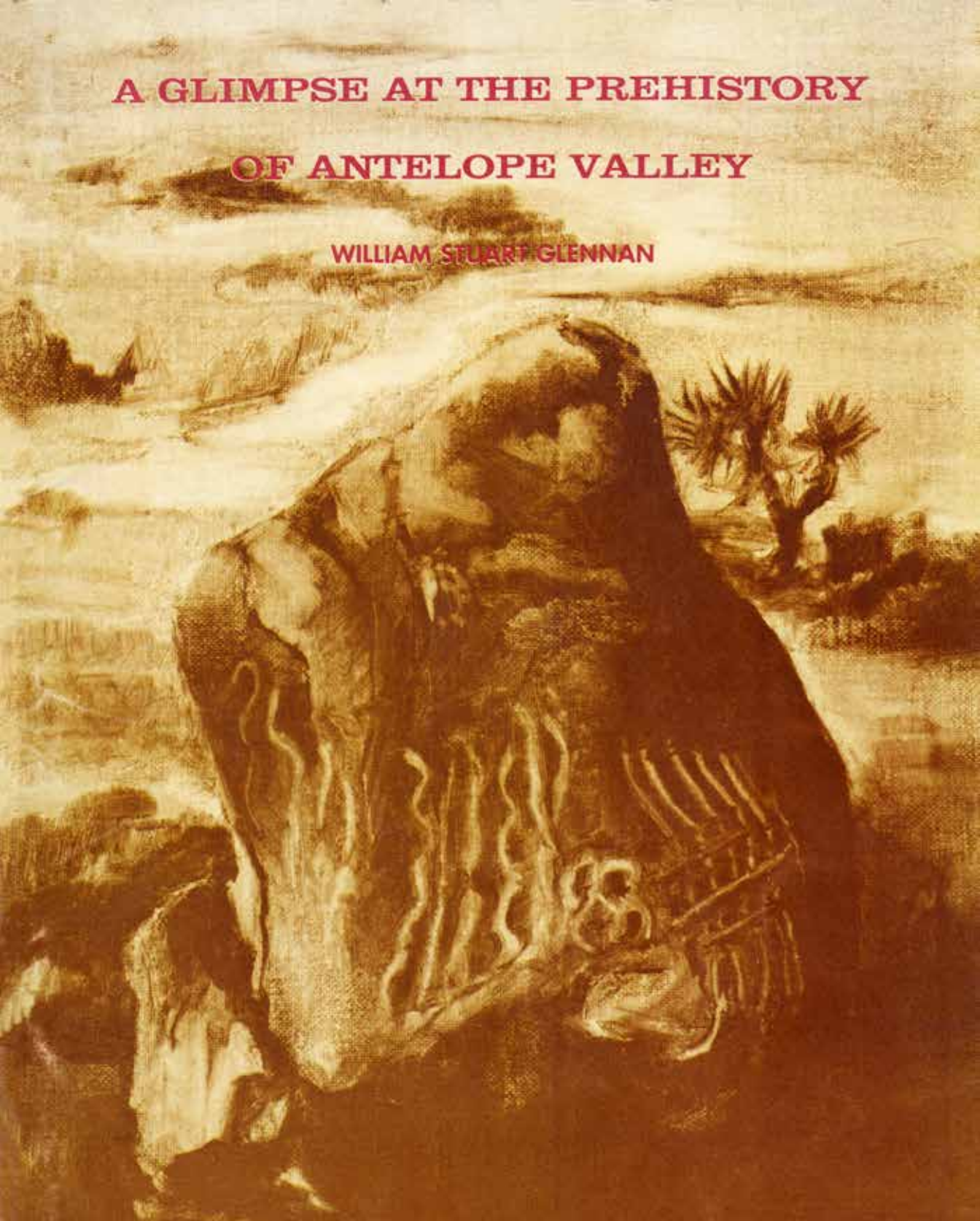
# A GLIMPSE AT THE PREHISTORY OF ANTELOPE VALLEY

WILLIAM STUART GLENNAN




A PUBLICATION BY

THE KERN-ANTELOPE HISTORICAL SOCIETY, INC.

# A GLIMPSE AT THE PREHISTORY OF ANTELOPE VALLEY

## Archaeological Investigations at the Sweetser Site (KER-302)

**WILLIAM STUART GLENNAN**

1971

Cover-Art Work
By Antelope Valley's
Well known Indian Artist
**MR. CHARLES LaMONK**

*A publication by*
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# FORWARD

"A GLIMPSE AT THE PREHISTORY OF ANTELOPE VALLEY", is the fourth publication of the Kern Antelope Historical Society Inc. We feel that the material in this publication, by author William Stuart Glennan, will be a great contribution to not only Antelope Valley historians but to others throughout our country. There has been very little published on this areas first migrants and settlers–that is–Early Man and Indians–but through Stuarts research we should all benefit.

Stuart came to Antelope Valley in 1947 with his family, Mr. and Mrs. Willard Glennan, settling in Rosamond. He soon became interested in Valley Indian Life and also became a charter member of our Society, though only a youth. His interest in his subject led him to U.C.L.A. where he received his B.A. degree in 1963. He then took time out for Army service and returned to U.C.L.A. to study and receive his Masters degree in 1970. He is now working on his Doctorate at U.C.L.A. of which this publication is a part.

We of the Kern Antelope Historical Society are proud of our Charter Member Stuart Glennan and extremely proud to have a part in the publication of his material.

Glen A. Settle
Book Chairman
Kern Antelope Historical Society Inc.
March 1971

# TABLE OF CONTENTS






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# INTRODUCTION

The Sweetser site (KER-302) is located in the Antelope Valley, about seventy miles north of Los Angeles (Fig. 1). Very little field work has been done in the area and the valley's prehistory was unknown, for the most part, from direct archaeological work in the valley proper prior to the present study. The interpretation of the lithic collection from the Sweetser stie and its temporal placement must rely heavily upon sites and lithic assemblages of known chronological position outside of the Antelope Valley. Such comparisons, to a very large extent typological, are especially necessary for placing the Sweetser site occupation in time.

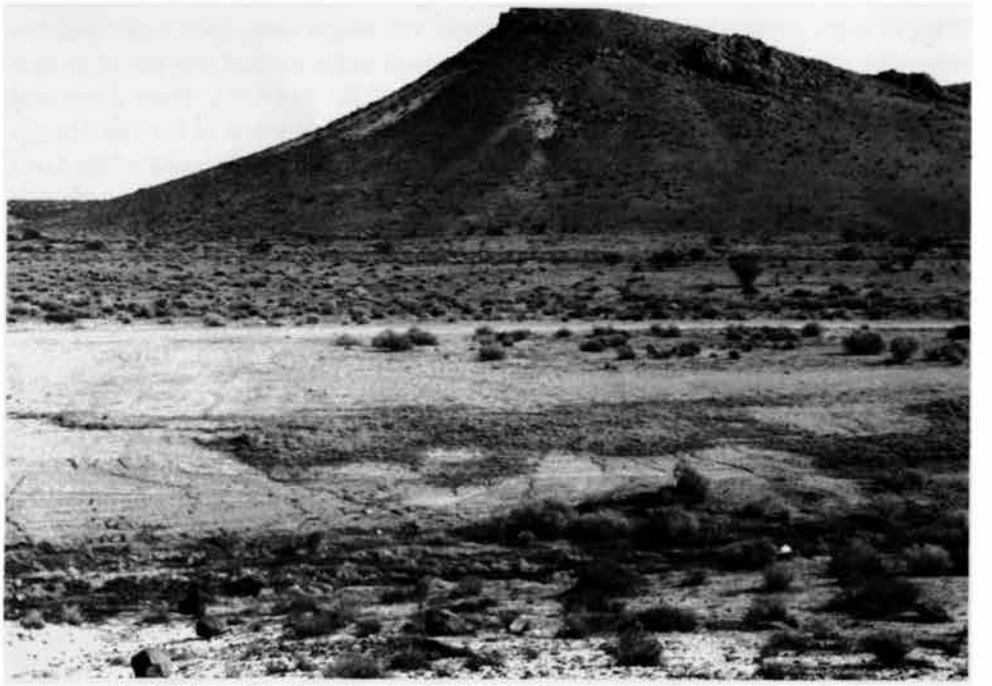

**Fig. 1. View of the Sweetser site (KER-302). Looking east with site in foreground.**

The purpose of this paper is fairly simple, to present the data from one site within the Antelope Valley and to take a beginning step toward filling in the picture of the prehistory of the valley. Any detailed conclusions must await further work at sites which may produce more comprehensive cultural remains. Some field work at sites from the period between historic contact and the Sweetser site occupation has been carried out by Antelope Valley College, but none of the material has been published.

The Sweetser site collection was gathered entirely from the surface during weekends in 1964 and 1965. Little possibility exists for excavation of the site due to extensive disturbance of the site brought about by the leveling and grading associated with the

construction of a metal shed located near the center of the site. Another factor is the general shallow nature of the site, a feature not uncommon for open air desert sites in the area.

While next to nothing is known of the prehistory of the Antelope Valley there is at least some limited information concerning the people of the region at historic contact by the Spanish. At that time two groups were living in the valley and surrounding mountains, both Shoshonean speakers.

In 1776 Francisco Garces, a Franciscan friar, visited the occupants of the southern half of the Antelope Valley. These people, the Kitanemuk, lived mainly in the mountains and foothills along the southern and western periphery of the valley and Garces visited a village probably located near present day Lake Hughes. At that time the Kitanemuk were living in large, rectangular huts covered with tule and willow mats. Each house had two entrances, one to the east and the other at the west and a sentinel was posted at each during the night (Coues 1900: 273-274; Kroeber 1925: 611-613). These communal houses may indicate associations with the Yokuts to the northwest in the San Joaquin Valley. The Kitanemuk also seem to have carried on trade with the Chumash of the Santa Barbara area for such items as haliotis shell inlayed vessels (Kroeber 1925: 613). There is also evidence that the Kitanemuk made small, no doubt temporary, conial huts of juniper limbs which were probably covered with mats as well. One such hut framework (Fig. 2) stood until 1966 in the foothills a few miles south of Palmdale. This hut probably dates

**Fig. 2. Historic period juniper hut. Scale is three feet.**

to some time around 1900 as the juniper limbs were cut with a metal ax. A small pen or corral of juniper posts and wire stood nearby and judging from its small size sheep or goats may have been kept. It has since been moved to the Los Angeles County Museum due to the construction of the new freeway.

By 1910 the number of Kitanemuk must have been down to a few families at most because Kroeber (1925: 883) lists only 150 people remaining for the entire Serrano group (consisting of the Serrano, Alliklik, Vanyume, and Kitanemuk).

The picture presented of the Kitanemuk is a meager one but even less is known of their neighbors living in the northern half of the valley. The Kawaiisu are felt to be a fairly late offshoot of the Chemehuevi, moving into the Antelope Valley and the Tehachapi Mountains from the eastern Mohave desert (Kroeber 1925: 601). Garces also passed through Kawaiisu territory in 1776, but fails even to make note of their extistence and they were probably a small group, with Kroeber placing their aboriginal population at about 500 (1925: 603). The Kawaiisu are reported to have gathered salt at Saltdale and traveled on to around Randsburg to obtain obsidian (Zigmond 1938: 635). As with the Kitanemuk, the Kawaiisu spent most of their time in the mountains and may have associated with the central valley Yokuts and the Kern River Tubatulabal. Their subsistence economy was generally montane, with desert flora and funa utilization being secondary and the desert was seen as an area for occasional trips, but not for permanent residence (Zigmond 1938: 635). The Kawaiisu and Kitanemuk seem to have been friendly, at least in historic times. The Kawaiisu called the Kitanemuk "the southerners" and the two groups are reported to have lived together in Brite Valley, near Tehachapi (Zigmond 1938: 637).

From what is presently known of the historic peoples of the Antelope Valley they spent little time in the valley proper, remaining in the mountains and foothills the majority of the time. Just how far back into prehistory this settlement pattern goes is open to question at our present knowledge.

# PHYSICAL SETTING

The Sweetser site (Fig. 3) is located in the southeastern corner of Kern county, about three miles northwest of Rosamond, California in the Antelope Valley. This region is the extreme western tip of the Mohave desert and is therefore a portion of the Great Basin.

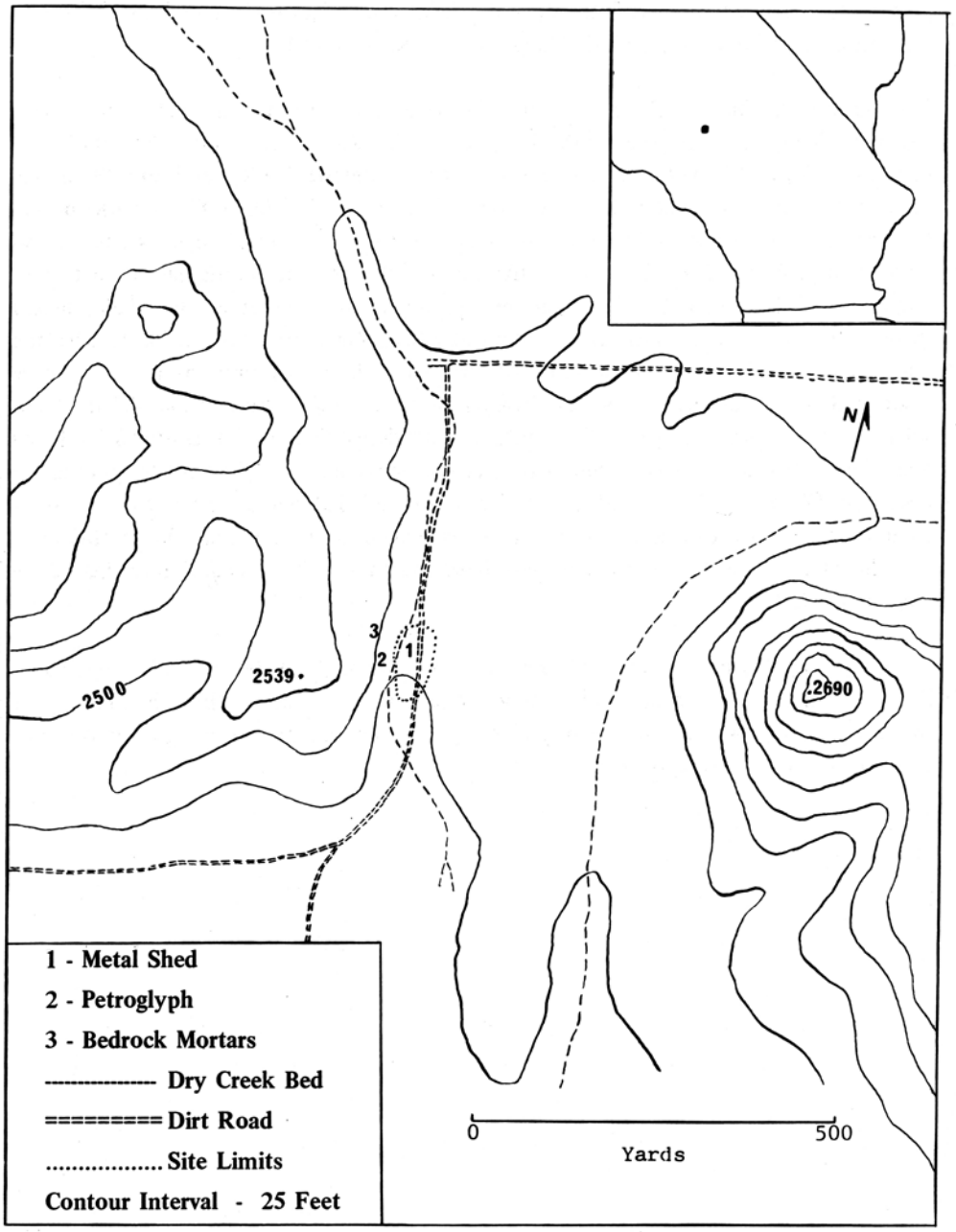


**Fig. 3 Map of the Sweetser site.**

The site is situated on a relatively flat alluvial plain between two hills. A fine layer of typical desert sand, ranging from three to six inches in depth, covers the site with a layer of hardpan below. The soil of the site is totally free of any visual evidence of prehistoric human occupation such as darkened earth and charcoal and the stone tools scattered over the surface led to its discovery. A metal storage building is located almost directly in the center of the site and a large portion of the northwestern corner of the site was destroyed when the area was filled and leveled in preparation for construction. A dirt road cuts through the site, running north to south and any stratified cultural deposit which may have originally existed has been further destroyed by its presence. The site covers an area of about 5,000 square yards with the majority of the stone tools being recovered from the central 1,000 square yards.

The site commands a view of the Antelope Valley to the south and west and the Tehachapi Mountains about seven miles to the northwest. Four miles to the southeast lies Rosamond Dry Lake which had a shore line of about twenty-five miles when full. This playa, along with Rogers Dry Lake farther to the east, was filled by drainage from the mountains to the north and was always fairly shallow (Blackwelder 1954: 36-38). The elevation of the Sweetser site is about 2500 feet and today the climate is semi-arid (Bailey 1954, Fig. 1). The vegetation in the region is a combination of Joshua Tree woodland and Creosote Bush scrub cover (Bailey 1954: 38-41). In the low hills to the northwest scrub oak, digger pine, juniper and manzanita are common with cottonwood, willows and live oak present in creek bottoms. Above 5000 feet in the Tehachapi Mountains yellow pine, fir and cedars are present (Wiese 1950: 10-11).

# FEATURES

Feature 1 is a large, flat slab of rhyolite with three conical depressions of various size in its surface (Fig. 4). The slab is 40 inches wide and 72 inches in length. The depressions probably served as mortars, but due to their shallow depths the end of a mano could have served quite well as a pestle. The surface area of the slab is quite smooth and probably was used as a bedrock milling stone. This feature is located across the dry creek bed, on the slope of the hill to the west of the site (Fig. 3).

**Fig. 4 Bed rock mortar west of site.**

Feature 2 is a large, roughly spherical boulder which is covered on two sides with pecked geometric design elements (Fig. 5). None of these petroglyphs is deeply grooved and the surface of the boulder is quite weathered with small portions of the rock's surface flaking off. Due to their present physical condition it is quite difficult to determine, in detail, the design elements originally present. This feature is also located across the dry creek bed to the west, somewhat higher up the slope than the bed rock mortar (Fig. 3). The boulder is 79 inches long, 58 inches high, and 47 inches in thickness.

**Fig. 5. Petroglyph boulder to the west of the site. Upper portions well weathered and flaking off.**

# ARTIFACT DESCRIPTION

The cultural assemblage recovered from the Sweetser site consists totally of stone tools, with no perishable materials being represented. The collection includes 1331 artifacts, the majority of which are chipped stone implements, with about 7 precent being ground stone milling equipment. See Table I for the number of specimens and their size range in each type.

## GROUND STONE ARTIFACTS

Within the total collection of ground stone specimens a great many are fragmentary, but the majority can be classified as manos and milling stones.

## MANOS

Manos from the Sweetser site are generally quite well made, a fact which may indicate more than a casual, short term occupation of the site.

**TYPE Ia - Finished Biface Manos:**

This is the largest single group of manos and all specimens exhibit a high degree of finish and shaping. Outlines range from sub-rectangular (Fig. 6a, b) to eliptical (Fig. 6d) with the former being most common. Cross sections are sub-rectangular. Several specimens exhibit face and/or end battering (Fig. 6b, d). The faces were probably roughed up from time to time to keep them sharp and the battered ends may indicate some use of manos as hammers and pestles. Specimens such as Fig. 6d could have been used in conjunction with the bed rock mortar.

**TYPE Ib - Semi-Finished Biface Manos:**

Specimens in this group exhibit only minimal end and side finish and shaping by pecking and grinding. Some may be unfinished Type Ia manos. Outlines are again sub-rectangular to elipitical. Two specimens are wedge shaped in cross section (Fig. 6e) with the remainder having sub-rectangular profiles. Two specimens have smooth ground surfaces at one end and may have served double duty as both manos and pestles.

**TYPE II - Unifaced Manos:**

These implements show very little shaping of ends and sides (Fig. 6f) and appear to have been only casually utilized natural rocks of handy size, some being water rounded cobbles. Outlines and cross sections are varied and some specimens may be juvenile Type I manos.

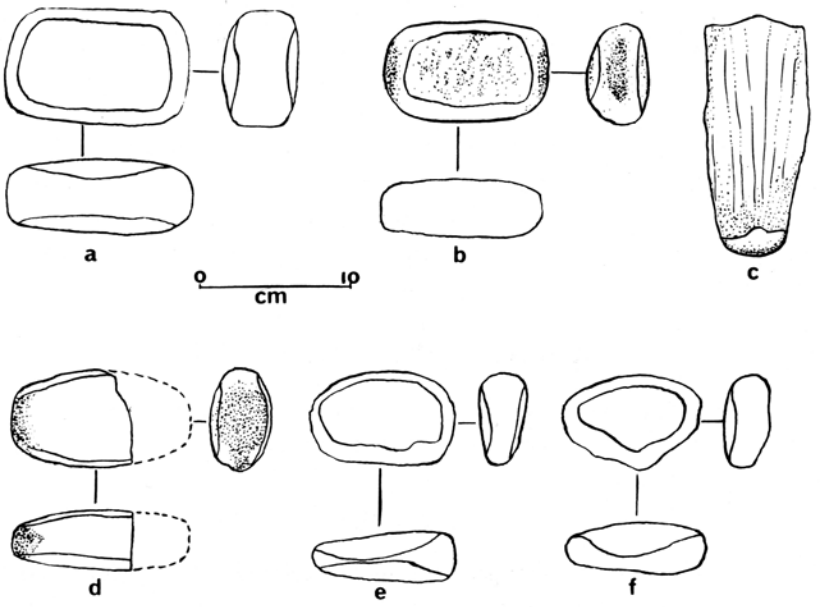


**Fig. 6. Ground stone tools. a-b. Ia manos. c. Pestle. d. Ia mano. e. Ib mano. f. II mano.**

Mano fragments too small to allow classification were also recovered and the majority would probably fall into Type Ia or Ib if complete.

Manos are generally made of hard granites and schists.

## MILLING STONES

The Sweetser site collection contains 48 milling stones, with both complete and fragmentary specimens being present. They are generally made from irregular shaped slabs of rock with one surface having a flat ground area for processing some wild plant food.

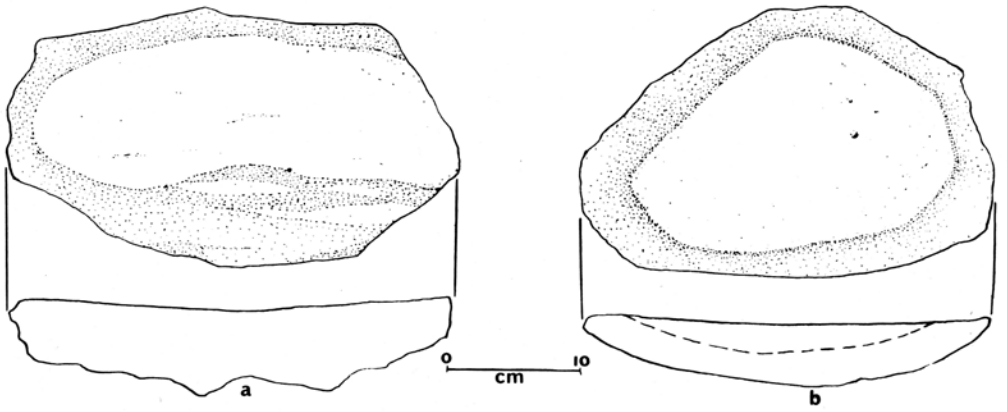


**Fig. 7. Milling Stones. a. Flat slab. b. Oval depression.**

The material used is generally a hard granite or schist, but rhyolite examples are also present. The grinding surfaces range from a flat area on an unshaped slab (Fig. 7a) to an oval depression on specimens with shaped sides and bottom (Fig. 7b). The well shaped specimens are generally of schist and the maximum depression measures 2cm in depth.

## PESTLE

One artifact was recovered from the Sweetser site which seems to have served as a pestle, possibly in conjection with feature 1. This specimen (Fig. 6c) is roughly conical in outline and triangular in cross section. Only one end exhibits a ground sruface and no great degree of finish is present, with no other shaping evident.

## MORTAR

One small mortar was found at the site. This specimen (Fig. 8) is made from a globular chuck of granite with very little outside shaping being evident. The depression is conical in shape and measures 8cm in depth.

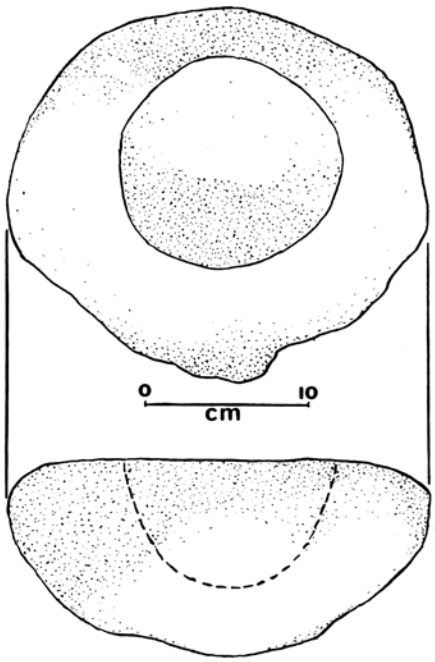


**Fig. 8. Granite Mortar.**

## CHIPPED STONE ARTIFACTS

The raw material overwhelmingly chosen for the production of chipped stone artifacts was rhyolite. Rhyolite outcrops are found throughout the Rosamond Hills with no supply problems. A large outcropping of cryptocrystalline quartz is located less than two miles to the northwest of the Sweetser site, but was seldom utilized as a source of raw material for chipped stone tools. The interpretation of this cultural focus on rhyolite is not clear.

That the stone knappers of the period were aware of the excellent flaking qualities of cryptocrystallines is illustrated by the presence of some finely flaked projectile points of chalcedony, but the people continued to place an emphasis on rhyolite. This cultural focus on rhyolite is also found throughout the entire Antelope Valley area during this time period. Later inhabitants of the valley made extensive use of local supplies of chalcedony as well as obsidian traded into the region, probably from the Owens Valley

The following typology is guided, for the most part, by an attempt to present the total assemblage to the reader and not just a series of idealized and unrealistic types, outside of which ninety percent of the actual specimens would fall. There will be an attempt to describe the general form of each type and the range of variation from that form. With some of the numerically smaller types, such as projectile points, it is possible to give a more detailed account of variation, but for groups such as flake scrapers or core hammerstones the descriptions must be more generalized. It is also felt by the author that lengthy, detailed typological subdivision of such tools does not always lead to useful results and often can present a misleading picture of reality.

## HAMMERSTONES

This is a very large group made up generally of fist sized rocks of globular shape with battered edges. Although there is a large degree of variation in size, shape and degree of use from one extreme of the hammerstone continuum to the other, the variation from any one specimen to another within this continuum is so slight that any typological subdivision would be purely arbitrary. The placement of hammerstones in a chipped stone classification is in itself somewhat arbitrary and, as noted by Treganza and Bierman (1958:67), they could also be placed in a pecked and ground stone classification. As was noted by Treganza and Bierman, it is not really too important where hammerstones are placed in a presentation format and for the purposes of this report they will be viewed essentially as chipped stone tools.

**TYPE I - Cobble Hammerstones:**

Water worn pebbles of fist size exhibiting only slight battering to the edges are rare at the Sweetser site with only three such specimens being recovered. One is oval in outline and circular in cross section (Fig. 9b) and is similar to one illustrated by Rozaire from Encino (1960, Pl. 2b). The second specimen is circular in outline and ovoid in cross section (Fig. 9a). The third specimen is similar to Fig. 9b.

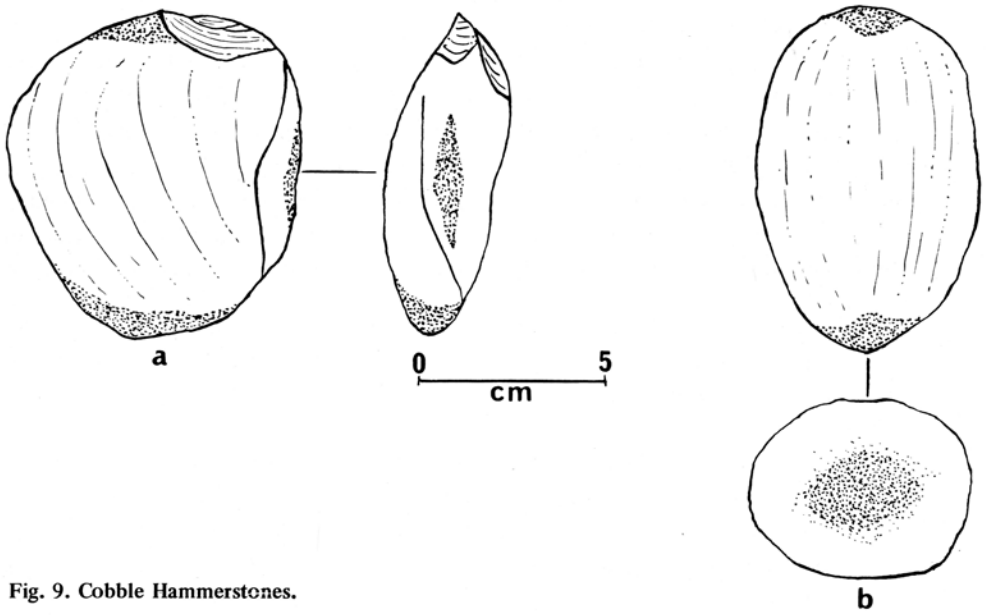


Fig. 9. Cobble Hammerstones.

**TYPE II - Core Hammerstones:**

These are fist sized core tools, generally of rhyolite and exhibiting battering ranging from one edge (Fig. 10b) to the entire surface of the specimen (Fig. 10a). In many cases core hammerstones probably started out as scraper planes, choppers or cores and it is often difficult to draw the line between any of the above mentioned groups. However, some of the specimens appear to have gone directly into use as hammerstones from their natural raw stone state.

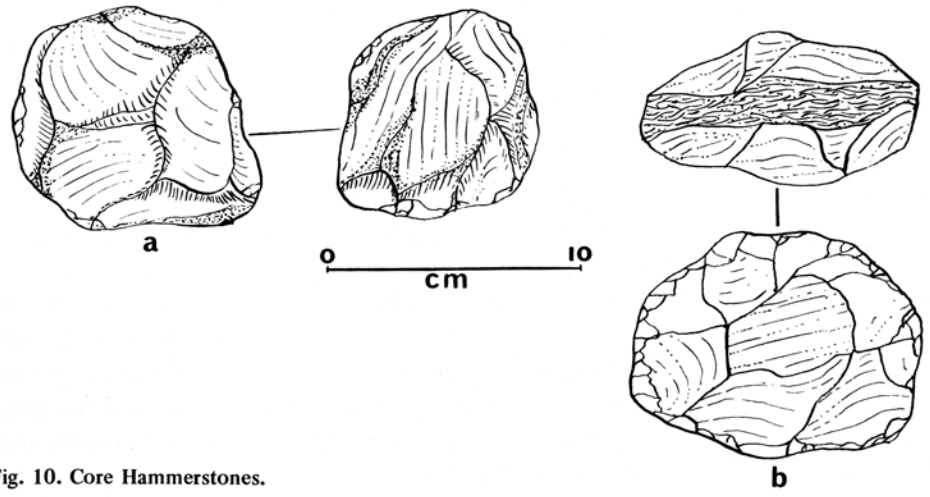


Fig. 10. Core Hammerstones.

## CHOPPERS

This is a fairly large class of heavy, roughly flaked tools which usually exhibit only minimal edge flaking to make them serviceable. Made from both large, heavy flakes and cores they appear to have served chopping and heavy duty cutting needs. As mentioned above it is impossible to mark the point at which a chopper becomes a hammerstone or likewise when a core becomes a chopper. It must be kept in mind that some specimens here discussed are placed within their respective types, be it hammerstone, chopper or core, on a somewhat arbitrary basis. There is also some overlap of choppers with large core scrapers.

### TYPE I - Uniface Choppers:

These are large unifacially flaked tools which have only a simple working edge produced by the removal of coarse flakes (Fig. 11). No great amount of work or time went into their manufacture and some may be rejected implements or those used only once and cast aside. Many of these specimens have battered edges and may have also served as hammers as the need arose.

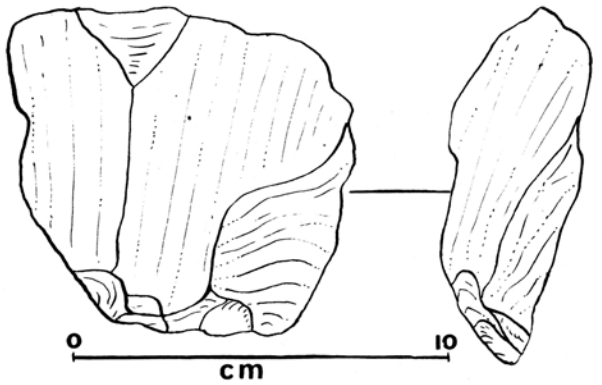


**Fig. 11. Uniface Chopper.**

### TYPE II - Biface Choppers:

These are large cutting tools which have working edges produced by bifacial flaking (Fig. 12a, b). Battering of the working edge is often found and these tools may have done duty as hammers from time to time. One specimen placed in this type is quite unique, with no comparable specimen being found in the literature. It is a large, tabular chunk of rhyolite with a bifacially flaked chopping edge at one end and a smooth, ground surface, similar to a mano, at the other end (Fig. 13). This implement must have served both as a chopping tool and a mano and points out quite well that any given artifact could and probably did serve more than one function when originally made.

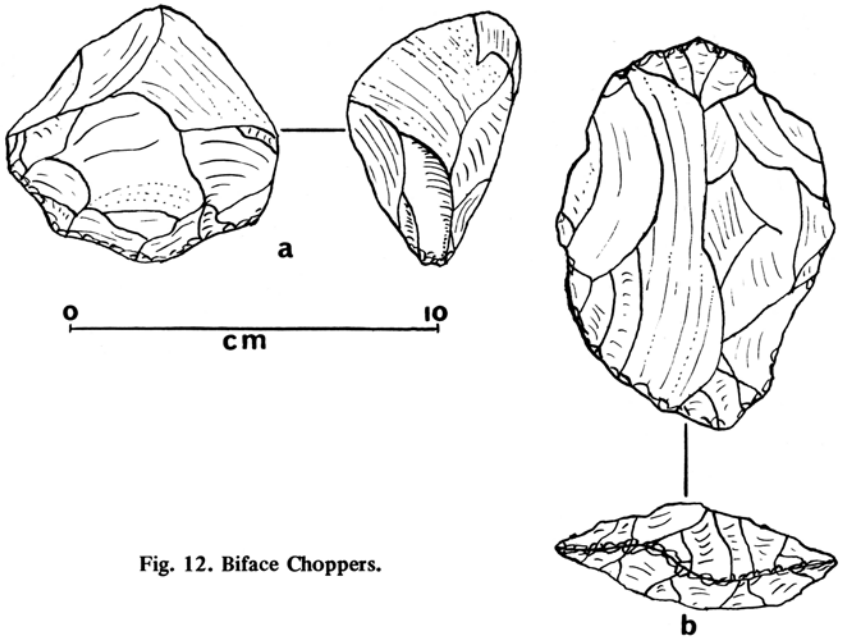


Fig. 12. Biface Choppers.

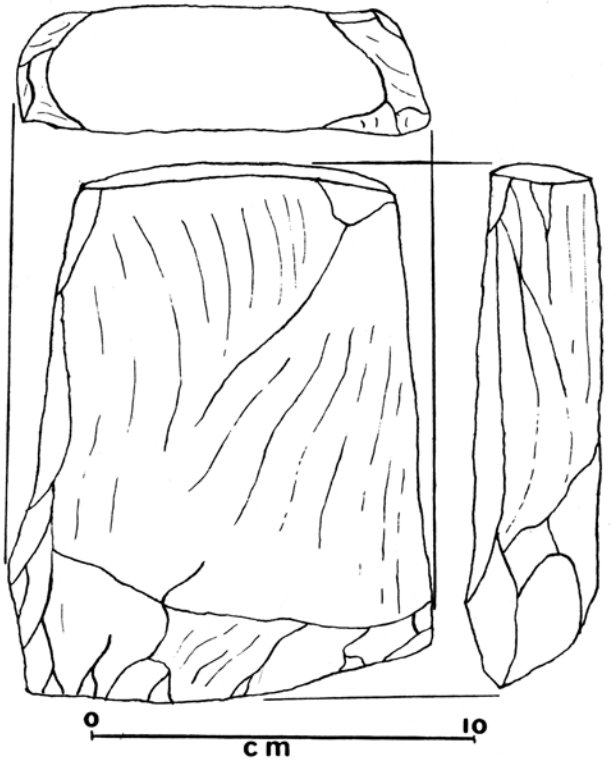


Fig. 13. Chopper/Mano.

**TYPE III - Digging Choppers:**

These are roughly triangular forms with the primary working area at the pointed end of the tool (Fig. 14). The working edges are crudely flaked and these tools may have served as picks.


**Fig. 14. Digging Chopper.**

## CORES

This is a small group of thick, circular to oblong cores of fairly uniform size and shape. Some specimens are bifacially worked, bi-convex disks with chipping covering their entire surface (Fig. 15) while other are quite roughly flaked. All specimens exhibit only minimal edge battering and the relatively small number of cores probably indicates that the majority of the stone tools were manufactured, or at least roughed out, at quarry locations surrounding the site.

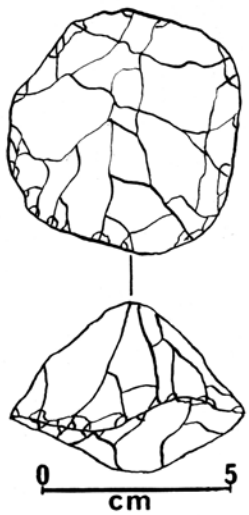


**Fig. 15. Core.**

## SCRAPER PLANES

Planes are generally core implements exhibiting a wide range in the degree of finish, but some specimens are made on large, thick flakes. On the whole, scraper planes from the Sweetser site are similar to forms found at Early Milling Stone Culture sites along the coast, such as Topanga (Treganza and Bierman 1958:56-57, Fig. 2) with the exception of Type III at Sweetser.

**TYPE I - Finished Scraper Planes:**

Core implements of circular to oval outlines and generally highly domed in cross section with the majority of the dorsal surface being flaked (Fig. 16a). Edge flaking ranges from one half to the entire periphery with working faces being very steep.

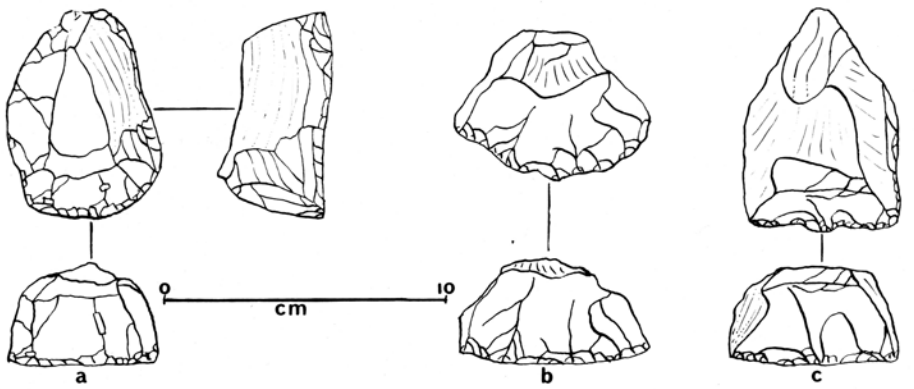


**Fig. 16. Scraper Planes. a. I plane. b. IIa plane. c. IIb plane.**

**TYPE IIa - Semi-Finished Scraper Planes (Convex Edge):**

Outlines and cross sections are much more varied than in Type I with the majority of the specimens showing casual use and finish (Fig. 16b). Working faces continue to be very steep, but overall workmanship usually consists of minimal edge flaking not continued around the entire periphery. The upper surfaces are not fully flaked and some specimens may be unfinished Type I planes. Others were apparently intended for short term use and therefore lack elaboration of finish. Generally made on cores, but some specimens are edge flaked macro-flakes. There is some overlap between Type IIa planes and large flake scrapers. No definite typological line can be drawn between the largest flake scrapers with steep working faces and scraper planes, if such exists.

**TYPE IIb - Semi-Finished Scraper Planes (Straight Edge):**

These are similar to Type IIa in their lack of overall finish, but they differ in that they have a single, straight working edge (Fig. 16c). Outlines range from sub-rectangular to plano-convex and with each specimen there seems to have been a conscious effort to produce a straight working face on the end of a rectangular form.

**TYPE III - Semi-Finished Scraper Planes (Pointed Edge):**

This type is represented by only three specimens and they may only be variants of Type IIa planes. They are made on macro-flakes with no regular outline and are roughly plano-convex in cross section (Fig. 17). The working edge is confined to a single edge, on which is flaked a steep face with a central projecting point or nipple. The sides of this point or projection exhibit the majority of any wear and it would appear that this tool form was specifically produced to serve some specialized function.

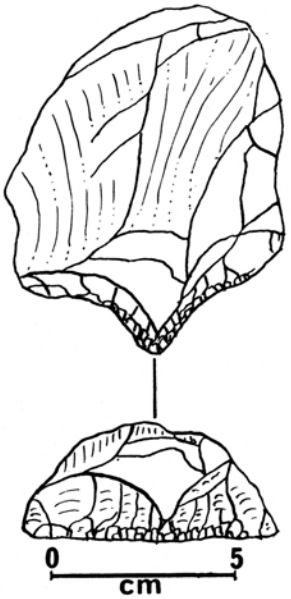


**Fig. 17. III Plane.**

## FLAKE SCRAPERS

This is the numerically largest group within the Sweetser site collection. They vary greatly in size and shape, but very few exhibit more than casual use and minimal edge flaking necessary to produce a serviceable working edge. Although they have been divided into four types for the purposes of presentation it should be kept in mind that they are all really members of a continuum. Some specimens could be placed in a convex side scraper type, but there are also specimens which are semi-convex side scrapers, straight side scrapers, semi-concaved side scrapers and so on. While these typological subdivisions may be useful and meaningful when dealing with other assemblages, they are of little value here. Suffice it to say that the great majority of the flake scrapers, regardless of size, were essentially side scrapers, with working edges ranging from convex to concaved.

**TYPE I - Small Uniface Flake Scrapers:**

Small, thin flakes with worked areas along one or more edge (Fig. 18a, b). Some specimens are random flakes which exhibit only fine edge flaking due to use (Fig. 18c, d) while other (Fig. 18e) are notched and may have been used as spokeshaves.

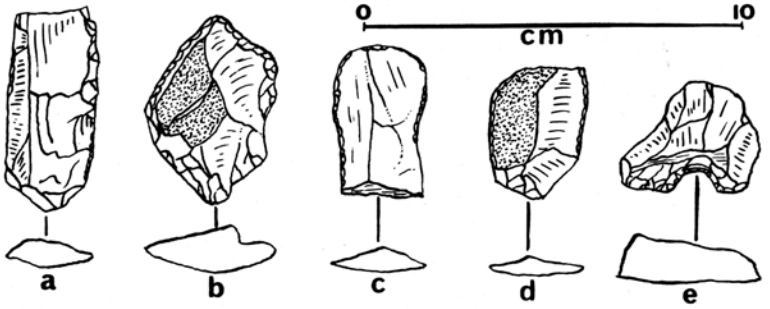


**Fig. 18. Small flake scrapers.**

**TYPE II - Medium Uniface Flake Scrapers:**

Specimens differ from Type I only in size with minimal edge flaking again being the rule (Fig. 19a, b, c). Spokeshave-like tools are also found (Fig. 19d).

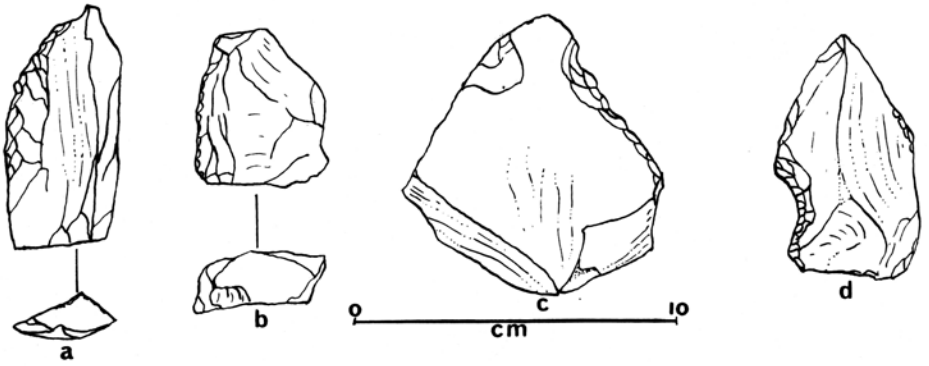


**Fig. 19. Medium flake scrapers.**

**TYPE III - Large Uniface Flake Scrapers:**

Large, thick flakes with one or more worked edges with minimal flaking along the periphery (Fig. 20a). Some specimens have slightly battered edges and there is some overlap with small choppers and Type IIa scraper planes. Most specimens indicate casual, short term use.

**TYPE IV - Biface Flake Scrapers:**

This is a small group of random sized flakes set apart from other flake scrapers by their bifacially worked cutting edges (Fig. 20b, c). Finish is always minimal and some specimens may have served as small choppers. These tools could not be classified as

bifaces, in the sense of a knife or projectile point, but many could have been utilized in the same manner as a knife. Some specimens may be rejects or pre-forms of refined biface production, but most were probably unifaced flake scrapers which were later bifacially worked to serve the need of the moment.

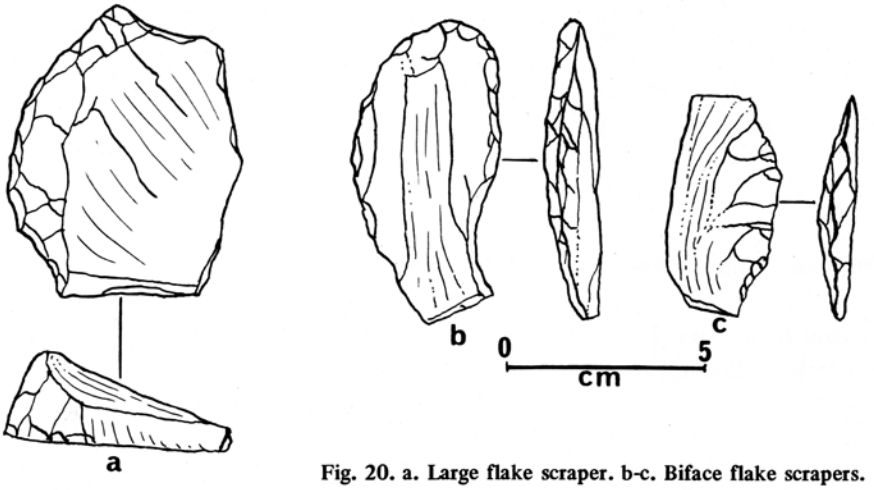


**Fig. 20. a. Large flake scraper. b-c. Biface flake scrapers.**

## CORE SCRAPERS

This classification includes a wide variety in both form and size, with angular cores predominating and edge flaking limited to minimal working of the basal periphery (Fig. 21a, b). Some specimens exhibit battered edges and there is some overlap with choppers, but the worked edges are essentially uniface in nature. Some battered specimens may also have functioned as hammers at times and some of the rougher examples may only be cores. Other specimens are fairly well made (Fig. 21b) and resemble Type IIa scraper planes.

The typological line here drawn between Large Flake Scrapers (Type III) and Core Scrapers is tenuous at best and intended only to present the range of variation. In many cases it is impossible to say just when a large flake with edge flaking ceases to be a flake tool and becomes a core tool.

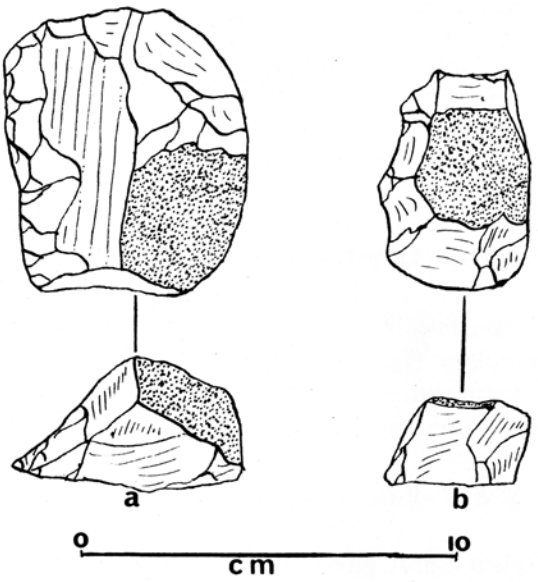


**Fig. 21. Core scrapers.**

## PLANO-CONVEX SCRAPERS

The members of this group are generally made on long flakes which have been unifacially worked over the majority of their dorsal surfaces. In many cases the bulb of percussion is still preserved on the flat, ventral surface. In a few cases there is minimal flaking on this ventral surface. The specimens within this group are diverse in outline, with rectangular, oval, leaf, triangular, and disk shaped forms being present. They are held together as a typological unit by their uniform plano-convex cross section and flat ventral surfaces which are not generally worked.

**TYPE I - Low Plano-Convex Scrapers:**

Made on thin flakes with the majority of the dorsal surface worked. Outlines are generally oval (Fig. 22a) with some specimens triangular to leaf shaped (Fig. 22b). Most appear to be completed tools, but some may be rejects or biface pre-forms.

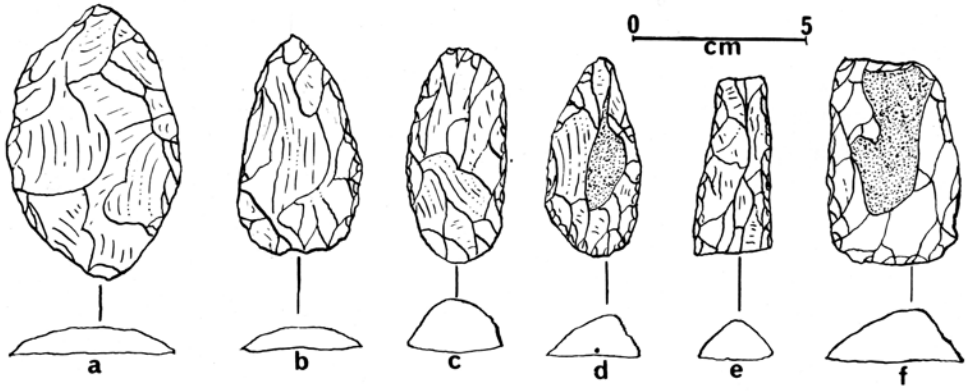


**Fig. 22. Plano-Convex scrapers**

**TYPE II - Keeled or Domed Scrapers:**

Highly plano-convex cross sections and usually exhibiting the best overall finish. Outlines range from oval (Fig. 22c) to leaf shaped (Fig. 22d; 23a) and triangular (Fig. 22e). A few specimens are rectangular in outline (Fig. 22f). Some specimens have quite steep faces at one end (Fig. 23b) and are similar to Type I scraper planes, but much smaller in size.

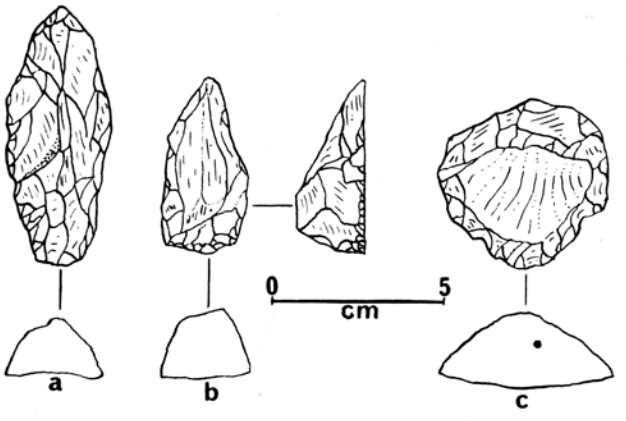


**Fig. 23. Plano-Convex scrapers.**

**TYPE III - Disk Scrapers:**

A small group of roughly circular flake tools with the majority of the dorsal surface worked (Fig. 23c). Generally with low plano-convex cross section.

A short discussion of the Plano-Convex series leads to some interesting questions. What was their function and why are they so common in the Antelope Valley?

The domed or keeled forms may have been used in a manner similar to scraper planes and a few do have their primary working edge at one end (Fig. 23b). However, the majority have their primary working edge along the sides (Fig. 22c, d, e; 23a) and they are generally somewhat smaller than scraper planes. The majority also have ends which are too pointed to have functioned as standard scraper planes and in some cases the end of the original flake remains unworked (Fig. 22e).

Experimentation was done on several types of regional plant materials, such as creosote bush, willow, yucca, and manzanita. In each case a flake scraper served as well as or better than a domed plano-convex scraper. Tests were also done with rabbit skins and again flake scrapers or knives served as well as plano-convex scrapers. Their plano-convex cross sections would have made them quite difficult to haft and they were probably used in the hand or stuck into the end of bones. At the present state of knowledge the use of these implements must remain an open question.

Although plano-convex scrapers are fairly common at the Sweetser site, and throughout the remainder of the Antelope Valley, they are not commonly reported from sites in the remainder of Southern California during the same period. Harrington illustrates a similar type, which he calls keeled scrapers, from the Stahl site (1957: 60-61, Fig. 45), located near Little Lake California. Harrington suggests that the high ridge or keel may have been left to add strength. Similar implements have been reported from San Diego county (Brott 1966: 180-183, 189) where they are associated with San Dieguito II and III. In both of the above cases they are always rare and the common occurrence of this type of tool in Antelope Valley may point to an emphasis on some regional food resource within the valley or some local processing technique of a food resource being handled by different tool forms outside of the valley.

## PROJECTILE POINTS

When dealing with a lithic assemblage on the level of the Sweetser site collection it is often difficult to draw typological line between some knife and projectile point forms. This is due largely to the general lack of specialization, particularly to the base, in projectile point forms. In some cases the distinction can be made with some degree of certainty, but it is quite possible that some specimens here typed as projectile points were

used as knives. Projectile points from the Sweetser site are generally smaller and lighter in weight than knives and usually exhibit finer edge and face flaking.

As has been previously noted the great majority of all chipped stone artifacts were made of rhyolite, with cryptocrystallines rarely represented. This pattern is altered to some extent when considering projectile points. Of the thirty specimens typed as projectile points, two are of basalt, five of chalcedony and one of obsidian, with the remainder being rhyolite. It may be that raw material such as chalcedony was selected when more finely flaked tools were being produced. However, rhyolite was still the most common raw material used for projectile point production.

**TYPE I - Leaf Shaped Points with Rounded Base:**

Four specimens in this type are made on small, thin flakes which were finished with a minimum of edge retouch (Fig. 24a, b, c). Little work was required to produce quite serviceable points from such flakes. The remaining specimens have flaking over their entire surfaces and were made on thicker flakes. They are generally bi-convex in cross section (Fig. 24f, g, h), but some specimens are plano-convex (Fig. 24d, e). One specimen (Fig. 24g) is quite small and resembles in size and shape a point from SDi-149 (Warren and True 1961:261, Fig. 4c). Projectile points from Little Sycamore (Wallace 1954, Fig. 39e, f) are similar to Type I points. One fairly large specimen placed in this type (Fig. 24f) does exhibit fairly rough flaking and may be a blank.

**TYPE II - Leaf Shaped Points with Elongated Tip:**

Two specimens make up this type and they are similar to Type I points in outline and bi-convex cross section. One has slight serration along its sides (Fig. 24i) while the other (Fig. 24j) is quite similar to a point from SDi-149 (Warren and True 1961:261, Fig. 4a). These two points may be variants of Type I.

**TYPE III - Stemmed Points with Rounded Base:**

These points are oval in outline, bi-convex in cross section and have weak shoulders and short stems with rounded base. Two specimens are of basalt (Fig. 24l, m) and the third of chalcedony (Fig. 24k). These points are similar to Silver Lake points from Lake Mohave (Campbell et al 1937:82, Pl. 42; Brott 1966;154-155, 169), the Tietfort Basin in San Bernardino county (Brott 1966:155, 169), Death Valley (Hunt 1960:31, Fig. 5e), the Stahl site (Harrington 1957:55, Fig. 41) and various sites in the Owens Valley (Lanning 1963, Pl. 13c, d; Davis 1963:207, Fig. 5a, c).

**TYPE IV - Lozenge Shaped Points:**

One specimen makes up this type and has a pointed stem which slopes away from weak shoulders at the mid-point (Fig. 24n). The stem is rounded and it is possible that this point is a variant of Type III.

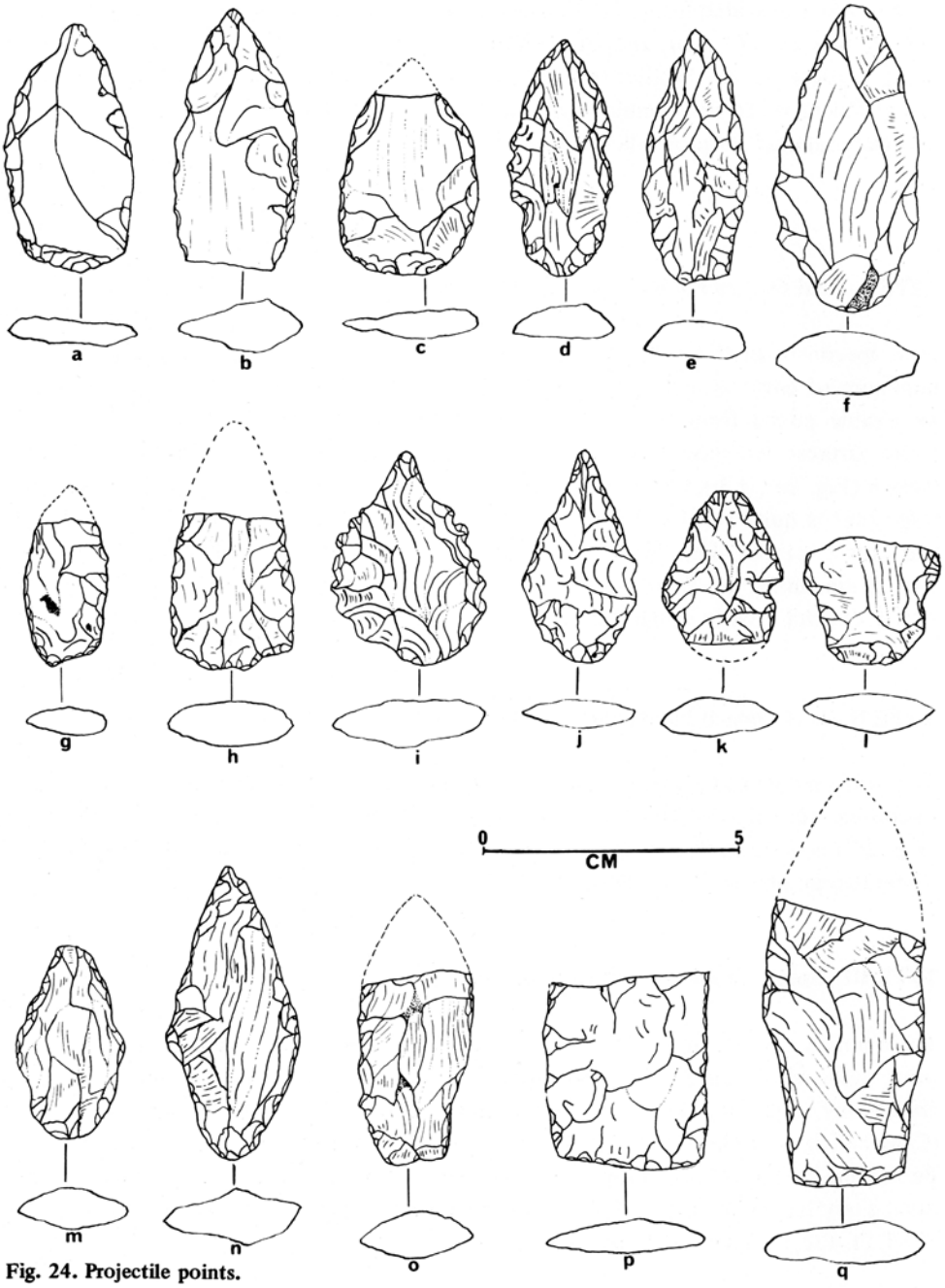


**Fig. 24. Projectile points.**

**TYPE V - Lanceolate Shaped Points with Straight Base:**

These specimens are generally larger and heavier than other points and some may be knives. All five examples have straight bases and the tips missing. The sides are straight (Fig. 24p) or slightly expanded to produce a weak stem (Fig. 24o, q). One specimen (Fig. 24o) is similar to one illustrated from the Rose Spring site (INY-372) in Owens Valley (Lanning 1963, Pl. 6a).

**TYPE VI - Concaved Base Point:**

One projectile point of obsidian was recovered and this specimen exhibits the maximum in basal elaboration found at the Sweetser site. The point is fairly small with a concaved base and leaf shaped outline (Fig. 25). The tip is missing and one ear of the base is broken off. This point is similar to shoulderless pinto points from the Stahl site (Harrington 1957:50, Fig. 39), Rose Spring (Lanning 1963, Pl. 6c) and the Owens Valley (Davis 1963:207, Fig. 5f, g). An obsidian hydration reading was done on this point (UCLA 1405) and a hydration level of 10.5 microns obtained. The exact significance of such a thick hydration layer is unclear at present, but current research on the Stahl site collection has produced hydration layers of equal and greater thickness (Clement Meighan, personal communication).


**Fig. 25. Projectile point.**

## KNIVES

This is the largest group of refined bifaces and they are generally well flaked over their entire surfaces. Some specimens are completely worked, with no portion of the original flake remaining, while others have the thick end of the flake remaining. In the later case these knives are also well made tools and exhibit considerable use, but the maker seems to have felt no need to flake that portion of the knife not directly related to its cutting functions. The fact that some knives have this thick, unflaked butt end would indicate that they may have been used in the hand, unhafted, or possibily used with bone handles.

All knives are made on flakes with somewhat of a preference for end flakes (Fig. 27e, 28b), but side flakes were also utilized (Fig. 26b).

In general the knives recovered from the Sweetser site are similar to specimens illustrated from Lake Mohave (Campbell et al 1937, Pl. 39, 40), Death Valley (Hunt 1960, Fig. 8, 9, 25, 26a-g), the Stahl site (Harrington 1957:58, Fig. 42a, b), and the Owens Valley (Lanning 1963, Pl. a-f).

**TYPE I - Leaf Shaped Knives with Rounded Base:**

Leaf shaped to elongated outlines with plano-convex (Fig. 26c, e) to bi-convex (Fig. 26a, b, d) cross sections. Comparable specimens illustrated from Lake Mohave (Campbell et al 1937, Pl. 40) and Rose Spring (Lanning 1963, Pl. 8a, b).

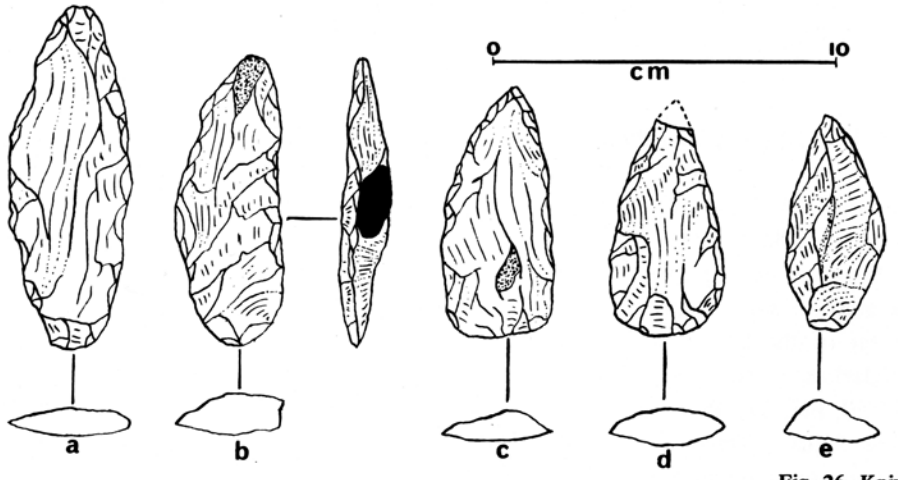


**Fig. 26. Knives.**

**TYPE II - Leaf Shaped to Triangular with Straight Base:**

Outlines are similar to Type I but tend toward a triangular form with straight base (Fig. 27a-e). Cross sections range from plano-convex (Fig. 27a) to bi-convex (Fig. 27b-e). Some specimens have flaked straight bases (Fig. 27a-d) but others have a straight base due to the presence of the unflaked, thick butt end of the original flake (Fig. 27e). Similar forms have been reported from Death Valley (Hunt 1960:90, Fig. 25) and Rose Spring (Lanning 1963, Pl. 8c-f).

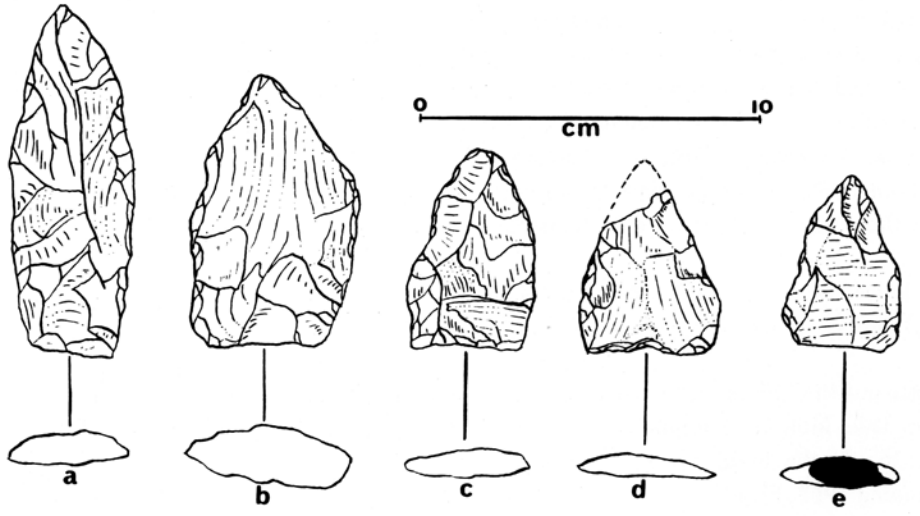


**Fig. 27. Knives.**

**TYPE III - Small Oval Knives:**

Generally bi-convex in cross section and oval (Fig. 28b) to circular (Fig. 28a, e) in outline. Some specimens retain the thick, unfinished butt end of the flake (Fig. 28b). Comparable to forms from the Stahl site (Harrington 1957:58, Fig. 42a).

**TYPE IV - Large Oval Knives:**

Specimens in this type are quite similar to those in Type III, differing only in size and weight. Bi-convex in cross section and some of the larger specimens may have served as choppers (Fig. 28c). Other members of this type, although quite large, exhibit fine overall flaking and finish (Fig. 28d). Comparable with specimens from Lake Mohave (Campbell et al 1937, Pl. 39) and the Stahl site (Harrington 1957:58, Fig. 42b).

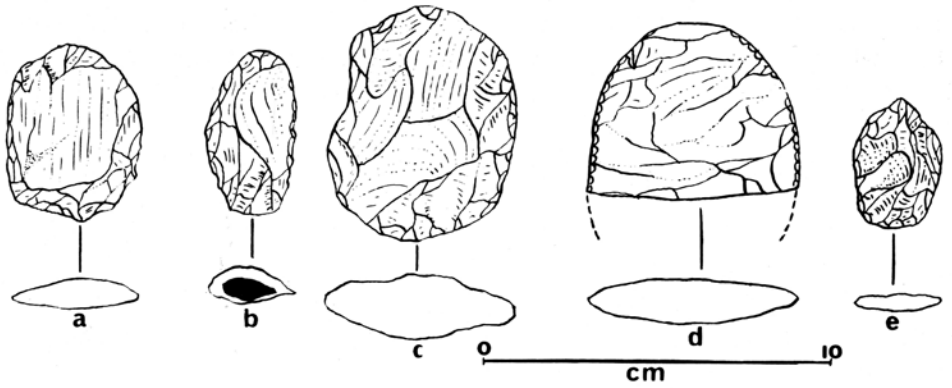


**Fig. 28. Knives.**

Knife fragments are very common in the collection but due to their present condition the majority can not be placed with any certainty into the above four types. However, it is unlikely that they would not all fit into the above four types. Many are completed and well utilized tools and may have been broken during use or while being re-sharpened. Other specimens appear to be unfinished tools, broken during manufacture.

## BLANKS

A number of the more roughly flaked bifaces can best be described as blanks (Fig. 29a, b). Most were probably pre-forms or rejects of refined biface production, but a few of the larger specimens may have served as choppers.

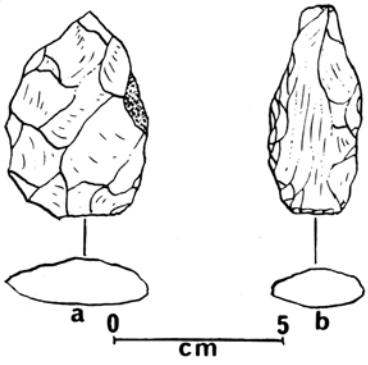


**Fig. 29. Blanks.**

## PUNCHES AND REAMERS

This is a small group of irregular shaped flakes which have pointed ends which probably served as punches and/or reamers. Most specimens exhibit minimal finish and their small number may indicate that bone and wooden tools performed the majority of such functions.

**TYPE I - Uniface Forms:**

Unifacially flaked specimens which exhibit minimal edges flaking (Fig. 30a-c). Outlines and sizes vary greatly.

**TYPE II - Biface Forms:**

Some specimens are similar to projectile points, but thicker and probably were reamers (Fig. 30d, e) while others are random flakes with a single projecting nipple (Fig. 30g). One specimen (Fig. 30f) may be an unfinished reamer or a biface blank.

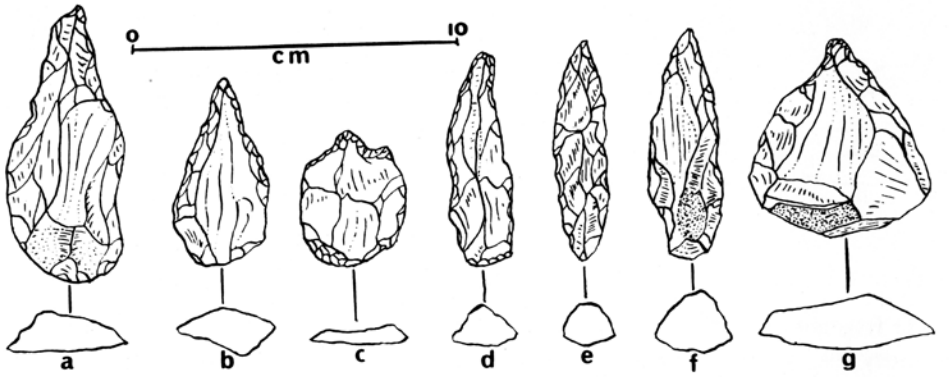


**Fig. 30. Punches and Reamers.**

## CHISELS

Two bifacially worked rectangular artifacts were recovered at the Sweetser site and seem to fit into no standard classification. One is thick, almost square in cross section with a straight working edge at one end and a rounded edge at the other (Fig. 31a). The second specimen is almost square in outline and rectangular in cross section with a straight working edge at one end and a rounded one at the other (Fig. 31b). They may have served as wood working tools, much like chisels.

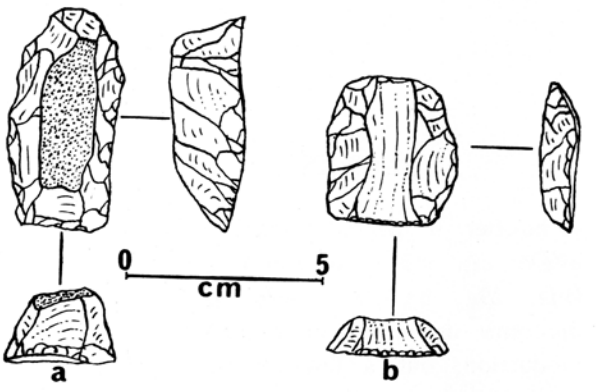


**Fig. 31. Chisels.**

# RAW MATERIALS

As has been previously noted, rhyolite was the major raw material used in the manufacture of flaked stone implements. Numerous sources of rhyolite are present throughout the Rosamond Hills (Wright and Troxel 1954:11; Noble 1954). The small amount of cryptocrystalline quartz used for some flaked tools was obtainable within the Rosamond Hills as well, particularly to the northwest around Gem Hill. The various types of granite used for manos were also available within a few miles of the Sweetser site and no great travel distance is indicated by any of the above raw materials.

Three of the raw materials represented in the collection do indicate some degree of travel. The specimens of basalt could point to relations with the eastern portions of the Mohave Desert, but some small basalt flows are noted for the Rosamond Hills (Noble 1954). The schist used in the manufacture of the well shaped milling stones and manos is not found in the immediate proximity of the site, but could only be secured in the mountains ringing the Antelope Valley to the north, west, and south. The Pelona schist is found in the Tehachapi Mountains to the northwest (Wiese 1950:12-15, Pl. 3, 4) and the Sierra Pelona to the south (Wright and Troxel 1954:9-11, Map 2). In the case of the Tehachapi Mountains the minimum distance involved is at least ten miles, with the largest outcrops of schist over twenty miles distant. The Sierra Pelona, west of Palmdale, is well over twenty miles to the south of the Sweetser site. In either case large slabs of schist would have had to be carried over considerable distances to reach the Sweetser site. The schist outcrops in the Tehachapi Mountains may have been within the seasonal round territory of the Sweetser site occupants.

Finally, the obsidian point may indicate some ties, possibly of a trade nature, with the Owens Valley region over eighty miles to the north of the Antelope Valley.

# DISCUSSION AND CONCLUSION

The problems of interpretation of the Sweetser site assemblage are considerable due to the nature of the collection under investigation and the lack of any prior knowledge concerning the prehistory of the Antelope Valley. The settlement pattern and subsistance base can only be outlined and the temporal placement of the occupation tentatively set. The temporal placement must rely for the most part on cultural sequences and assemblages outside of the Antelope Valley which contain typologically similar tool forms.

Comparisons with sites along the Southern California coast indicate that the type of ecological adaptation taking place at the Sweetser site was quite different, at least in emphasis, from any found along the coast during the Early Milling Stone period. Sites assigned to this period generally have high percentages of milling equipment, running from thirty to eighty percent of the total lithic collections (Treganza and Malamud 1950; Wallace 1954; Treganza and Bierman 1958; Rozaire 1960; Owen, Curtis and Miller 1964; King 1967; Greenwood 1970). In some cases there are similarities between implements from Milling Stone sites and the Sweetser site. Forms of manos, milling stones, scraper planes, flake scrapers and, to a lesser extent, projectile points are comparable. However, the coastal assemblages represent an ecological adaptation based to a large extent on wild plant food processing. The Sweetser site reflects more of an emphasis on hunting, with the percentage of milling equipment being seven percent of the total lithic assemblage.

The later Hunting Culture (Rogers 1929) on the coast does have percentages of milling equipment similar to the Sweetser site (Harrison and Harrison 1966), but projectile points and knives are typologically different and the number of mortars and pestles is much higher than at the Sweetser site. The Hunting Culture probably dates to a period later than the Sweetser site occupation.

As has already been noted some specimens from the Sweetser site, particularly projectile points, resemble types from Lake Mohave and the eastern Mohave Desert, Death Valley and the Owens Valley.

The comparable specimens from Death Valley are assigned by Hunt (1960) to Death Valley I and early Death Valley II which covers a period from the end of the Pleistocene to about 3,000 years B.C. (Hunt 1960:5, Table I) and a hunting economy is proposed.

The Stahl site, located at the southern end of Owens Valley offers some interesting comparisons. It is located at an elevation of 3,000 feet and had ready access to the Sierra Nevada to the north and the Mohave Desert to the south. A very similar situation is found at the Sweetser site with the southern extremity of the Sierra to the north and the Antelope Valley and Mohave Desert to the south and east. Many artifact classes are quite

similar in percentages, with like ratios of milling equipment refined bifaces and scraping tools being found at both Stahl and Sweetser. The one major difference is the large number of Pinto points from the Stahl site and the single Pinto-like point at Sweetser (Fig. 25) and it is possible that the Sweetser site occupation dates to a period earlier than that at Stahl. The two sites do occupy similar physical settings and the populations at each could have exploited quite similar ecosystems in a similar manner. This is indicated by the overall similarities between the two lithic assemblages and both sites had ready access to similar desert and mountain flora and fauna.

The Sweetser site was most likely a semi-permanent camp, occupied over a fairly long period of time, from which small groups of people could operate. Several factors point to a base camp designation for the Sweetser site:

1/ Number and concentration of artifacts in a fairly small area, the majority of which are fully completed and utilized tools.

2/ Diversity of tool types represented, reflecing a general occupation site rather than a specialized site, such as a quarry or hunting camp.

3/ Central location of the site and presence of a water supply (Local drainage pattern). Many small temporary specialized sites are to be found surrounding the site, such as a quarry site to the northwest and shoreline camps near Rosamond Dry Lake.

4/ Presence of the bed rock mortar and petroglyph boulder, indicating some degree of permanence and duration.

5/ Presence of exotic raw materials not available except through trade or long distance transport. The schist milling stones, particularly point to a settlement of some duration and permanence. Temporary camps would be expected to utilize local raw materials, especially when producing large, heavy items such as milling stones.

Semi-permenent base camps such as the Sweetser site were probably the center of activity during much of the year with smaller camps being established in the mountains during the summer months. Small hunting and gathering parties foraging the surrounding region from such base camps is a likely pattern. The number of people occupying such camps at any one time was no doubt small, probably numbering only a few families.

This same general settlement pattern of a large semi-permanent base camp with surrounding specialized temporary camps is found throughout the entire Antelope Valley, with another large base camp being located across the valley to the south at Fairmont Butte. This site is also surrounded by numerous small camps throughout its local area.

It must be kept in mind at this stage of archaeological research in the Antelope Valley that many sites on a temporal par with the Sweetser site are probably covered by valley sedimentation. However, on the present data the above settlement pattern seems indicated.

When discussing the subsistence base at the Sweetser site there is little doubt that hunting played an important part in the economy, with wild plant food gathering being less important than on the Southern California coast during the same time period. This is indicated by the emphasis on hunting and animal processing equipment with lesser percentages of seed milling equipment. Lanning (1963:246) notes the same situation at Rose Spring and draws a similar conclusion. However, due to the complete lack of floral and faunal remains at the Sweetser site the actual plants and animals involved in the food cycle and the degree of importance of any given item within that total cycle can not be determined.

A dating of the Sweetser site occupation to some period between 2,000 and 4,000 years B.C. seems likely. The occupation is probably earlier then that at the Stahl site, judging from the projectile point forms, but the two occupations could be contemporaneous.

Future excavation of a site of similar age in the Antelope Valley will no doubt fill out and change, at least to some extent, the picture of the valley's prehistory presented here.

# ACKNOWLEDGEMENTS

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*Finally, my thanks go to my wife, Evonne, for putting up with me while this paper was being prepared.*

## TABLE I

## ARTIFACT SIZE RANGE AND NUMBER IN EACH TYPE

| Artifact Type | No. of Specimens | Maximum in mm. L. | W. | T. | Minimum in mm. L. | W. | T. |
|---|---|---|---|---|---|---|---|
| Manos | | | | | | | |
| Ia | 17 | 121 | 83 | 52 | 92 | 65 | 42 |
| Ib | 7 | 132 | 102 | 53 | 81 | 71 | 42 |
| II | 11 | 120 | 73 | 60 | 70 | 46 | 38 |
| Fragments | 16 | Too incomplete to measure | | | | | |
| Milling Stones | | | | | | | |
| Complete | 10 | 487 | 329 | 204 | 280 | 217 | 54 |
| Fragments | 38 | Too incomplete to measure | | | | | |
| Pestle | 1 | 144 | 80 | 55 | ----- | ----- | ----- |
| Mortar | 1 | 246 | 226 | 140 | ----- | ----- | ----- |
| Hammerstones | | | | | | | |
| I | 3 | 89 | 76 | 53 | 85 | 60 | 35 |
| II | 176 | 120 | 89 | 72 | 52 | 41 | 21 |
| Choppers | | | | | | | |
| I | 3 | 136 | 94 | 60 | 88 | 67 | 39 |
| II | 57 | 145 | 118 | 94 | 75 | 45 | 25 |
| III | 2 | 133 | 99 | 44 | 112 | 70 | 36 |
| Cores | 10 | 89 | 63 | 52 | 61 | 53 | 34 |

TABLE I TABLE I (continued)

| Artifact Type | No. of Specimens | Maximum in mm. L. | W. | T. | Minimum in mm. L. | W. | T. |
|---|---|---|---|---|---|---|---|
| **Scraper Planes** | | | | | | | |
| I | 25 | 101 | 85 | 55 | 44 | 33 | 26 |
| IIa | 37 | 95 | 92 | 77 | 56 | 33 | 26 |
| IIb | 7 | 128 | 70 | 62 | 55 | 28 | 31 |
| III | 3 | 85 | 85 | 37 | 66 | 70 | 35 |
| **Flake Scrapers** | | | | | | | |
| I | 125 | 61 | 33 | 16 | 26 | 18 | 8 |
| II | 182 | 91 | 76 | 20 | 44 | 30 | 19 |
| III | 13 | 115 | 87 | 42 | 74 | 54 | 25 |
| IV | 17 | 87 | 55 | 26 | 56 | 31 | 10 |
| **Core Scrapers** | 57 | 111 | 109 | 39 | 57 | 40 | 23 |
| **Plano-Convex Scrapers** | | | | | | | |
| I | 47 | 96 | 65 | 20 | 39 | 20 | 12 |
| II | 52 | 110 | 50 | 32 | 50 | 26 | 21 |
| III | 9 | 62 (dia.) | | 26 | 31 | (dia.) | 12 |
| **Projectile Points** | | | | | | | |
| I | 16 | 60 | 32 | 11 | 28* | 17 | 6 |
| II | 2 | 42 | 30 | 10 | 41 | 22 | 8 |
| III | 3 | 38 | 23 | 11 | 31* | 23 | 8 |

TABLE I (continued)

| Artifact Type | No. of Specimens | Maximum in mm. L. | W. | T. | Minimum in mm. L. | W. | T. |
|---|---|---|---|---|---|---|---|
| Projectile Points (continued) | | | | | | | |
| IV | 1 | 57 | 26 | 11 | ----- | ----- | ----- |
| V | 5 | 57* | 32 | 9 | 38* | 25 | 11 |
| VI | 1 | 24* | 22 | 6 | ----- | ----- | ----- |
| Fragments | 2 | Too incomplete to measure | | | | | |
| Knives | | | | | | | |
| I | 25 | 99 | 39 | 19 | 46 | 23 | 11 |
| II | 21 | 103 | 49 | 23 | 50 | 28 | 11 |
| III | 8 | 48 | 38 | 17 | 32 | 27 | 10 |
| IV | 12 | 71 | 66 | 28 | 49 | 48 | 13 |
| Fragments | 240 | Too incomplete to measure | | | | | |
| Blanks | 49 | 112 | 40 | 32 | 57 | 26 | 13 |
| Punches and Reamers | | | | | | | |
| I | 6 | 85 | 36 | 17 | 41 | 16 | 9 |
| II | 12 | 77 | 46 | 25 | 62 | 22 | 17 |
| Chisels | 2 | 57 | 38 | 20 | 32 | 31 | 10 |

*Measurement of a fragmentary specimen.

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