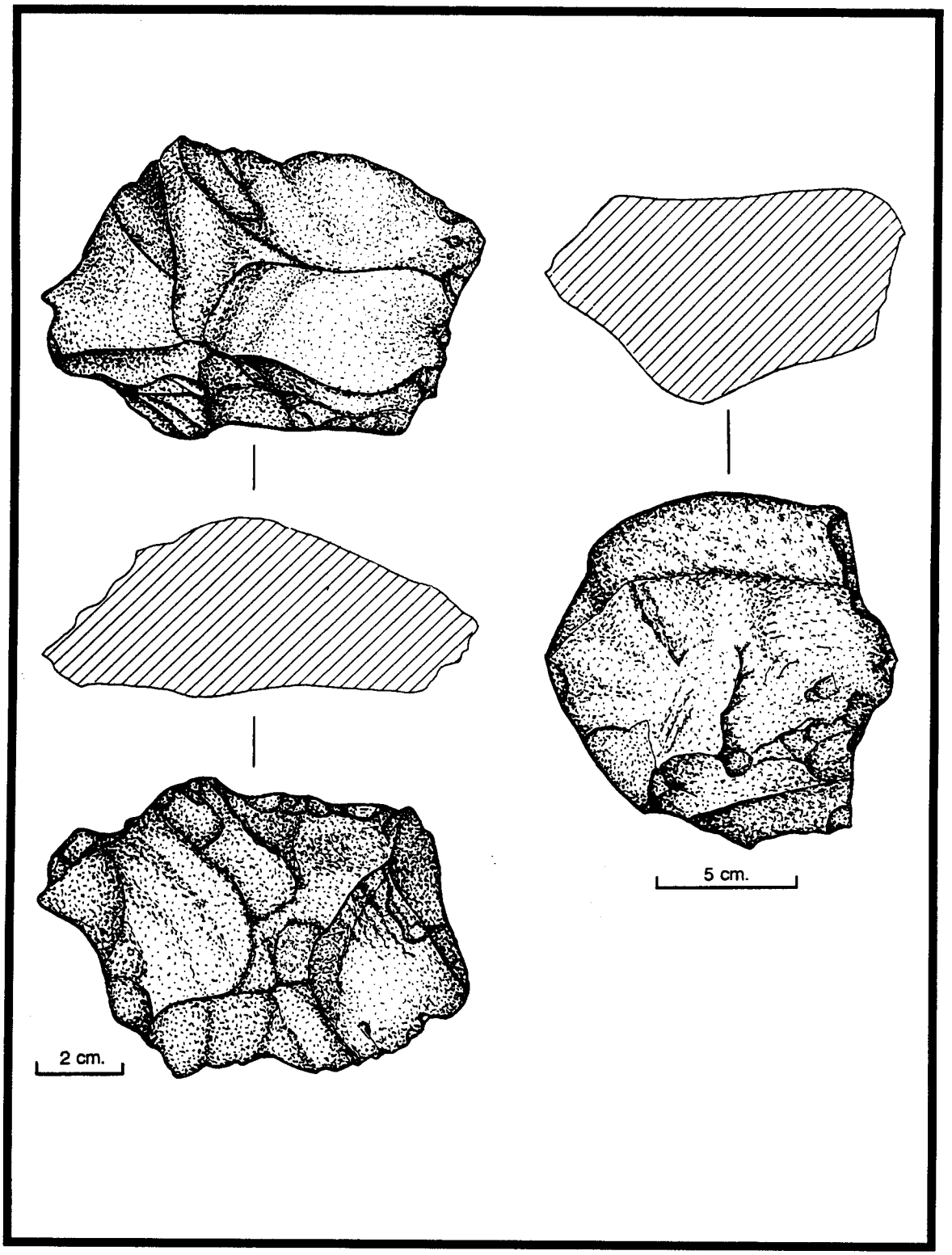

Fig. 3. Multidirectional cores from CA-KER-2852.

Table 1

ARTIFACT PROVENIENCE AND ATTRIBUTES[1], CA-KER-2852

ARTIFACT	PROVENIENCE	MATERIAL	L	W	T	WEIGHT
biface fragment	surface	rhyolite	40.1	34.5	10.6	16.1
biface fragment	surface	rhyolite	67.6	41.1	18.3	51.9
core	surface	rhyolite	103	69	41	231.1
core	surface	rhyolite	130	126	70	1238.1
core	TU-1, 0 to 10 cm.	rhyolite	77	64	19	88.8
core	TU-1, 0 to 10 cm.	rhyolite	87	40	22	86.8
"edge-modified" flake	TU-2, 0 to 10 cm.	rhyolite	39.5	25.9	8.5	7.2
mano fragment	surface	basalt	82	58	37	209.7

[1] in millimeters and grams

Table 2

DEBITAGE DISTRIBUTION[1] BY LEVEL, ALL UNITS, CA-KER-2852

MATERIAL/ LEVEL	RHYOLITE	CHALCEDONY	JASPER	CHERT	TOTALS
SURFACE	--	2 (104.27)	--	--	2 (104.27)
0-10	95 (409.07)	1 (0.69)	1 (1.31)	1 (46.0)	98 (457.07)
10-20	28 (410.37)	--	1 (0.15)	--	29 (410.52)
20-30	14 (91.19)	--	--	--	14 (91.19)
30-40	4 (3.01)	--	--	--	4 (3.01)
40-50	4 (96.1)	--	--	--	4 (96.1)
50-60	--	--	--	--	--
TOTALS	145 (1009.74)	3 (104.96)	2 (1.46)	1 (46.0)	151 (1173.16)

[1] number and weight in grams

Table 3

RHYOLITE DEBITAGE[1] TU-1, CA-KER-2852

FLAKES/ LEVEL	TERTIARY CORTEX	PRIMARY FLAKES	SECONDARY FLAKES	TOTALS
0-10	51 (144.76)	6 (133.11)	8 (61.58)	65 (339.45)
10-20	20 (150.14)	2 (191.50)	6 (48.87)	28 (390.51)
20-30	11 (54.70)	--	3 (36.49)	14 (91.19)
30-40	4 (3.01)	--	--	4 (3.01)
40-50	2 (6.34)	2 (47.48)	--	4 (53.82)
50-60	--	--	--	--
TOTALS	88 (358.95)	10 (372.09)	17 (146.94)	115 (877.48)

[1] numbers and weight in grams

CONCLUSIONS

Site CA-KER-2852 is interpreted as quarry/reduction locality site used in conjunction with the rock shelter as a temporary/short-term camp. The fine-grained rhyolite, which constituted the majority of lithic materials recovered (96% by numbers of flakes, 86% by weight), is present as fragments in the breccia rock outcrop and as boulders in the general area of the site. Although there are a large number of tertiary rhyolite flakes (n = 88 or 75%) recovered from TU-1 (which could indicate the finishing of stone tools at the site), the lack of any complete or broken tools, (only one broken rhyolite bifacial preform was collected) would indicate otherwise. While not great in number (27), the primary and secondary flakes with cortex weigh considerably more, 519.03 grams (59.2%), than those without cortex, 358.85 grams (40.8%) which would indicate that the site was probably used as a quarry and primary reduction site. The mano fragment, while not a clear indicator by itself, is evidence of possible food processing on the site.

It is possible that CA-KER-2852 may have functioned as a "satellite camp" to other sites in the Rosamond area. But without further data it is impossible to define the temporal or other relationships between sites in the area.

ACKNOWLEDGEMENTS

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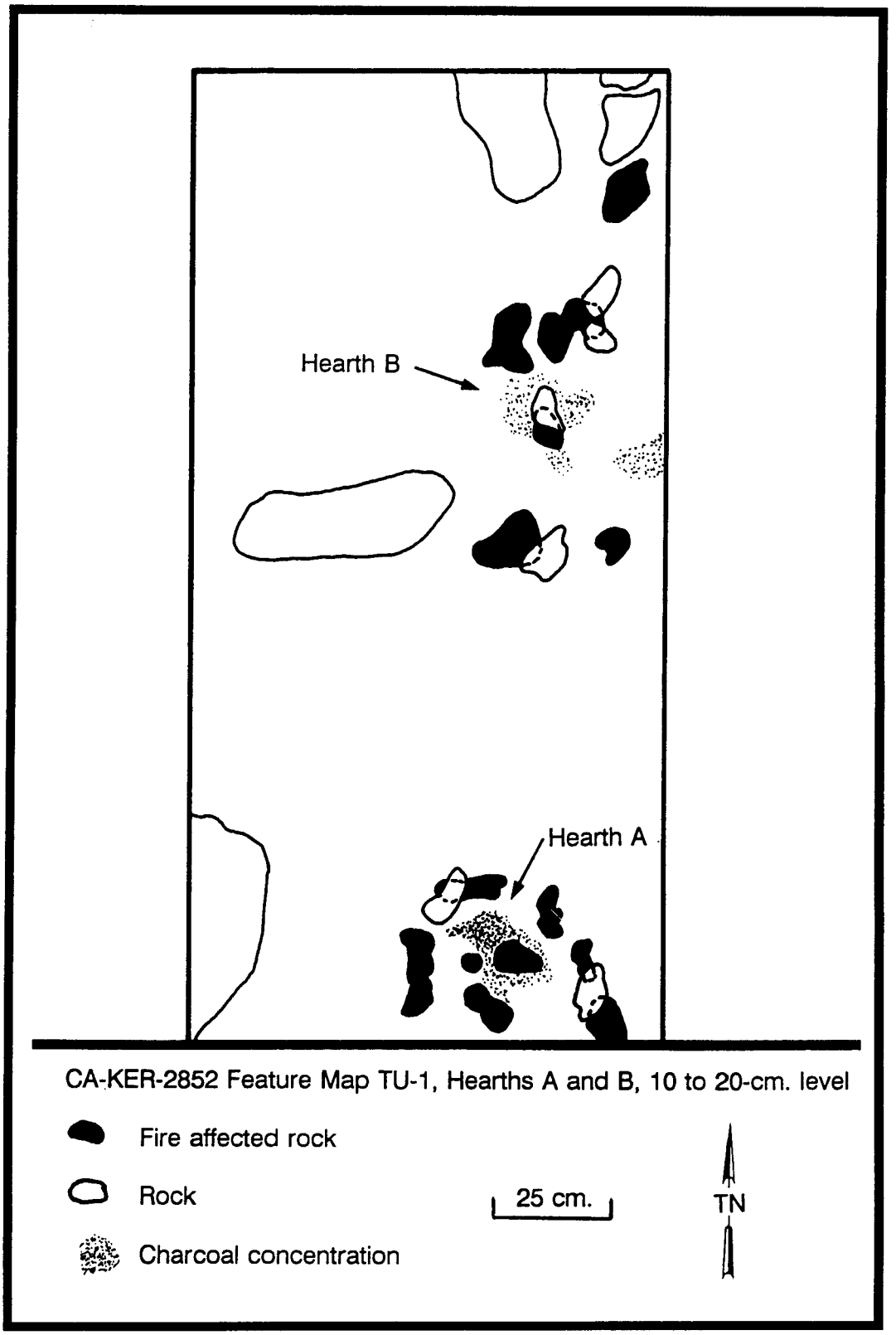

Fig. 4. Hearths A and B, CA-KER-2852.

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ARCHAEOLOGICAL INVESTIGATIONS CA-KER-3033, AT A SMALL LITHIC REDUCTION SITE IN ROSAMOND, KERN COUNTY, CALIFORNIA

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Eleven prehistoric archaeological sites, one historic, and three isolated artifacts were identified during a cultural resource survey conducted by California State University Bakersfield (Yohe 1991). One site, CA-KER-3033, was the subject of testing and data recovery in response to requirements of Kern County regarding cultural resources on land proposed for real estate development. During the testing phase, a substantial subsurface deposit was discovered which merited further investigation. The results of these efforts are presented herein.

LOCATION AND SETTING

The CA-KER-3033 site is located in Hidden Valley, north of the Rosamond Hills that forms part of the western Mojave Desert (Fig. 1). It consists of a scatter of flaked stone artifacts located just west of an ephemeral drainage situated within a broad alluvial plain at an elevation of 931 meters (2,560 ft.). The terrain of the site is generally flat, sloping slightly in a southwesterly direction. CA-KER-3033 is located in a primarily Creosote Bush Scrub community. The Kawaiisu claimed the Rosamond area (Kroeber 1925; Zigmond 1986).

PREVIOUS RESEARCH IN THE ROSAMOND AREA

The prehistoric archaeology record of the Rosamond area is becoming increasingly better known as population growth and development of the Rosamond area has necessitated archaeological inventory work to be performed. The first reported study for the area was by Glennan (1971), who investigated the Sweetser site (CA-KER-302), an extensive site located on mile southwest of the project area. Based on that work, Glennan (1971) suggested the existence of a "Rhyolite Tradition" dating roughly to 2,000-4,000 B.C. The establishment of this time period by Glennan (1971:30) was based on comparative archaeological materials from Lake Mojave, the eastern Mojave Desert, Death Valley, and Owens Valley. As a result of Glennan's study, and important research goal for the Rosamond area is the establishment of a regional chronology.

A number of prehistoric and historic sites and isolated finds have been recorded two miles west and south of the project area. Two nearby quarry/workshops sites, CA-KER-2314 and -2330, were investigated by Sutton (1988). Surface collections and excavations produced, in addition to chalcedony and rhyolite flakes, cores, hammerstones, and bifaces.

A portion of a large site (CA-KER-519) was tested and surface collected by Parr (1989). This was the southern terminus of an extensive, though diffuse, rhyolite quarry/workshop or assay site representing one aspect of a prehistoric lithic procurement/reduction system. Surface collection produced numerous rhyolite flakes and a single groundstone fragment. A test excavation revealed that no substantial subsurface deposit was present, at least in the extreme southern part of the site.

Site CA-KER-2546 (located two miles south of CA-KER-3033), a discrete lithic reduction site, containing a relatively large number of artifacts in a small area, was tested by Parr (1990). A total of 109 artifacts was surface collected and a single test unit excavated. Although the subsurface deposit was slight the surface collection contained a varied assemblage including rhyolite, jasper, chalcedony, and obsidian debitage; eight cores; an obsidian biface fragment; and a fragment of incised slate. Site CA-KER-2547 in proximity to CA-KER-2546, consisted of a fragment of a basalt bowl, a fragmented metate made of a white, coarse-grained stone, and a rhyolite core.

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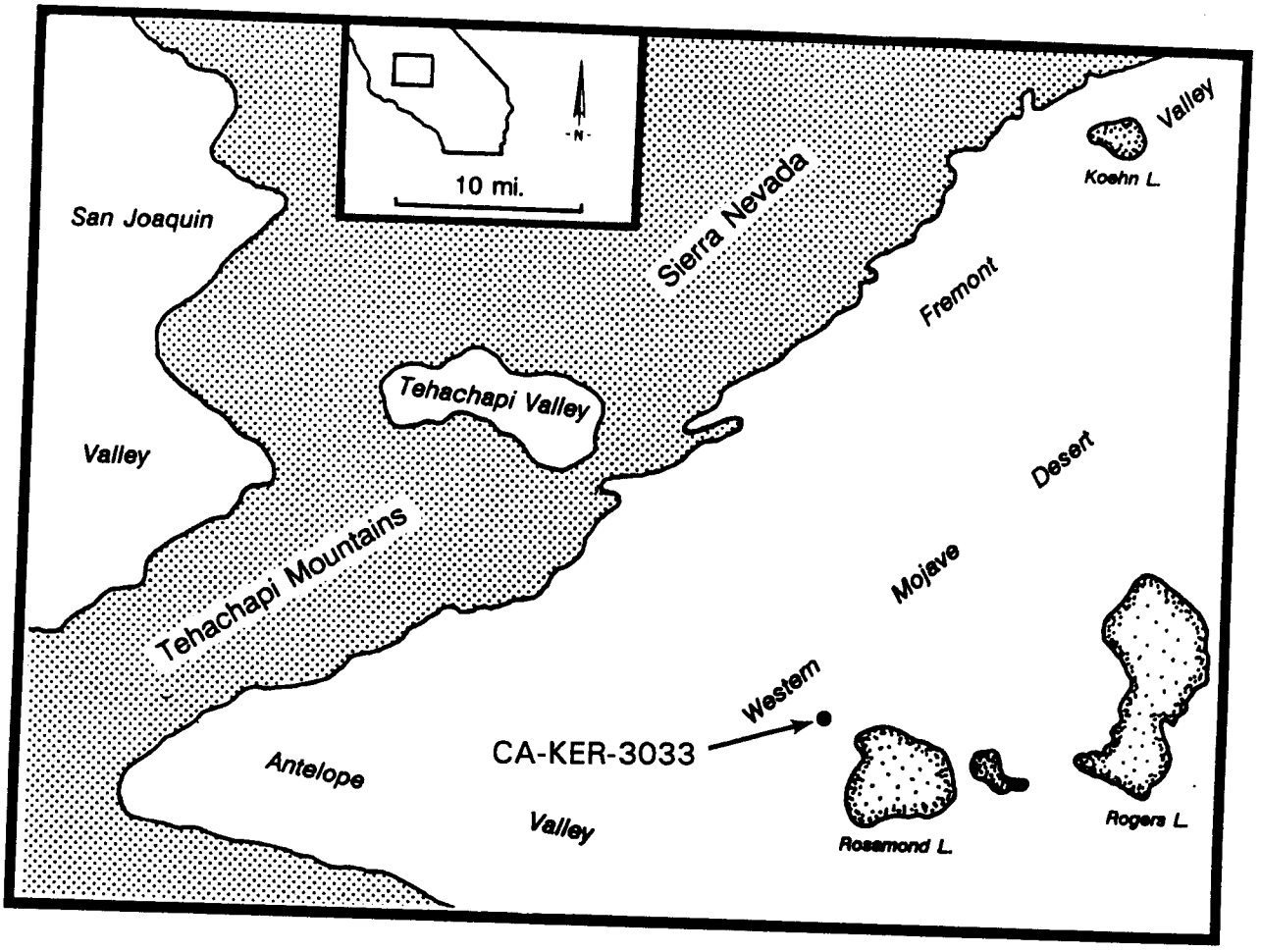

Fig. 1. General location of CA-KER-3033.

Archaeological site CA-KER-2990, located approximately three miles east of CA-KER-3033, consists of a small secondary lithic reduction area and a short-term camp (Jackson and Yohe 1991). The surface of this site contained 26 flakes (88% of which are rhyolite). One test unit yielded an additional ten flakes and relative absence of a substantial subsurface deposit.

Site CA-KER-2852, located 1/2 mile south of CA-KER-3033, consists of a small quarry site used in conjunction with a short-term camp at a rockshelter (Scott 1991; see this volume). Surface collected artifacts included two rhyolite bifaces, two multidirectional rhyolite cores, and two chalcedony flakes. The surface of the site contained areas of lithic reduction, primarily of the local rhyolite materials. Test excavations of the rockshelter revealed a shallow deposit (50 cm.) with two hearths, one of which yielded charcoal that produced a radiocarbon date of 800 $\pm$ 80 radiocarbon years.

The area surrounding CA-KER-3033 contains a wide variety of sites ranging from small lithic reduction sites to complex long term habitation sites. Temporally, these are believed to range from 6,000 B.P. to historic times.

SITE DESCRIPTION

The CA-KER-3033 site (Fig. 2) consists of a scatter of flaked stone artifacts located just west of an ephemeral drainage situated within a broad alluvial plain at an elevation of 931 meters (2,560 ft.). Within the northern portion of CA-KER-3033, a relatively high concentration of rhyolite flakes and a nearly complete biface was recorded (Yohe 1991). Although no archaeological features were observed on the surface, it was felt that a subsurface cultural deposit may exist at this site. Testing (during September and October 1991) confirmed this belief, and data recovery was conducted (in November and December 1992).

GENERAL FIELD METHODS

Two 1 x 2 meter test units and eight 1 x 1 meter units were excavated during the testing and data recovery phases at site CA-KER-3033. The location of the test units were chosen judgementally within a one-meter grid based on the surface distribution of artifacts.

Each of the test units was excavated in arbitrary 10 cm. levels by shovel and trowel. All soils from the test units were passed through 1/8-inch mesh screen and all cultural materials were saved, bagged, and labeled by unit and level. The finished depth of the units varied depending on the findings during the test excavations of the site (Table 1). An approximate 10% sample of site was excavated and processed.

SOILS AND STRATIGRAPHY

During the excavations, three soil changes were noted. They were identified as the upper soil stratum (A) consisting of a pale brown (HUE 10YR 6/3) gravelly silt, the middle stratum (B) consisting of a light yellowish brown (HUE 10YR 6/4) gravelly silt, and the lower stratum (C) consisting of a yellowish brown (HUE 10YR 5/4) gravelly silt. The darkest, most "midden-like" soil was noted in stratum B, contained the majority of the cultural remains.

FEATURES

One feature (Feature A), a possible hearth was discovered in TU-9 (Fig. 3). The feature appeared in the 20 to 30-cm. level and continued in the 30 to 40-cm. level. Two soil samples were taken from the center of the feature in hopes of obtaining a radiocarbon date. Throughout the 20 to 40-cm. levels of units 1, and 5 through 10, fire-affected rock (FAR) was noted, but none were collected. It is possible that the FAR is related to undiscovered features or the feature noted above.

MATERIAL CULTURE

A total of 6,634 artifacts was recovered during the archaeological investigations (see Table 2). Debitage comprised the bulk of the collection (6,604 flakes [99.55%]).

FLAKED STONE

Biface Fragments

Twenty-two biface fragments were recovered at CA-KER-3033. The provenience and attributes of the bifaces are presented in Table 3 and several are illustrated (Figs. 4 and 5). All of the bifaces were of rhyolite.

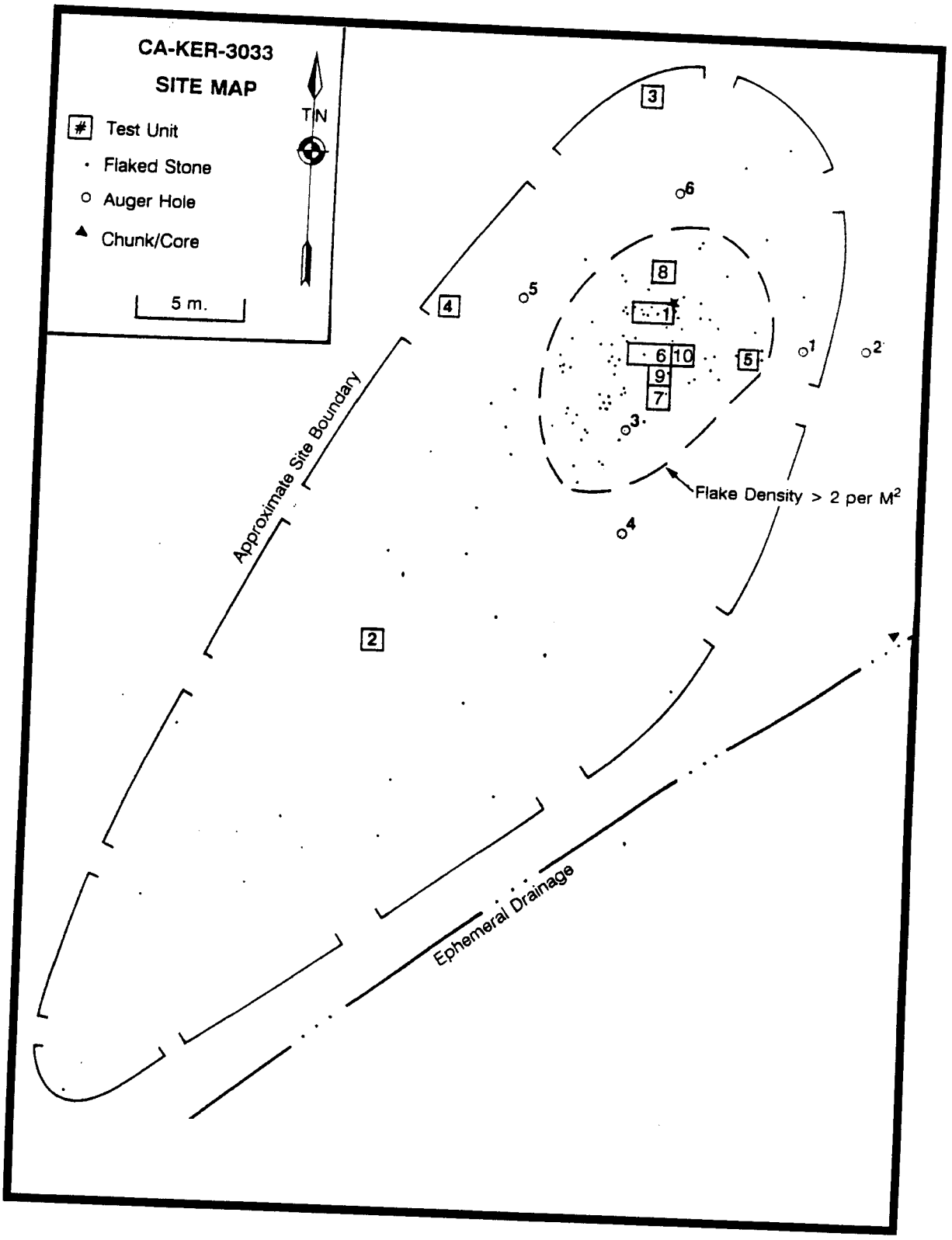

Fig. 2. Map of the CA-KER-3033 site.

Table 1

DEPTHS (cm.) OF EXCAVATION UNITS, CA-KER-3033

TEST UNIT	DEPTH AS 1 x 2	DEPTH AS 1 x 1	CUBIC METERS EXCAVATED
1	2.2	--	2.2
2	--	0.4	0.4
3	--	0.4	0.4
4	--	0.6	0.6
5	--	1.1	1.1
6	2.0	--	1.1
7	--	0.5	0.5
8	--	0.5	0.5
9	--	0.5	0.5
10	--	0.6	0.6
Totals	4.2	4.6	8.8

Table 2

VERTICAL ANALYSIS OF ARTIFACT DISTRIBUTION UNITS 1 THRU 10, CA-KER-3033

LEVEL/ ARTIFACT	Sur.	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-110	TOTALS
groundstone	--	--	--	--	1	--	--	--	--	--	--	--	1
biface fragments	1	--	1	9	8	3	--	--	--	--	--	--	22
uniface fragments	--	--	--	1	--	--	--	--	--	--	--	--	1
cores/ fragments	1	--	--	2	1	--	1	--	--	--	--	--	4
debitage	87	572	913	2,344	1,122	754	429	158	85	73	60	7	6,604
bead	--	--	--	--	--	--	--	--	--	1	--	--	1
Totals	89	572	914	2,356	1,132	757	430	158	85	74	60	7	6,634

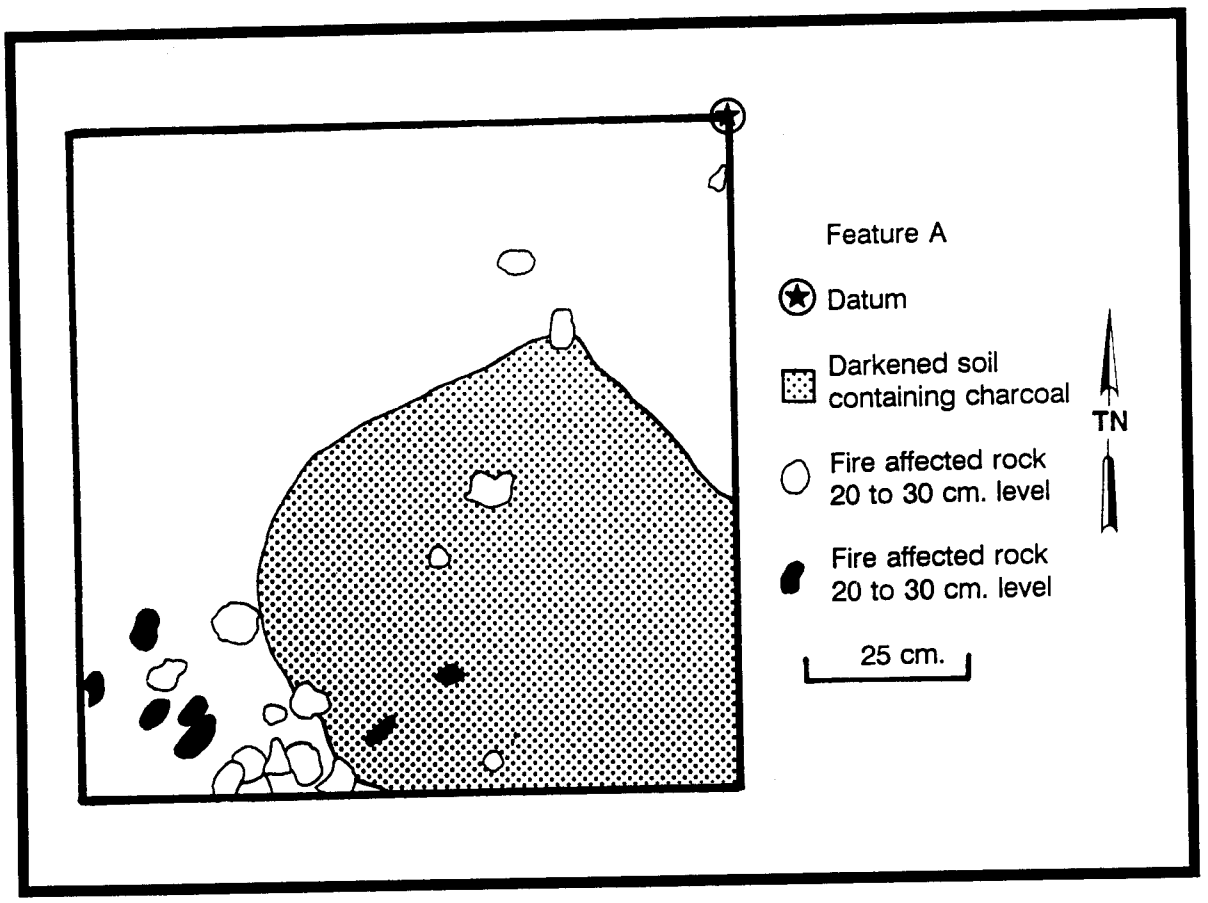

Fig. 3. Feature A. Hearth located in the 20 to 40-cm. levels of TU-9, CA-KER-3033.

Uniface

A single uniface was collected. The specimen is made from a secondary rhyolite flake and retains a portion of cortex opposite the modified edge (Fig. 6a).

Cores

Three cores and one core fragment were recovered from CA-KER-3033. All of the specimens were multidirectional. Two chalcedony core fragments fit together and are considered as one core. The provenience and attributes of the cores are presented in Table 4 and illustrated in Figure 6 (b-d).

Debitage

The majority of the debitage is waste flakes resulting from tool manufacture and/or core reduction. Similar to many sites in the Rosamond region, the majority of lithic materials consisted of rhyolite (6,415 flakes, [97.14%]). Rhyolite debitage comprises the majority of the artifact subsurface assemblage, 6,339 flakes (97.27%); although chalcedony (169 flakes; 2.59%), basalt (7 flakes; 0.12%), quartz (one flake; 0.01%), and obsidian (one flake; 0.01%) occurred in small numbers (Table 5).

Table 3

PROVENIENCE[1] AND ATTRIBUTES[2] OF BIFACE FRAGMENTS, CA-KER-3033

CAT. NO.	PROVENIENCE	MATERIAL	LENGTH[3]	WIDTH	THICKNESS	WEIGHT	FIG.
S-105	Surface	rhyolite	62.0	29.0	7.1	13.80	4b
1-013	TU-1, 20-30	rhyolite	33.5	25.0	6.0	4.40	4a
1-015	TU-1, 30-40	rhyolite	77.0	60.0	22.5	80.50	5a
1-006a	TU-1, 20-30	rhyolite	26.5	10.5	5.0	1.60	4d
1-008	TU-1, 30-40	rhyolite	40.0	36.3	9.0	11.30	4c
6-008	TU-6, 20-30	rhyolite	42.5	32.9	8.3	11.50	4e
6-009	TU-6, 20-30	rhyolite	64.3	44.5	23.0	67.20	--
6-010	TU-6, 20-30	rhyolite	48.0	47.8	9.8	26.29	4f
6-011	TU-6, 20-30	rhyolite	55.5	66.0	19.6	70.75	--
6-012	TU-6, 20-30	rhyolite	56.3	52.5	11.5	55.30	--
6-014	TU-6, 20-30	rhyolite	46.1	53.0	10.0	24.67	--
6-015	TU-6, 20-30	rhyolite	84.0	62.7	25.0	136.51	5b
6-017	TU-6, 30-40	rhyolite	41.4	34.4	10.2	17.04	--
6-018	TU-6, 30-40	rhyolite	44.5	36.5	9.8	17.89	--
6-019	TU-6, 30-40	rhyolite	21.3	32.6	7.0	5.23	--
6-023	TU-6, 40-50	rhyolite	29.7	42.7	12.8	11.87	--
6-024	TU-6, 40-50	rhyolite	21.5	27.1	6.8	4.68	--
8-011	TU-8, 30-40	rhyolite	100.6	54.5	19.6	99.40	--
9-013	TU-9, 30-40	rhyolite	42.6	34.4	12.0	17.10	--
9-019	TU-9, 40-50	rhyolite	55.8	39.6	11.3	43.03	--
10-003	TU-10, 10-20	rhyolite	66.0	60.5	22.5	99.96	--
10-009	TU-10, 30-40	rhyolite	44.3	31.2	9.8	13.31	--

[1] unit and level (cm.); [2] millimeters and grams; [3] incomplete measurements

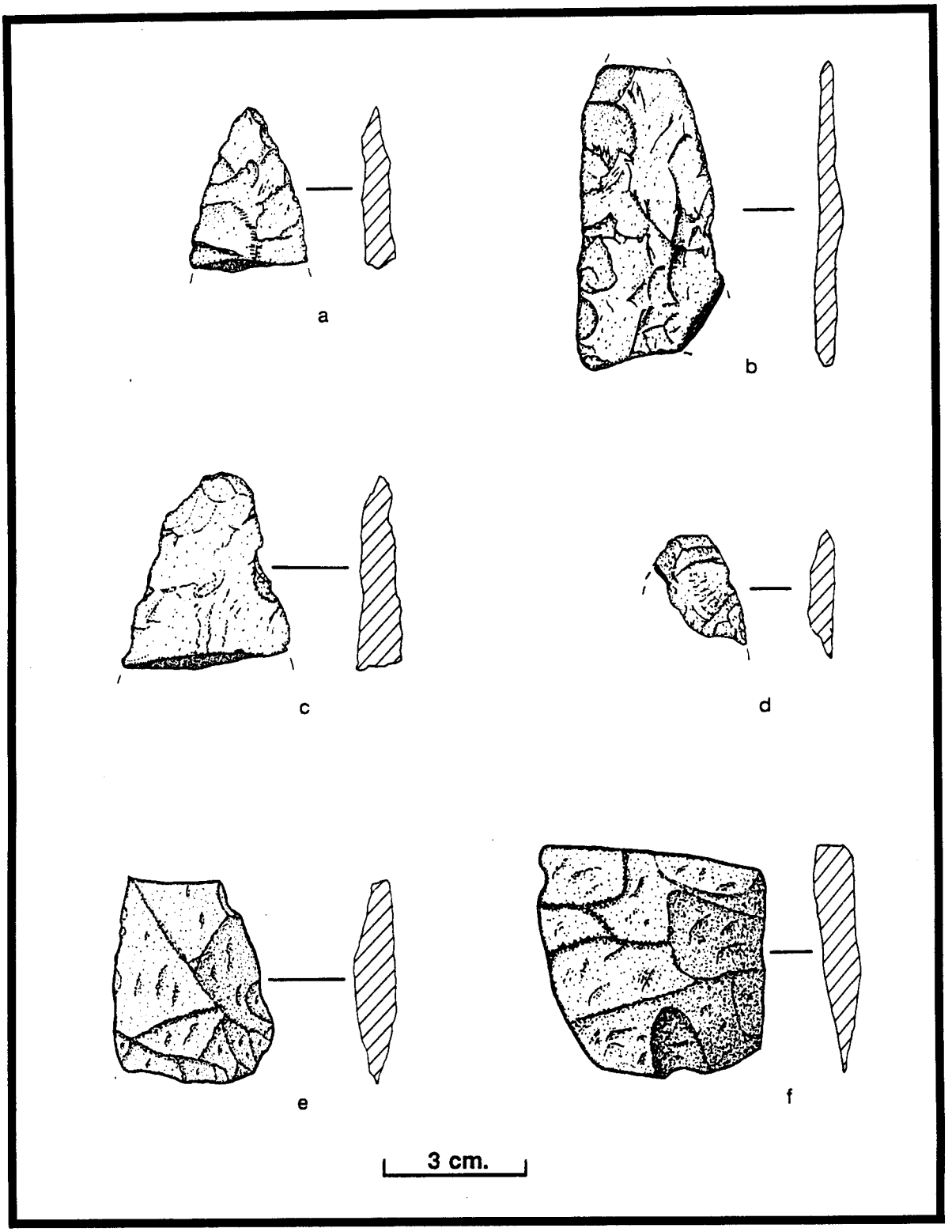

Fig. 4. Biface fragments from CA-KER-3033.

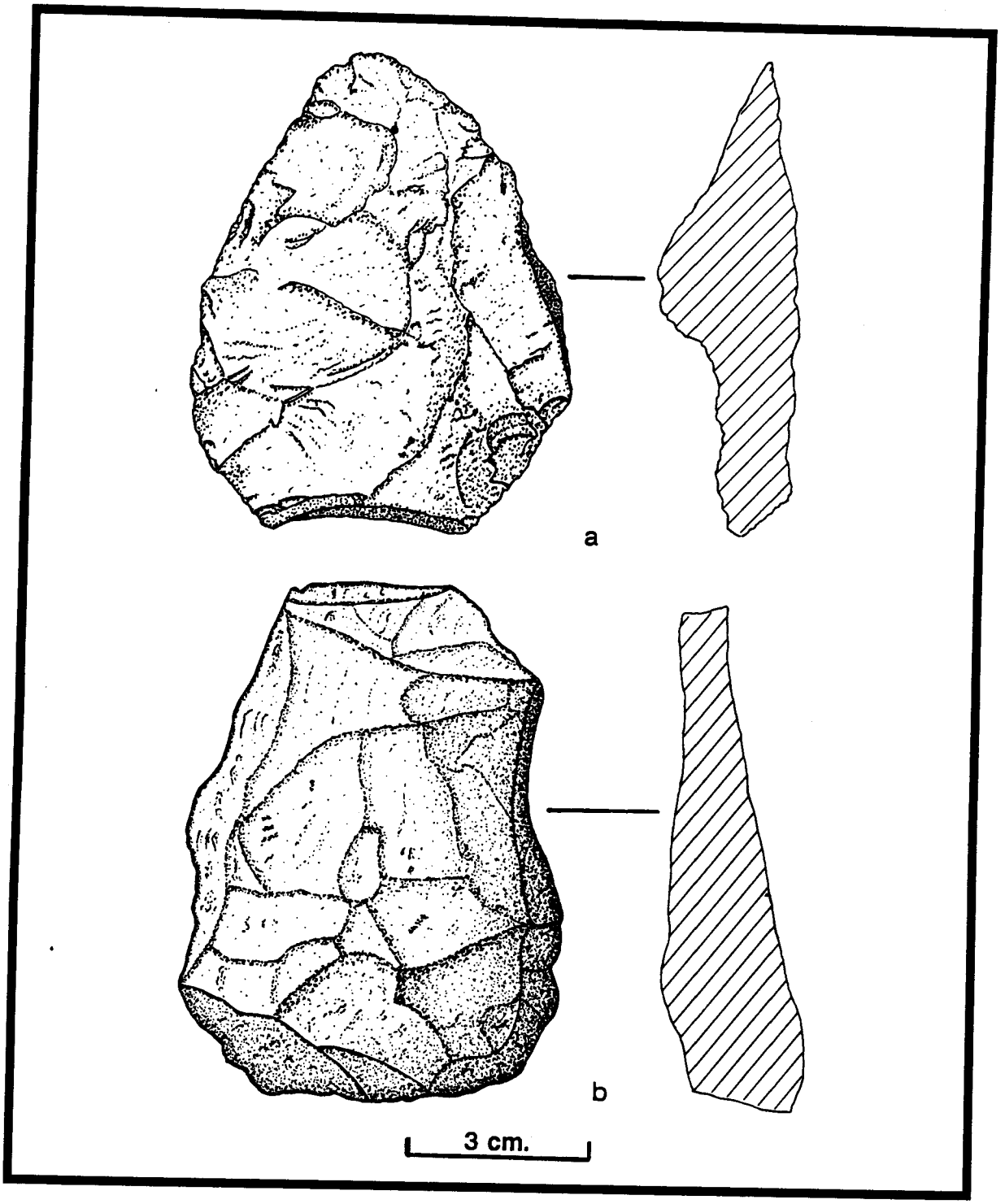

Fig. 5. Biface fragments from CA-KER-3033.

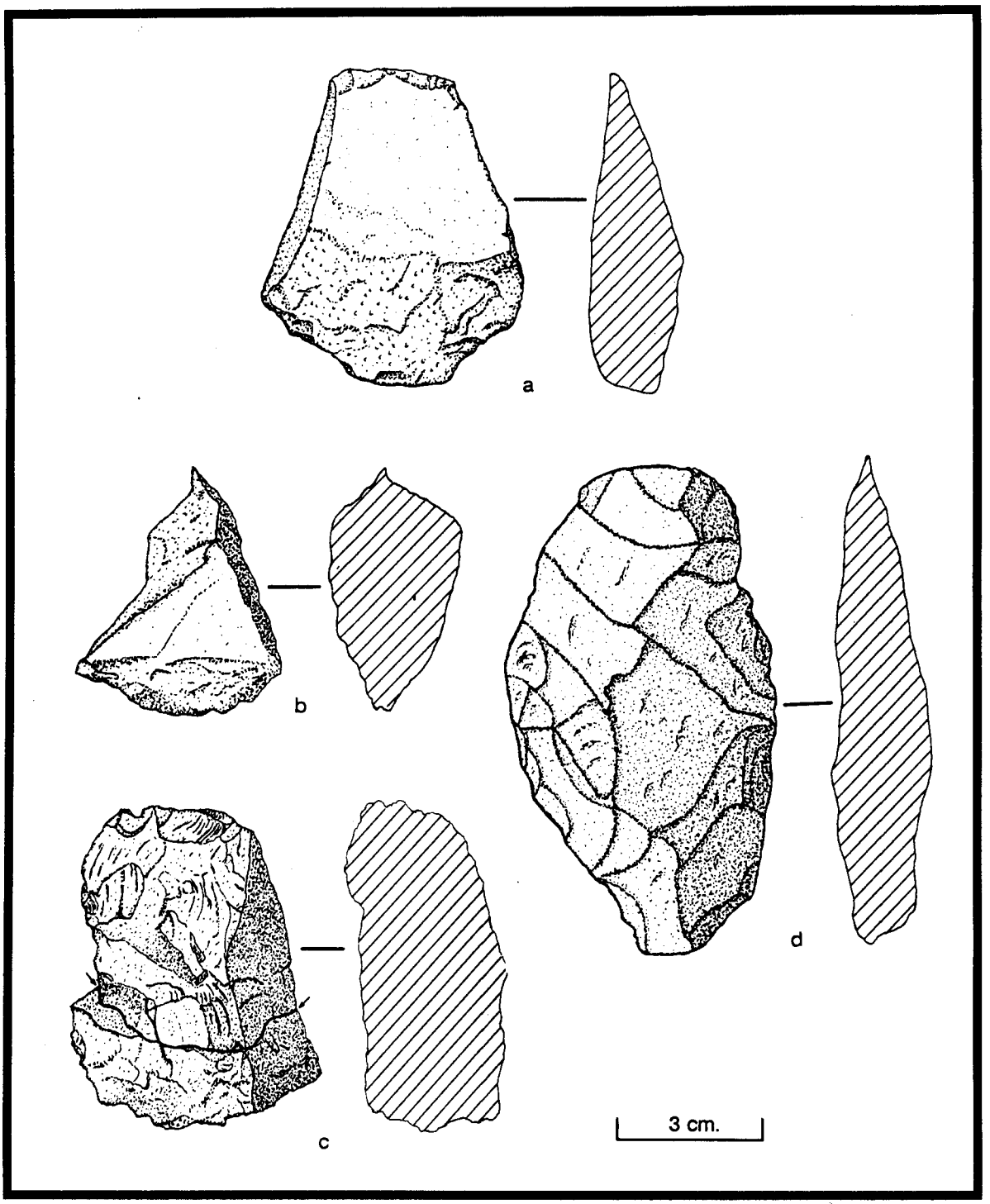

Fig. 6. Uniface (a); and cores (b-d) from CA-KER-3033.

Table 4

PROVENIENCE[1] AND ATTRIBUTES[2] OF CORES AND CORE FRAGMENTS, CA-KER-3033

CAT. NO.	PROVENIENCE	MATERIAL	LENGTH	WIDTH	THICKNESS	WEIGHT	FIG.
S-098	Surface	chalcedony	63.0	57.0	45.5	179.52	6b
1-009[3] 1-011	TU-1, 20 to 30 TU-1, 30 to 40	chalcedony	67.8	53.0	32.0	97.70	6c
8-006	TU-8, 20 to 30	rhyolite	79.2	51.2	39.3	135.07	6d
1-020	TU-1, 50 to 60	rhyolite	50.7	42.1	26.0	38.00	--

[1] unit and level (cm.); [2] millimeters and grams; [3] 1-009 and 1-011 together form a complete core

Table 5

DEBITAGE BY LEVEL, TEST UNITS 1-10, CA-KER-3033

DEPTH	RHYOLITE	CHALCEDONY	BASALT	QUARTZ	OBSIDIAN	TOTALS
0 to 10	550	21	1	--	--	572
10 to 20	889	24	--	--	--	913
20 to 30	2,299	41	3	1	--	2,344
30 to 40	1,082	40	--	--	--	1,122
40 to 50	730	22	1	--	1	754
50 to 60	424	5	--	--	--	429
60 to 70	152	4	2	--	--	158
70 to 80	80	5	--	--	--	85
80 to 90	70	3	--	--	--	73
90 to 100	56	4	--	--	--	60
100 to 110	7	--	--	--	--	7
TOTALS	6,339	169	7	1	1	6,517

A complete lithic analysis of the debitage collected from TU-1 (Table 6) shows that the greatest number of flakes area tertiary (n=1,934; 99%), with primary and secondary flakes comprising approximately 1%. This is what one would expect to find for flake type ratios associated with late-stage production of bifaces. A focus on biface production is further substantiated by the frequency of bifaces at the site, the prevalence of multifaceted platforms on the flakes (n=118, or 13.4%) versus single faceted platforms (n=26, or 1%), and the high number of diagnostic biface thinning flakes (n=210, or 10.8% of all flakes). Interestingly, when these data are compared with numbers of cortical flakes associated with a primary quarrying area less than one half mile to the south, the CA-KER-3033 are distinctly different. At CA-KER-2852, 8.6% of the flakes were found to be primary flakes, 14.7% secondary, and 76.5% tertiary (Scott 1991). It would appear, based on these data, that CA-KER-3033 was a site where rhyolitic materials were brought "roughed-out" and then further reduced as bifacial preforms/cores.

GROUNDSTONE

A groundstone fragment (probably a unifacial mano fragment) was collected. It measures 50.6 x 39.3 x 29.4 mm. and weighs 58.29 grams.

SHELL BEAD

CA-KER-3033 yielded one complete *Olivella biplicata* shell bead (Fig. 7), collected from the 80 to 90-cm. level of TU-5. The specimen most closely resembles a Class A1b "medium spire-lopped" type (Bennyhoff and Hughes 1987:117-118). It measures 11.14 x 6.8 x 6.1 mm., has a hole diameter of 1.8 mm., and weighs 0.41 grams. The bead cannot be dated at this time (Bennyhoff and Hughes 1987).

FAUNAL REMAINS

Faunal remains recovered from CA-KER-3033 include a total of 84 specimens. Their distribution by unit and level is presented in Table 7. One of the 84 specimens is a fragment of freshwater mollusk shell (*Anodonta* sp.; 4-002). It was recovered from the 0 to 10-cm. level of TU-4. Two fragments of cow (*Bos taurus*) were recovered from the 10 to 20-cm. level of TU-1. It is felt that these elements are post 19th century and are clearly intrusive. From the 20 to 30-cm. level of TU-9 three specimens of pocket mouse (*Perognathus* sp.) and 14 specimens of kangaroo rat (*Dipodomys* sp.) were recovered. In the 30 to 40-cm. of the same unit (TU-9), eight kangaroo rat (*Dipodomys* sp.) specimens were recovered. One unidentified rodent fragment was recovered from the 30 to 40-cm. level of TU-9. The remaining 55 specimens were unidentified bone fragments appear to fall in the rodent to rabbit-sized range. Of the unidentified bone, eight fragments (9.5%) show evidence of being burned; four at the 100 to 110-cm. level of TU-1, two at the 50 to 60-cm. level of TU-5, and two from the 0 to 10-cm. level of TU-6. The presence of burned bone suggest that these remains are cultural rather than naturally intrusive into the deposit.

DATING

In an effort to obtain information about the time period during which the site was occupied, a single charcoal sample was submitted for radiocarbon analysis. This sample consists of screen-collected charcoal from the 50 to 60 and 60 to 70-cm. levels of TU-5 (within charcoal-bearing soil at the bottom of Stratum B). An assay of 2,400 $\pm$ 160 radiocarbon years B.P. (Beta-48761) was obtained. While this sample does not represent a distinct cultural event (e.g., a hearth), it nonetheless provides some general idea regarding the time of site occupation. A second charcoal sample was removed from the hearth in TU-9. There is very little charcoal present in the soil sample, not enough to submit for a conventional assay (or even an AMS date).

Table 6

FREQUENCY OF FLAKE TYPES BY LEVEL AT TU-1, CA-KER-3033

LEVEL (cm.)	PRIMARY FLAKES	SECONDARY FLAKES	TERTIARY FLAKES	[1]SINGLE FACETED	[1]MULTI-FACETED	BIFACE THINNING	SHATTER/ FLAKE FRAGS.	SAMPLE SIZE
0 to 10	2	2	126	3	12	18	97	130
10 to 20	1	2	345	5	24	35	284	348
20 to 30	3	1	355	5	35	43	276	359
30 to 40	2	1	586	4	21	45	519	589
40 to 50	--	4	283	4	9	40	234	297
50 to 60	0	2	155	3	6	10	138	157
60 to 70	--	--	32	1	4	6	21	32
70 to 80	--	--	21	1	3	6	11	21
80 to 90	--	--	9	--	--	2	7	9
90 to 100	--	--	19	--	3	5	11	19
100 to 110	--	1	3	--	--	--	4	4
Totals	8 (0.6%)	13 (0.6%)	1,934 (99%)	26 (1%)	118 (6%)	210 (11%)	1,602 (82%)	1,955

[1] flake platforms on nonbiface thinning flakes

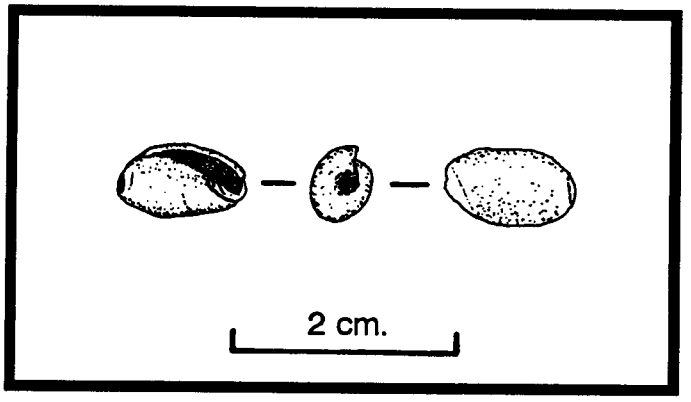

Fig. 7. Shell bead, CA-KER-3033.

Table 7

VERTICAL DISTRIBUTION OF VERTEBRATE FAUNAL REMAINS, CA-KER-3033

COMMON NAME	TAXON	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-110	TOTAL NISP	TOTAL WT.
mollusk shell	*Anodonta* sp.	1	--	--	--	--	--	--	--	--	--	--	1	.06
kangaroo rat	*Dipodomys* sp.	--	--	14	8	--	--	--	--	--	--	--	22	.66
pocket mouse	*Perognathus* sp.	--	--	3	--	--	--	--	--	--	--	--	3	.03
cow	*Bos taurus*	--	2	--	--	--	--	--	--	--	--	--	2	42.76
unident. rodent	rodent	--	--	--	1	--	--	--	--	--	--	--	1	.02
small mammal	Mammalia (sm.)	3	4	17	17	3	2	--	2	2	1	4	55	4.26
TOTAL		4	6	34	26	3	2	--	2	2	1	4	84	47.99
TOTAL WT.		0.13	43.22	0.71	0.77	0.28	0.29	--	0.13	0.20	0.03	0.62		47.99
TOTAL WT. (Burned)		--	--	--	--	--	0.29	--	0.07	--	0.03	0.62		1.01

DISCUSSION

Site CA-KER-3033 is interpreted as a small workshop/satellite camp where lithic reduction activities and tool manufacturing took place. The small number of flakes with cortex indicate that primary reduction activities were accomplished at other areas, possibly one of the rhyolite quarries located a short distance to the south. The presence of fire-affected rocks, one hearth, one small groundstone fragment, and some burned bone suggests some subsistence activities in addition to stone tool manufacturing. The depth of the densest layer of the cultural deposit indicates some antiquity which has been further substantiated by the radiometric assessment.

Although there is a close spatial relationship between three prehistoric archaeological sites that have been investigated in Hidden Valley (CA-KER-3033, CA-KER-2852, and CA-KER-302), their temporal and functional associations are less clear. CA-KER-2852 is a small rockshelter/quarry site approximately 1 km. south of CA-KER-3033, with an occupation dated to 800 $\pm$ 80 radiocarbon years. The Sweetser site (CA-KER-302) is located 1 km. southwest of the CA-KER-3033 and is perhaps the most elaborate of the archaeological sites known to the immediate area. It had been reported (Glennan 1971) to contain rock art, milling features, and abundant stone artifacts, all suggesting a substantial habitation through time. Glennan (1971) suggested that the site could date to as early as 6,000 B.P., which is far older than the dates from CA-KER-3033 or CA-KER-2852, but Glennan's dating is based on certain projectile point types (Pinto?) from the site rather than more definitive dating methods such as radiocarbon dating. However, if it *was* a long-term habitation site, other sites, such as CA-KER-2852 and CA-KER-3033 might have been "satellite camps" or special activity areas that were *functionally* associated with the Sweetser site, although the short distances separating the sites makes this possibility seem less likely. Since CA-KER-2852 is separated temporally from CA-KER-3033 by at least 1,600 years, and both are interpreted as short-term camps, their is apparently no human behavioral relationship between these two sites. Until there is more definitive dating and knowledge of the period of occupation of the Sweetser site, little more can be said about the functional relationship between it and many of the camps and rhyolite quarry sites found in the immediate area.

Although CA-KER-3033 is a small site, its importance to our understanding of archaeology cannot be underestimated (see Glassow 1985). The human behavioral record from this site suggests that a small group of people lived briefly at this site perhaps 2,400 years ago, further shaping roughed-out rhyolite quarry blanks collected from local quarries. These were worked into thin bifaces that may have been used as preforms for dart points. This information, considered with data from other sites in the Rosamond area to be collected in the future will only serve to enrich our knowledge of human settlement patterns in the prehistoric western Mojave Desert.

ACKNOWLEDGEMENTS

We thank the field crew which consisted of R. Scott Baxter, Dorothy Fleagle, Juanita Garcia, Peggy Murphy, Richard H. Osborne, Robert E. Parr, Sharynn-Marie Valdez, and Lori Wear. Robin Novickas and R. Scott Baxter illustrated the artifacts. Faunal analysis was preformed by Sharynn-Marie Valdez . The archaeological materials discussed above are stored at the California State University, Bakersfield Museum of Anthropology.

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A BIBLIOGRAPHY FOR THE YOKUTS AND RELATED TOPICS: A SUPPLEMENT

Complied by

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Richard H. Osborne, Dept. of Sociology and Anthropology, CSU Bakersfield

INTRODUCTION

The following bibliography is an update to the more extensive one published in the last KCAS Journal (1992). These references were compiled from the individual research projects of the authors and is presented here with the hope that it will be useful to others studying Yokuts culture. It is by no means a complete source listing, rather, it is intended to provide a foundation upon which to build. Readers with additional references are encouraged to contact the editor. This will facilitate the continuing updating of the Yokuts bibliography.

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CORRECTIONS

The reference to Merriam (1914) listed in Vol. 3 of the KCAS Journal has the wrong date, the correct date being 1904. The complete correct reference is as follows.

Merriam, C. Hart

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INFORMATION FOR AUTHORS

Society members wishing to submit materials for consideration into future issues of the Journal should consult this issue for style. Submissions should be made on 8½ by 11 in. paper, double spaced, and clearly legible. If at all possible, a 5¼-in. floppy disk with the text also should be submitted, please identify the program used.

All illustrative materials (maps, photos, drawings, etc.) should be labeled as FIGURES, numbered consecutively and referenced in the text. A list of figure captions should be placed at the end of the text.

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