

CHUMASH ARTIFACTS COLLECTED IN SANTA BARBARA COUNTY, CALIFORNIA

Campbell Grant

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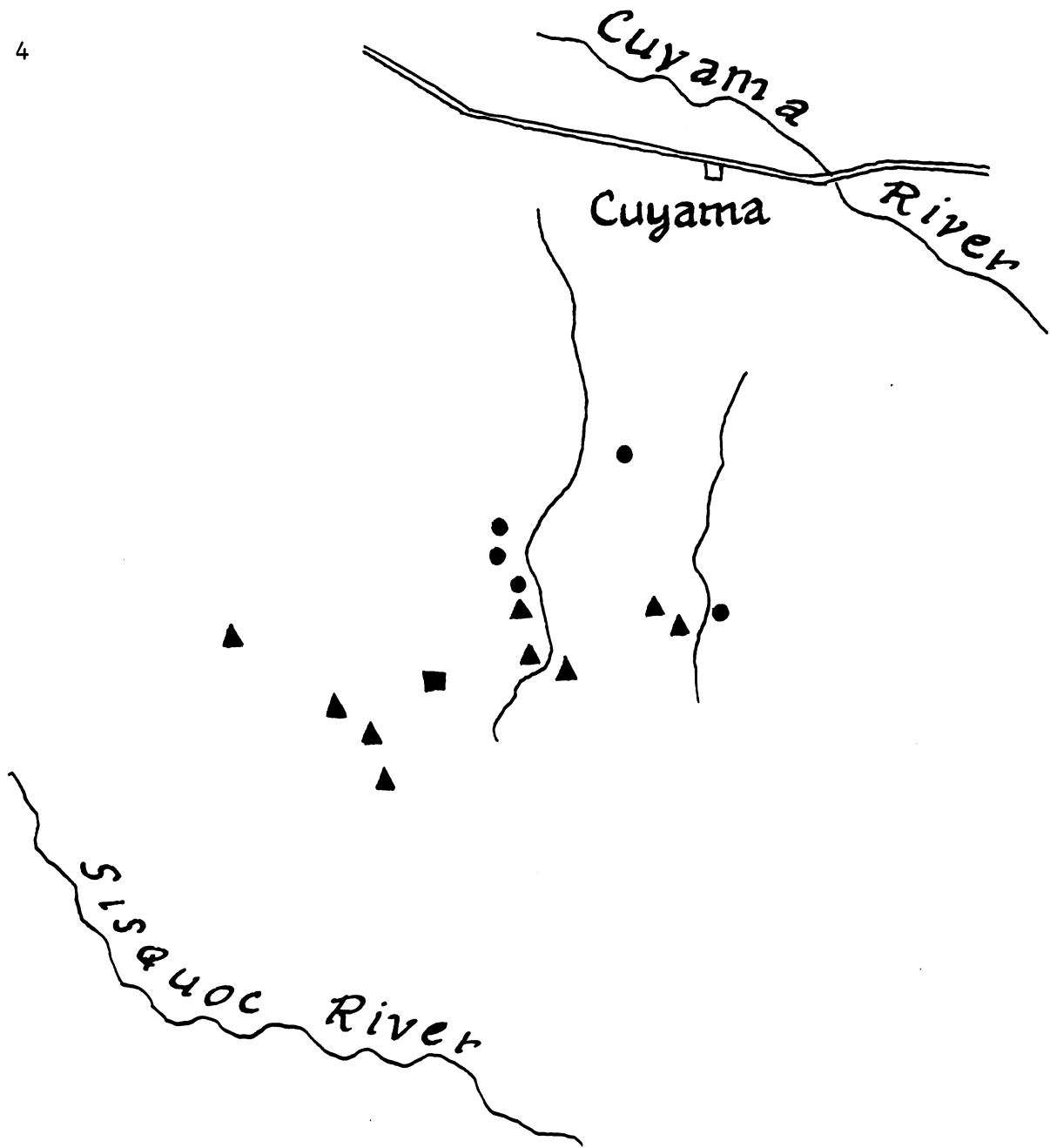
## INTRODUCTION

For many years stories have been told in the Santa Barbara area about Indian baskets, arrows, and other artifacts found by ranchers and hunters in the remote and half-legendary Hurricane Deck country, a rocky ridge between the Sisquoc River and Manzana Creek, and in the Sierra Madre range to the north. Invariably these tales vanished into thin air upon investigation, although the few examples of basketry from this region at the Santa Barbara Museum of Natural History tend to give some credence to the "tall tales."

Recently, however, the Museum has acquired a large and varied collection of artifacts, particularly rich in perishable materials, from a burial site and adjacent dry caves in the Sierra Madre Mountains. This collection was made during the 1920's and 1930, and there can be little doubt that rumors about these finds were the basis for some of the tales current in Santa Barbara. The collection is of considerable importance since it contains practically every known Canaliño type of artifact (Rogers 1929; Orr 1943), and positively extends the range of the Chumash Indians to the Cuyama drainage. By Chumash I refer to the Chumash speaking people who were in possession of the Santa Barbara region at the beginning of the Spanish Period, with a recognizable culture pattern known as the Canaliño culture which had endured for several thousand years.

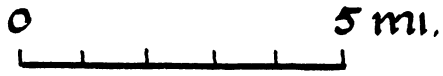
The Sierra Madre Mountains rise in northeastern Santa Barbara County between the Sisquoc and Cuyama rivers. This region is a rugged range of open woodland, the habitat of forests of Big-cone spruce, piñon pine, and California juniper interspersed with chaparral and grass. The streams, with the exception of the Sisquoc, are largely intermittent or completely dry in summer, and signs of Indian occupation are found near the springs in the upper reaches of the short, steep canyons which cut through the sandstone outcrops and are filled with oaks and occasional stands of sycamore and willow.

Within a radius of four miles of the burial site there are nine pictograph caves, and it was while recording some of these sites in 1961 that I met Mr. J. G. James, a rancher in the Cuyama Valley, and saw his extraordinary collection of Indian artifacts. I suggested to him that the most logical ultimate home for the collection might be in the Santa Barbara Museum of Natural History, where it could be classified and studied, and the more spectacular items added to the exhibits in the Indian Hall. In the fall of 1962 Mr. James wrote me that he and Mr. Henry Abels of Santa



- burial site
- cave caches
- ▲ pictograph sites

☀  
Big Pine Mt.



Map 1

General Location of the James-Abels Finds



Maria (who had shared in the finds and held half of the artifact collection) had decided to give their Indian materials to the Museum. The joint collection is presently being catalogued and will be known as the James-Abels Collection.

## THE CAVES

The caves are located in narrow canyons on the northern flanks of the Sierra Madre range. The earliest knowledge of the caves and of the artifacts occasionally found in them came from a collection of nine baskets acquired by the University of California in 1907. These are illustrated in Kroeber (1925, pls. 52, 53, 54). The baskets were discovered by J. E. Heath of Wasioja, California, while he was working in these canyons for C. E. James, father of the co-donor of the James-Abels Collection. Heath sold the baskets to the University of California, but following their delivery they were confiscated by the U.S. Forest Service in what was probably the first implementation of the then recently passed "Act for the Preservation of American Antiquities" of June, 1906. The baskets then became the property of the Smithsonian Institution, which in turn gave them to the University of California Museum of Anthropology.

During the 1920's Mr. James investigated the sandstone caves lying in deep canyons back of his ranch house and recovered many artifacts, mostly baskets and other articles of a perishable nature. These objects invariably rested on bedrock, were covered with sticks and grass, and buried under several inches of fine sand. With the exception of the baskets, the artifacts were wrapped in tule matting. Although there was a great number of shallow, eroded sandstone caves in the area, less than a half dozen of them contain caches.

## Artifacts Recovered

### Feathered Dance Skirt (Pl. 1a)

The most spectacular item found by Mr. James was a ceremonial dance skirt, wrapped in tule matting (Pl. 1b) and in a good state of preservation. This is the only item that was not in the collection when it was acquired by the Santa Barbara Museum of Natural History. During the 1930's the skirt was given to Dr. M. R. Harrington for the Southwest Museum in Los Angeles, California, where it is on display at the present time. With the kind permission of the Museum, the skirt is described here for the first time, by Mr. Bruce Bryan.

"The foundation of the skirt is fiber netting (possibly Asclepias sp.), 81 cm. wide at the waist. The belt cord, of which there is a small piece at the left side and a long piece at the right, originally was approximately 260 cm. long. The length of the skirt including eagle feather fringe is 62 cm., depth of the actual textile, 26 cm.

"There are three rows of short crow (raven?) feathers attached to the upper skirt (one or two look like small eagle feathers). Since most of them are missing, it is impossible to get an accurate count. There are 48 eagle feathers at the bottom, though here again a few are missing.

"The belt cord at first glance looks as if it is woven of four separate strands but there is only one strand, ingeniously braided to give it a thickness of about 14 cm.

"The skirt was certainly used in historic times as it has bits of red fabric woven into it and a number of blue glass beads."

This is the only ceremonial skirt to be recovered in Chumash territory. Solid evidence of their use is found in Reichlen and Heizer (1963:33, fig. 11). This picture shows a Santa Ines Chumash Indian wearing the ceremonial costume of a shaman. The eagle-feather trimmed skirt is very similar to that found by Mr. James. This type of dance skirt is known ethnographically throughout Southern California. A skirt identical with the one illustrated in Reichlen and Heizer is pictured as worn by a Yokuts shaman in Latta (1949:202).

### Matting

The collection contains an abundance of matting, mostly fragmentary, but there are a half-dozen sizable pieces. Three recognizable methods and a number of different materials were used in their construction.

Type A (Pl. 2a): Mat material, Scirpus acutus (common tule). Width of the flattened stems, 10-15 mm; lengths of tule fastened together with same material twined; about 20 cm. between lines of twining. Ends reinforced with braided tule.

Type B: Mat material, S. californicus (California bulrush) and S. olneyi (Olney bulrush). Width of flattened stems, 5-7 mm. Lengths of tule (rush?) fastened together with same material twined; about 8 cm. between lines of twining. Edges reinforced with braided tule, tied on with Yucca cord.

Type C (Pl. 2b): Mat material, S. californicus and S. olneyi. Width of flattened stems, 5 mm. Two outer bindings are of Apocynum cannabinum (Indian hemp) twined; inner bindings threaded through stems, 7 cm. between threadings. Edges reinforced with braided tule, tied on with Yucca cord (Pl. 2d).

Type D (Pl. 2c): Same as type C, but twining used throughout; no threading through stems.

In addition, there is a small piece of type D matting where the fibers have been beaten and separated individually to make a very soft material, possibly a cradle mattress.

With the exception of a few fragments, matting has not been previously reported from the Chumash area, although all early writers mention its extensive use as a floor covering, for doors, to line enclosures, as screens to separate sleeping quarters, for cradle lining, to wrap objects, etc. Many of the perishable materials found by Mr. James were wrapped in matting. While there are several examples of each of the three types of construction, the coarse self-weave of type A is the most common variety. Gayton (1948:82-83) describes the Yokuts-Western Mono manufacture of types C and D matting, and mentions the triangular tule Scirpus olneyi.

### Basketry

There are nine examples of basketry in the James-Abels Collection. Two of these are large storage baskets (one with decorations); one is a dish-shaped, decorated basket; two are asphaltum-lined water bottles; one is a large olla-shaped basket; one a sieve; and two are gambling trays. In addition, there are fragments of a seedbeater and of baskets.

Three basic basketry techniques are shown in the collection. Most of the pieces are coiled, but the water bottles and sieve are twined. The storage baskets are rather crudely fashioned, while the shallow dish, the olla-shaped basket, and the gaming trays are carefully done.

The foundation material for most of the coiled baskets is Epicampes rigens Benth. (deer grass), though the shallow dish shows a three rod Juncus (rush) foundation. The basketry water bottles are twined with rush and the sieve has a split willow rim with a fine twig material (possibly willow) for warp.

Storage basket 1 (Pl. 4a): This is a typical large, conical, storage basket, about 55 cm. in diameter and in rather poor condition. It has been crudely patched with asphaltum and widely spaced Juncus stitches (Pl. 4c). There is also a large patch applied to the side, the patch being a piece of another basket roughly stitched and cemented on. It would seem that the owners were trying to get the last possible use out of these baskets and that they were in very poor shape when abandoned in the cave.

Although the workmanship on this basket is not too carefully done, there is an attempt at decoration. A repeated design in black of twined point-to-point triangles (rather like an hourglass) occurs in a somewhat aimless manner on the outside of the basket.

Storage basket 2 (Pl. 4b): This is similar in most respects to the storage basket described above, and shows the same crude repairs and general air of deterioration. It bears no design.

Dish-shaped, decorated basket (Pl. 3a, cover): This rather carefully made shallow basket is 22 cm. in diameter and has an intricate hourglass design around the rim. It is very greasy on the inside and appears to have been used as a food dish. The construction of the foundation is three rod Juncus; it is the only basket in the collection not utilizing the grass bundle foundation. Deetz (1963) thinks that this basket was probably the bottom section of a narrow-mouth jar, as it is coiled in a direction opposite to that usually found in open form Chumash baskets. The top coils indicate that additional coils have been removed. The design is in a reddish color on buff base and is typical of known Chumash design elements. When found this basket was in position as a lid to the olla-shaped basket described below.

Olla-shaped basket (Pl. 3a): This basket, which is 35 cm. in diameter, is the best preserved of the James-Abels Collection baskets. It is carefully made, undecorated, and with the exception of a small section missing from the bottom, is in excellent condition. When found the basket was half-filled with pine needles and a bunch of deer grass.

Sieve (Pl. 3b): This sieve-like utensil is 47 cm. in diameter, with a rim of split willow wood. Construction is a loose twining (Fig. 1c) of slender twigs (possibly willow) about 2 mm. in diameter. The woven section is dark brown in color and has been polished from long use as a sifter. The sieve apertures are about 5 mm. square.

Water bottles: Two twined water bottles recovered in the caves

are in poor shape. The best preserved (Pl. 3c) is a lower half of a bottle 15 cm. in diameter. Most of the original asphaltum lining of the bottle is still in place. The construction is simple twining (Fig. 1d) with Juncus, reinforced with courses of diagonal twining. The second water bottle is similar, but has been crushed by a rockfall.

Gaming trays (Pl. 3d, e): Each of these trays are 45 cm. in diameter. They are identical in appearance, showing rodent damage and having lost parts of their rims. The trays show evidence of minor repairs with asphaltum and Juncus stitching.

Seedbeater (Pl. 4d): This artifact is represented by fragments of split willow rim and parts of two courses of center mesh. A lattice of slender twigs is held in place by courses of twined fiber cord. Originally the seedbeater was probably similar to one shown in Kroeber (1925, Pl. 29).

Miscellaneous basketry fragments: In addition to the above, the collection contains a number of basket bottoms and other fragments. There is a large section of what was probably a sieve, but with a loose twining quite unlike the complete specimen described above. One large coiled basket bottom is coated with a layer of asphalt about 3 mm. thick (Pl. 5b). A fragment of what was perhaps a storage basket shows an elaborate design of the step type (Pl. 5c). There is a small basketry bottom with a ring of drilled 2 mm. holes around the edge (Pl. 5a).

Because of their association with the large collection of typical Canaliño artifacts, these baskets must be assigned a Chumash origin. Comparison with other known Chumash baskets found under similar circumstances only strengthens this attribution.

The first sizable collection of archaeological Chumash type baskets was that of the nine baskets found in Bowers Cave in northern Los Angeles County (Elsasser and Heizer 1963). These show the crude patching with asphaltum and Juncus evidenced in much used storage baskets.

The nine baskets acquired by the University of California in 1907 (see p. 5) are very similar to those in the James-Abels Collection, which is not surprising since the assemblage came from the same locality. An additional seven baskets found in Chumash territory, in a cave in the Sespe Mountains (Heye 1926), resemble both Cuyama and Sespe basketry in the crude coiling techniques and designs.

TABLE 1  
Summary of Basketry Data

Specimen	Dimensions Diameter (cm.)	Technique	Coils per 10 cm.	Stitches per 10 cm.
Storage Basket 1	55	Coiled, single grass bundle	27	31
Storage Basket 2	55	Coiled, single grass bundle	31	49
Dish-shaped Basket	22	3 rod triangular	36	51
Olla-shaped Basket	35	Coiled, single grass bundle	23	33
Water Bottles	15	Simple twining, diagonal twining reinforcing		
Sieve	47	Simple twining		
Gaming Trays	45	Coiled, single grass bundle	28 29	24 41
Seedbeater		Simple twining		

Additional baskets and basketry fragments recovered from dry caves, all following the pattern of the larger collections described above, have been reported by Rogers (1929:70), Harrington (1942:141), and Kowta and Hurst (1960).

Deetz (1963) has summarized the basketry in the James-Abels Collection as follows:

"The significance of the James-Abels collection to our knowledge of Chumash material culture is great. Since several functions are indicated by these baskets it is likely that the collection represents a basic tool kit of sorts, with most important types represented. The only type of basket known to have been used by the Chumash but not represented is the basketry hat, a coiled bowl-shaped basket worn by women. The conical baskets were used to collect vegetal foods, harvested with the aid of the seed beaters. This activity was made possible in some cases by the ability

to transport water into dry areas in tarred bottles. The jar and bowl indicate aspects of food consumption and storage. Even recreational activities are indicated by the gambling trays.

"The baskets in this collection are slightly different from those manufactured on the coast, but fall within the range of Chumash style and technique. Greater use of deer grass in weaving is indicated by these specimens; most of the known examples of Chumash basketry are from the coastal areas and show almost exclusive use of a species of rush (Juncus textilis) both for stitching and foundation of coiled basketry. However, since the baskets in the James-Abels collection were associated with a demonstrably Chumash assemblage, this variation can be accepted as both legitimate and contemporary, since both the James-Abels collection and coastal baskets are known to be of a recent date, probably circa 1800-1820."

As verification of Deetz's postulated dating of the basketry, a fragment of storage basket 1 (see p. 8) has been recently radiocarbon dated at 120 years (1843 A.D.  $\pm$  80 yrs.).

#### Two Additional Baskets Recently Recovered in the Same Area

In June 1962, the Santa Barbara Museum of Natural History authorized a pictograph reconnaissance in the eastern Sierra Madre mountains of northeastern Santa Barbara County. The survey was undertaken by Gordon Grant, son of the author, and Nicholas Goodhue. In a two week period, working in very rough country, three hitherto unknown pictograph sites were recorded, and two baskets in better-than-average condition were recovered. The latter were found in small cache holes in the sides of narrow canyons.

Water bottle (Pl. 5d): This large twined water bottle, 42 cm. high by 24 cm. in diameter, is lined with asphaltum. The construction is simple twining with Juncus reinforced every four courses with three or four courses of a heavier material. The bottle also has asphaltum on the outside for about 7 cm. from the bottom, which has been partially destroyed by rodents.

Shallow dish (Pl. 5e): This is a decorated shallow basket 30 inches in diameter; coils per 10 cm., 36; stitches per 10 cm., 43. The basket is very well made and still quite rigid and strong. Decoration consists of six small, black chevrons. When found, the basket was near a large slab of Pseudotsuga macrocarpa (Big-cone spruce) which must have served as a protective platform. Construction is 3 rod triangular and grass bundle.

The number of specimens of Chumash basketry that have been recovered from caves in this small area of Santa Barbara County is astonishing. The University of California Lowie Museum of Anthropology, Berkeley, now has the nine baskets found by J. E. Heath, and, in addition, seven specimens collected by Grant Dewlaney about 1889. Another six baskets from the Heath collection are at the Smithsonian Institution. The Southwest Museum, Los Angeles, has a Cuyama area water bottle from the J. G. James collection, and a similar water bottle is in the Bowers Memorial Museum, Santa Ana, California. The Santa Barbara Museum of Natural History collection now has the nine James-Abels baskets and the two recently discovered baskets discussed above. Four additional baskets are in private hands: two water bottles recently recovered by Mr. and Mrs. Halford of New Cuyama; and Dr. James F. Deetz of the Department of Anthropology, University of California at Santa Barbara, tells me that two baskets with design patterns were found just a short time ago in Sisquoc Canyon. More than half of these thirty-nine basketry finds were water bottles. Dr. Deetz has estimated that there are no more than one hundred and fifty Chumash baskets in existence.

In the spring of 1964, Mr. Lawrence Dawson of the Lowie Museum of Anthropology and Dr. Deetz arranged the first comprehensive exhibit of Chumash basketry at the Santa Barbara campus. Eighty-five baskets were gathered from museums and collectors all over the country, representing the types of baskets the early Spanish and American traders obtained from the Chumash weavers in the early 1800's. Almost without exception they are highly decorated and skillfully constructed, in marked contrast to the simple work baskets recovered from cave caches.

### Cordage

The collection includes a number of short pieces of cordage of various diameters and materials. There are two sizable pieces of the netting mentioned by Spanish diarists, and an article of indeterminate use that looks as if it could have been used as a tumpline headband.

Netting (Pl. 6a, c): Specimen is 23 by 11 cm., 2-ply S-twist Yucca whipplei cordage; about 1.5 mm. in diameter with 1.5 cm. mesh. A second fragment is 70 by 30 cm., 2-ply S-twist Yucca cordage, about 3 mm. in diameter with 4 cm. mesh.

Headband (Pl. 6d, Fig. 1b, f): Woven band probably used as a tumpline for carrying burden baskets. Length is 27 cm., width at center about 5 cm., tapering to about 2 cm. at the reinforced loop ends. Made of 2-ply S-twist Yucca cordage, about 2 mm. in diameter.



Here again we have been dealing with material unique in the known Chumash inventory. All these cordage samples are dark buff in color, though the cordage used in the matting construction is of several colors and textures. There seem to have been three materials used for cordage in the collection: the coarsest is Yucca; the softest (similar to cotton string), Apocynum; the intermediate texture may be either Asclepias or Urtica. These three fibers were widely used in Southern California.

The cordage found with the Bowers Cave artifacts (Elsasser and Heizer 1963) was, with one exception, of Apocynum cannabinum, and it is not surprising to note its common use in the matting in the James-Abels Collection.

#### Stone Projectile Points and Tools (Pl. 11a, b, c)

The three most carefully worked stone pieces were found in the burials and are described below in that section. In the caves and ground adjacent to the caves a total of seventeen stone artifacts were recovered: scrapers and choppers, 4; drills and punches, 2; knives, 2; projectile points, 9.

Most of the stone material collected occurs in other Chumash collections, but there are several exceptions among the projectile points—notably a large shouldered point of red stone foreign to the region, which must have been obtained in trade. The material of the other specimens is chert of various shades and a very dark flint.

#### Bone Tools

The collection contains six deer antler tools and one rib bone tool. Five of the deer antler implements are stone flaking tools; one is a splitting wedge showing much evidence of pounding on the squared-off end. One of the antler pieces is double pointed. The rib bone implement resembles an awl or punch.

Whalebone wedges have been pictured and described in accounts of the coastal Chumash, but this may be the first deer antler wedge definitely associated with the Chumash. Kroeber (1925:559) says, "The planking was split with wedges which would be needed also for cemetery boards and probably for wooden dishes. The Chumash replaced the usual California antler wedge with one of whalebone." Split boards were found in the burial area.

### Wooden Objects

Gaming sticks (Pl. 13b, lower right): A well-used set of eight split elderberry dice sticks were found in a tule mat. Seven of the sticks are cut off square on one end and pointed at the other; the eighth stick has a nock cut into the end instead of a point. All eight sticks are about 16 cm. long.

Digging sticks(?): Two pointed sticks (Pl. 13b, top) were recovered. One is 58 cm. long, 5 cm. wide, and 3 cm. thick; the other is 41 cm. long, 3 cm. wide, and 2 cm. thick. Both appear to be of Pseudotsuga macrocarpa and show fire backening (from hardening?) at the pointed end.

These sticks clearly show tool marks used in shaping, suggesting some sharp iron tool, but as no such implement was found at any of the sites, a large stone cutting edge might have been used.

Arrow shafts (Pl. 13b, left center): There is one hardwood arrow foreshaft, 23 cm. long and 6 mm. in diameter, that is pointed at one end, with traces of asphaltum. This end was probably inserted into the cane mainshaft and bound. A similar arrow is to be seen at the Santa Barbara Museum of Natural History, one of a bundle of over twenty arrows found in a cave cache near Figueroa Mountain in 1960. A second shaft fragment is 17 cm. long and 4 mm. in diameter, tapering to a point at one end. It looks like the front end of a self-point arrow.

Elderberry tubes (Pl. 13b, left, lower center): One tube is 36 cm. long and 3.7 cm. in diameter, cut off square at the ends and with the bark still in place; the second tube is 19 cm. long and 2 cm. in diameter. The larger tube is formed by the removal of the pith core; the smaller has had the pith hole enlarged artificially.

The most interesting wooden items are the dice sticks, not previously reported from Chumash territory. Gayton (1948:92, 163, 268) describes a game played by various Yokuts tribes using dice sticks. Six or eight split elderberry sticks were thrown on a deerskin or blanket. The scoring was similar to the walnut dice game: two face up or down, 1; three face up or down, 1; all face up or down, 4. The game was usually played by women.

The digging sticks are doubtfully identified as such; they may have served as sticks used around the cooking fire for lifting hot stones or poking the embers. The wooden tubes, too, are puzzling. The Santa Barbara Museum of Natural History has two tubes identical to the

larger tube described here, which were collected from caves in the Hurricane Deck country in 1935. The smaller tube may have served as a medicine tube.

#### Miscellaneous Artifacts

Smoking pipe (Pl. 8b, right): This is typical of the highly finished, dark green steatite pipes so often found in the Chumash area. What makes it unusual (but not unique) is that it not only has the bone mouthpiece still fastened in place with asphaltum, but also a band of wood fiber, 3.7 cm. wide, has been cemented to the upper end.

Woolen fabric: This is the only Spanish material (with the possible exception of the leather sandal soles described below) that was found in the caves. There are several fragments, the largest about 22 cm. square (Pl. 16b). The weave is coarse—almost like burlap sacking—and the color dark brown. The best probability is that these fragments are examples of Mission weaving. The fabric and stemmed pipe were found together in a small cave.

Hide: A small storage bag of fawnskin (Pl. 7a) and the remains of another were recovered from a cave. The bag is sewn down the length with fiber string and one end is gathered and bound. The hair side is turned out.

Another find was a pair of leather sandal soles (Pl. 7b). There has been no previous record of such sandals from the Chumash region although Harrington (1942) reports them ethnographically. These may be a Mission period innovation, or possibly were obtained in trade from traveling Yumas or Mohaves who wore such sandals (Forde 1931:92-93). The rather crudely cut, squarish soles show holes drilled for toe and ankle thongs, and one sole has been substantially gnawed by pack rats.

#### Raw Materials

In several of the caves there was a considerable amount of raw material, chiefly fiber for cordage. Most of the fiber was carefully tied in hanks and enclosed in tule matting.

Fiber: Yucca whipplei (Quixote plant; Pl. 8a, upper left) was the most abundant material; it occurred as straight and coiled pieces all tied at one end. Chlorogalum pomeridianum (Soap plant; Pl. 8a, right), bulb husks probably for brush-making. Cupressus sargentii (Jepson; Pl. 8a, lower center), very soft when separated into fibers; might have been used for cradle lining. The Sargent cypress is rare in

Southern California. There is a small stand of them on the north slope of Figueroa Mountain and a few isolated trees in the Sisquoc Canyon. This material was in the form of strips of bark.

Herbs: Ephedra viridis (Mexican tea) and Gnaphalium sp. (Cudweed) were found in bundles and probably served some medicinal purpose.

Basketry material: Epicampes rigens (Deer grass) was found in one large bundle about one meter in length.

#### THE BURIAL AREA

In the spring and fall of 1930, J. G. James and Henry Abels excavated an Indian burial site on a potrero (high isolated grassland) at the head of the canyon where most of the cave caches were located. Unfortunately, the notes they kept at the time have been lost, but in many conversations with Mr. James I obtained the following information.

The burial area was roughly circular, about 25 feet in diameter. There were more than twenty individual burials and indications of one burial on top of another, although the depth of the site was less than three feet in most places. The skeletons were flexed, face down, and with the head facing to the west. In 1934, W. D. Strong (1935) of the Smithsonian Institution checked the extent of the site with James and located a 30 foot diameter house circle nearby. Many bedrock mortars and basket mortar bottoms were found in the vicinity.

#### Artifacts Recovered

##### Stone Objects

Smoking pipes (Pl. 8b, center): Three pipes of typical Canaliño shape and size were found with the burials. They are made of greenish-black steatite; although traces of asphaltum remain at the narrow end, no mouthpieces were found.

Arrow straightener (Pl. 8b, bottom): The single example recovered is a rather unusual type—single groove with a long shank for gripping. The material is greenish-black steatite.

Medicine tube (Pl. 8b, second from left): A large fragment of a cylindrical steatite tube. The steatite is a highly micaceous type, gray-black and very brittle.

Pestles (Pl. 8b): A number of pestles were found, all but one of sandstone. Several are short and fairly well formed; one (Pl. 8c, lower) is 50 cm. long, very well made of reddish sandstone and with "acorn" hand grip. Another (Pl. 8b, left) is small and of grayish-green steatite.

Bowls and ollas (Pls. 9, 17a): The most remarkable find was a large, micaceous steatite cooking olla (Pl. 9d) partially filled with earth, in which were three exceedingly fine small steatite bowls (Pl. 9a-c) of a light greenish color. Inside the topmost bowl was a small pottery jar typical of ware from Guadalajara.

Four additional cooking ollas (Pl. 9e-h) were recovered. These are rather small, and of the usual grayish micaceous steatite. They had not been cleaned before being placed in the burials and were encrusted with fire blackening. In addition, one olla still contained about an inch of a mush-like substance. The only unusual olla had an incised rim and four vertical raised bands as decoration (Pl. 9f).

In one section of the burial area there were scattered fragments of five large, flat-rimmed sandstone bowls (Pls. 10a, b, 17b) with flaring sides. These are similar to the type shown in Orr (1943:12), described as Early to Middle Canaliño.

In addition there was one small sandstone mortar (Pl. 12a) which may have served as a paint mortar.

There is a fragment of a broken steatite olla (Pl. 12b) which has been adapted for use as a baking comal with the addition of a large, drilled hole at one end. The fragment is roughly 17 by 10 cm.

The craftsmanship of the three light green steatite bowls is outstanding, and the largest of the three is as fine a piece as has come out of the Chumash area. The color of the steatite is different from the Catalina varieties and suggests some other source. There are deposits of this stone in Yokuts country, and Longinos Martínez mentions (Simpson 1961) some near Purísima.

It is curious that in the case of the five large sandstone bowls found broken in the burial, no single one could be restored from the fragments. In this case of "killing," one large piece of each bowl had been removed.

Flint weapons and tools: Three flint objects were recovered: a knife (Pl. 11a, top center) made of a thin band of flint and finished on one edge; and two large spear points (Pl. 11a, second and third from right), one of blackish-brown flint, the other of gray-green chert. The points are typically Canaliño.

Beads (Pl. 12c, upper left): Thirty-one highly finished drilled tubes of greenish black steatite were recovered. These are shown strung alternately with Tivela tubes.

#### Wooden Objects

Three pieces of planking were recovered. Their dimensions were: 46 x 13 cm. x 15 mm.; 52 x 13 cm. x 15 mm.; and 57 x 13 cm. x 15 mm. These specimens are still in fair condition after being underground for perhaps one hundred and fifty years. The wood is probably Pseudotsuga macrocarpa, which is abundant in the Sierra Madre range. The planks were probably split by deer antler wedges similar to the one described on page 13, and may have served as cemetery boards. It is unfortunate that the surface of the boards has deteriorated to the point where the original tool marks can no longer be seen.

#### Bone Objects

Whistles (Pl. 13a, left): Two deer tibia whistles were found; these are similar to the whistles illustrated in Elsasser and Heizer (1963, Pl. 4). There was no sign of wrappings or asphaltum.

Strigils (Pl. 13a): Two sweat sticks of mammal bone were uncovered, possibly of bear femur. One is complete, the other fragmentary. These are similar to the one pictured by Gifford (1940:215, Fig. M1), but much larger.

#### Shell Objects (Pls. 12c, 14d, 15a, b)

Beads: Hundreds of beads, mostly of Olivella biplicata, were found, together with ornaments of Haliotis, clam money, Tivela stultorum, and other objects. I have classified the material according to Gifford (1947).

F5b	Drilled <u>Olivella biplicata</u> (whole)
H2aIII	Rings from <u>Megathura crenulata</u>
K4aI	<u>Haliotis</u> drilled disc
K8bIII	<u>Haliotis</u>
Q1bIV	Trapezoidal <u>Haliotis</u> ornaments
Q5bI	Trapezoidal <u>Haliotis</u> ornaments
S6aIII	Rectangular <u>Haliotis</u> ornaments
U	Serrated triangle of <u>Haliotis</u>
VIaI	<u>Tivela stultorum</u> drilled discs of various diameters, some incised with designs

X2b	<u>Olivella biplicata</u> beads
X3bI	<u>Olivella biplicata</u> beads
AP4bIII	Crescent of <u>Haliotis</u>
AT2cI	Fishhooks of <u>Haliotis</u>
AU3	Columella ( <u>Fusinus dupelithouaris?</u> )
AV2b	Drilled tubes <u>Tivela stultorum</u>
AwIc	Rounded clamshell beads <u>Tivela stultorum</u>
Aw2a	Rounded clamshell beads <u>Tivela stultorum</u>
Ethn.K2	Star-shaped ornament of <u>Haliotis</u>

There are a number of narrow clamshell strips lined with holes, that are not shown in Gifford.

Implements: One spoon of Mytilus shell was recovered. A hole in the bottom had been plugged with asphaltum. Two paint containers (Pl. 14c, upper) were found; one of Himnites, with traces of black, the other of Aequipecten, with traces of red.

In addition, the burial area contained the following species of unworked mollusk shells:

<u>Semele decisa</u>	<u>Haliotis crackerodii</u>	<u>Himnites multirugosus</u>
<u>Cardium</u> sp.	<u>Chione undatella</u>	<u>Aequipecten circularis</u>
<u>Mytilus edulis</u>	<u>Saxidomus nuttallii</u>	<u>Protothaca staminea</u>

### Paint

Four molded cakes of paint were recovered in the burial area. Two are oval in shape and about the size of a fist (Pl. 14c, lower left). Several show signs of having been used; there is an indentation at the end as though the owner had scraped or rubbed off a bit whenever he needed some paint. The material is quite soft and of a very rich ocher color. I know of no deposits of this mineral in the Santa Barbara County mountains, and it would seem probable that the paint had been obtained in trade.

One cake is oblong, with squared-off sides and incised with criss-cross lines. It is very similar to a paint cake pictured by Yarrow (1879: 261). The color is a brownish-red ocher, and the texture is quite hard, as though a binder had been added in the molding. Another cake (Pl. 14c, lower right) is similar in texture and color, and is about thumb-size.

### Miscellaneous Artifacts

Amulet (?) (Pl. 14a): An oval shaped object of gray steatite, notched and perforated.

Skirt weights (Pl. 15a, upper left): A number of these were recovered (Rogers 1929:408).

Quartz crystals (Pl. 15a, lower left).

Asphaltum: A lump in which are imbedded many small, drilled discs of Olivella biplicata.

Pendant (Pl. 14b): One very curious little pendant made of rodent teeth set in resin was discovered. This is almost a duplicate of one shown by Yarrow (1879, Pl. 13, No. 68).

Small, oval rings (Pl. 15a, center): A number of these objects, fashioned of a brownish, opalescent material, occurred in the burial area.

Caucasian-made Material (Pl. 16a)

Small Guadalajara type pottery jar.

Bottom of stemmed wine glass.

Two pairs of scissors.

An iron key.

Fragment of blue figured Canton teacup, ground round and drilled for ornament.

Iron tube about the size of a medicine tube and possibly used as such.

Several hundred Venetian glass beads were recovered. The most common type is the small, round, blue bead; next in quantity is the slightly larger, dull reddish bead with whorled white patterning. A few of the beads are tubular, with red, yellow, and blue longitudinal stripes and the ends ground at an angle to show colors in depth. All three types are known to have been distributed by the missionaries, and are pictured by Yarrow (1879, Pl. 13).

These Caucasian manufactured articles give the best clue to the dating of at least part of the site. They are all objects which might have been obtained from the Mission Santa Ines (about thirty-five miles by trail from the site). It is unfortunate that we do not know how this contact material was distributed through the burial area. The cemetery was in use during and perhaps after the Santa Ines Mission period (1804-36); lack of contact material in parts of the cemetery could indicate pre-mission use.



## SUMMARY

According to Kroeber (1925), the territory of the Chumash included the Cuyama Valley and some country to the north, but as the literature provides no solid evidence to support this, his statement has always been open to question. The only publication I have been able to find on the archaeology of this area is an extremely sketchy report by Strong (1935). With Mr. James as guide, Strong excavated several village sites in the Cuyama Valley and along the Sisquoc River, but did not recover sufficient artifact material to justify any conclusions.

The James-Abels Collection of materials from the caves has substantially broadened the known Chumash inventory, and fills in some of the gaps in our knowledge of this group. The feathered dance skirt, varieties of tule matting, sieve, headband, netting, gaming sticks, hide bags, sandals, and fiber-banded smoking pipe are all unique; most or all of these items are known from other parts of Southern California but are described here for the first time from a Chumash collection.

The close association of the historic period perishable material with an adjacent burial area containing contact material rather solidly places the collection in the late Canaliño and early historic periods. The burial material and the cave caches embrace nearly all known coastal Canaliño cultural elements. The wealth of perishable items enlarges our knowledge of the Chumash way of life. The great cemeteries of the Santa Barbara coast and the infinite number of island sites have provided many museums with a wealth of artifacts in stone, bone, and shell, but little or nothing of basketry, wood, or cordage.

Thus the James-Abels Collection definitely places the Chumash in this "no man's land," sheds new light on their culture through the perishable material, and lastly, gives us a clue to the age of the adjacent pictographs. The fact that all the items in the collection were found in the vicinity of pictograph sites tends to verify the theory that the Chumash were the painters of these ceremonial designs, and the lateness of the sites affords a clue to their dating.

## ACKNOWLEDGMENTS

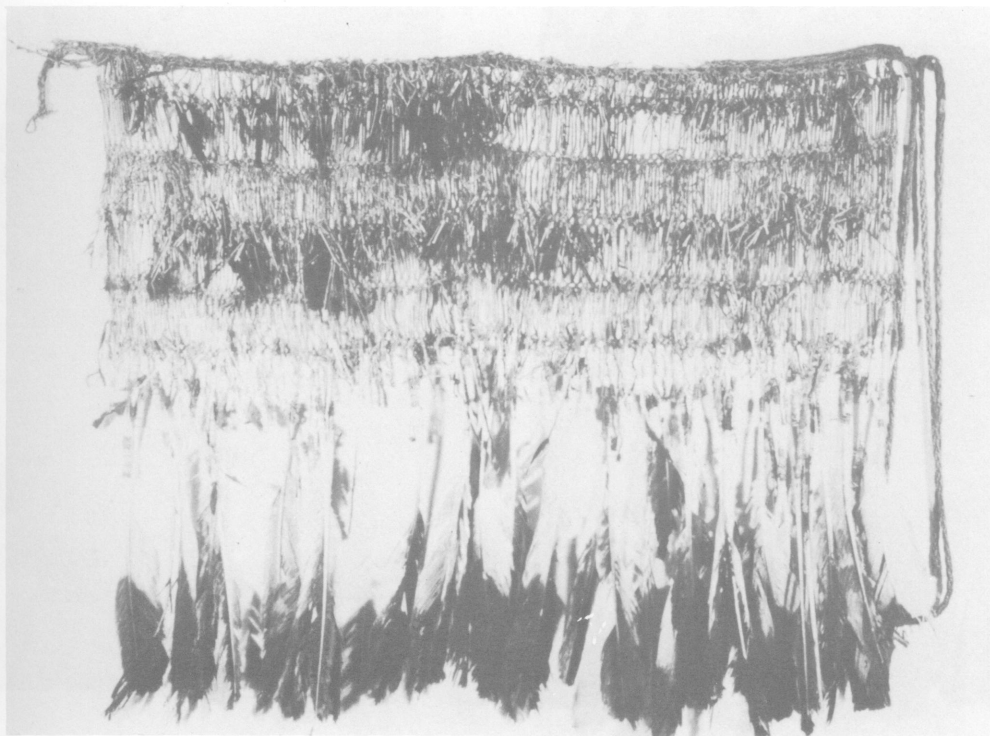
I am deeply indebted to Dr. Robert F. Heizer and Dr. James F. Deetz for their encouragement and criticism during the preparation of this paper.



- Plate 8 a. Raw materials: Yucca whipplei (upper left); Chlorogalum pomeridianum (right); Cupressus sargentii (lower center)  
 b. Steatite objects, l. to r.: pestle (4576); medicine tube (4577); 3 smoking pipes (4579-4581); one smoking pipe with bone mouthpiece (4582); arrow straightener (4578)  
 c. Sandstone pestles (4596, 4597)
- Plate 9 a-c. Steatite bowls (4589, 4588, 4590)  
 d. Steatite olla (4595)  
 e-h. Small steatite ollas and bowls (4593, 4591, 4594, 4592)
- Plate 10 a,b. Large sandstone bowls (in possession of Dr. J. J. Cawley, Bakersfield) with cross-sections
- Plate 11 a. Chert and flint tools and projectile points  
 b,c. Assorted scrapers and a core (4526-4528, 4530, 4534, 4423, 4422)
- Plate 12 a. Small sandstone bowl (4596)  
 b. Fragment of olla used as baking stone (4421)  
 c. Miscellaneous steatite and shell beads (4547, 4549, 4551, 4552, 4554)
- Plate 13 a. Miscellaneous bone artifacts: strigil, wedge, flakers, whistles (4429, 4568, 4569, 4599)  
 b. Miscellaneous wooden artifacts: digging stick(?), board, arrow fragments, elderwood tube, gaming sticks (4428, 4430, 4500, 4503)
- Plate 14 a. Steatite amulet(?) (4575)  
 b. Resin and rodent tooth pendant (4556)  
 c. Paint cakes and paint cups  
 d. Miscellaneous shell ornaments (4545, 4546, 4550, 4562, 4563)
- Plate 15 a. Miscellaneous artifacts: asphalt skirt weights, quartz crystals, shell fishhooks, Megathura rings, ovoid rings of unknown material (resin?) (4557-4560, 4566)  
 b. Trade beads (4505)
- Plate 16 a. Caucasian-made material: scissors (4534), pottery jar (4536), key (4537), wine glass bottom (4538), china cup bead (4539), iron tube (4584)  
 b. Coarse woolen material (4445)

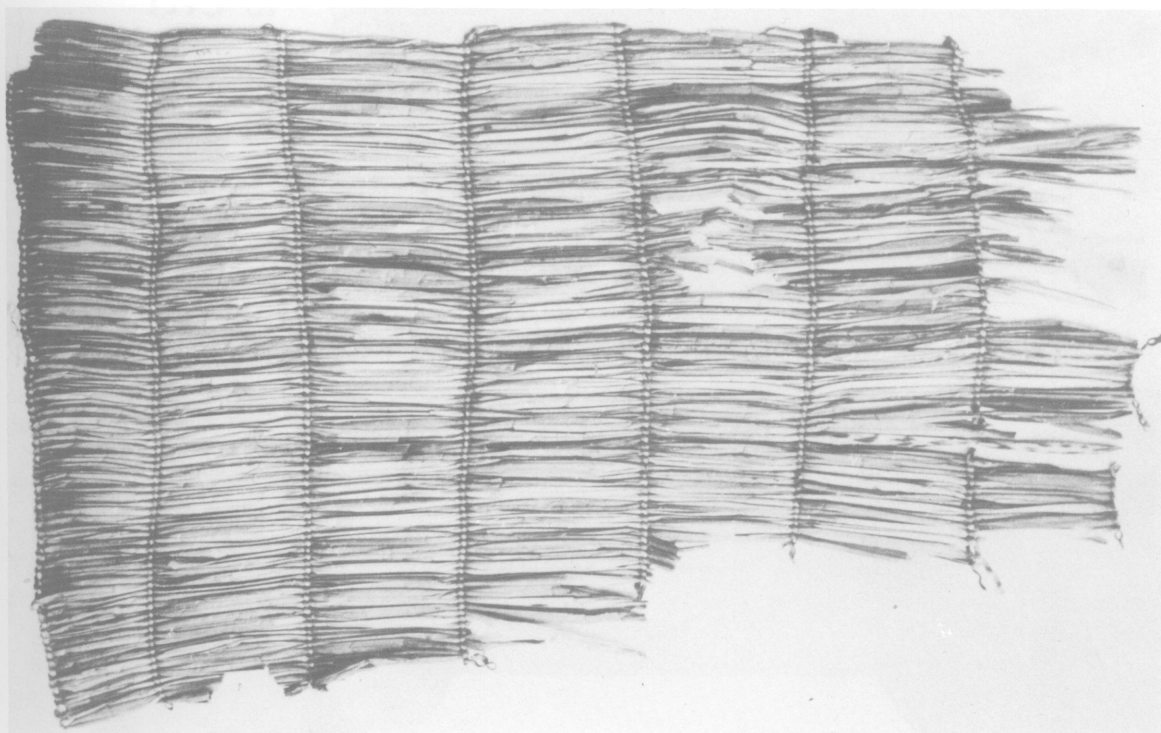
- Plate 17
- a. Nested steatite bowls and pottery jar in large olla in situ
  - b. Fragments of five large sandstone bowls
  - c. Miscellaneous artifacts in excavation trench

- Figure 1
- a. Design elements from baskets in James-Abels Collection
  - b. Weave of tumpline shown in Plate 6d
  - c. Twining from sieve shown in Plate 3b
  - d. Twining from water bottle shown in Plate 3c
  - e. Twining from a large fragment
  - f. Reconstruction of tumpline shown in Plate 6d



a

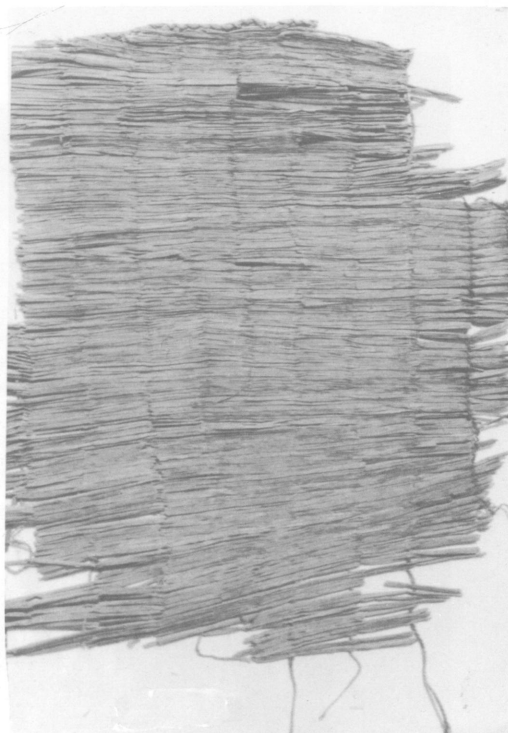
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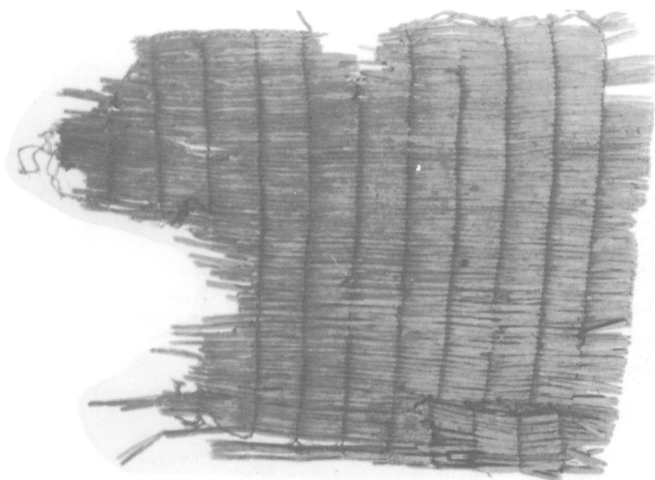
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Plate I

a

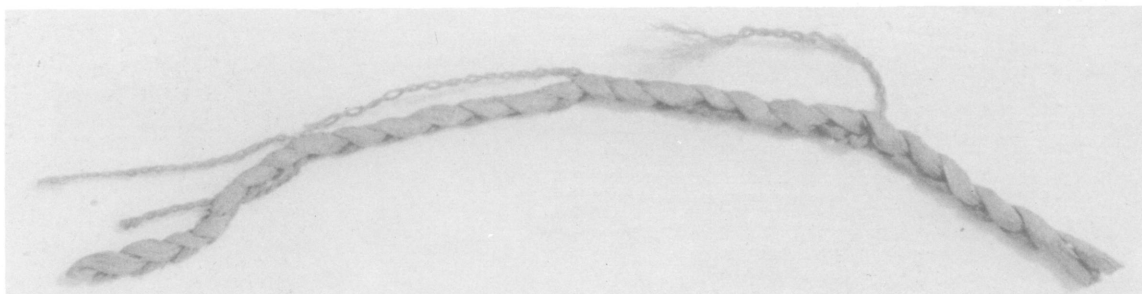


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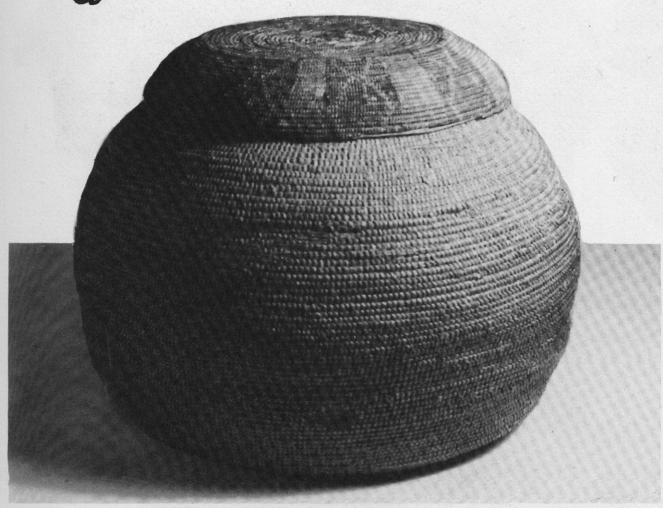
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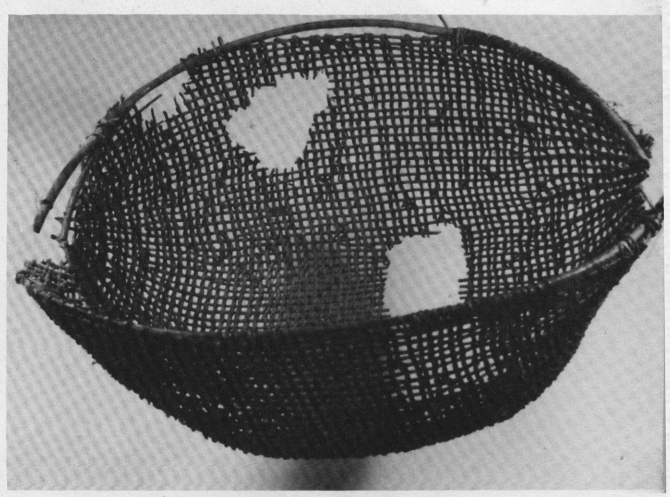
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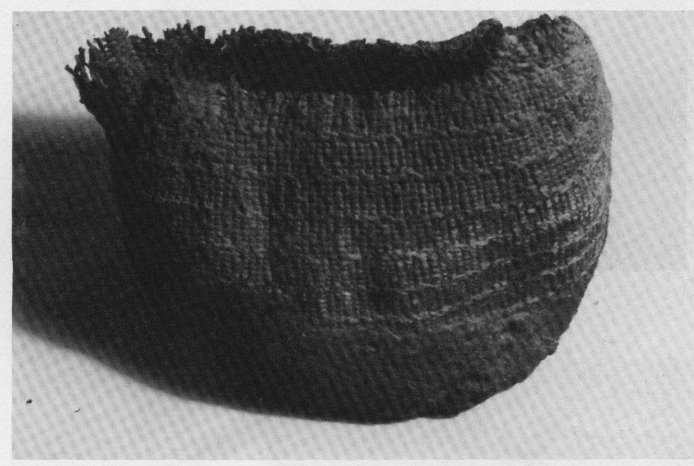


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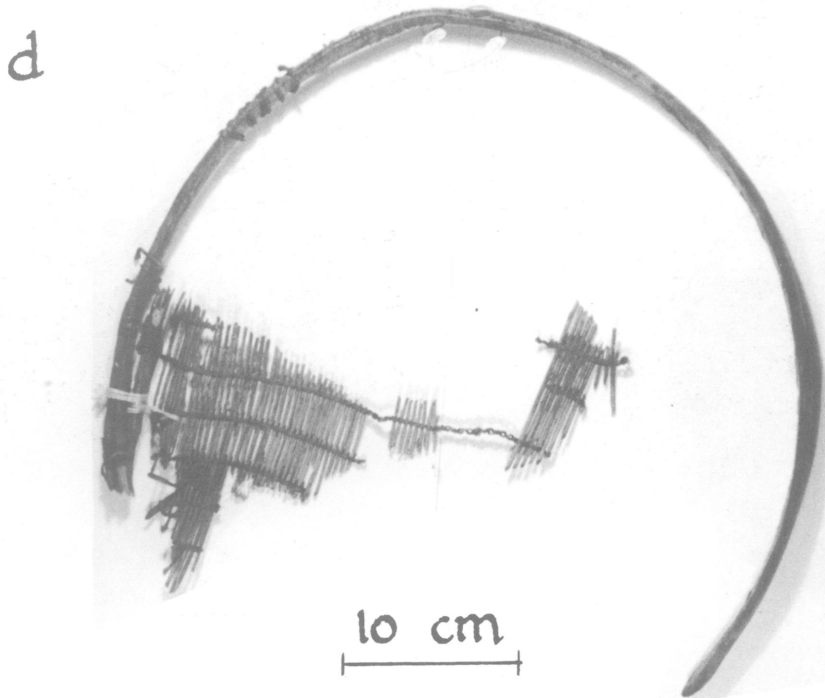
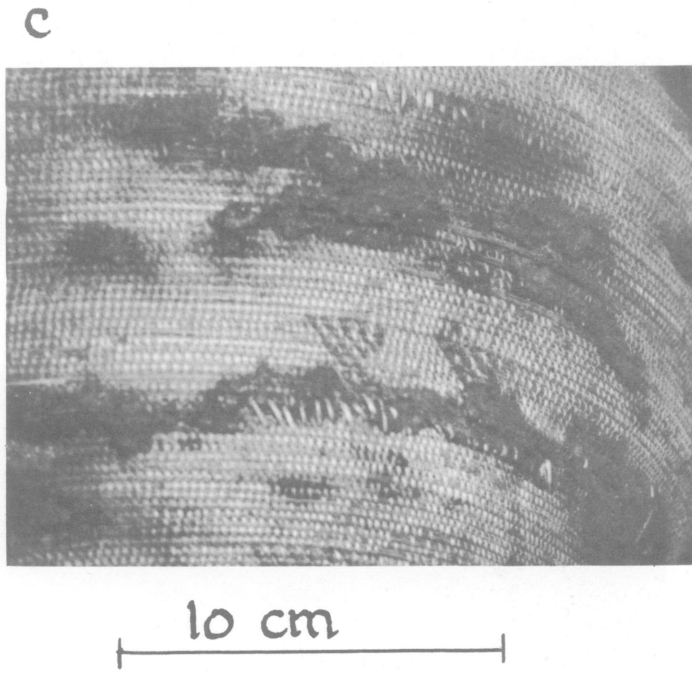
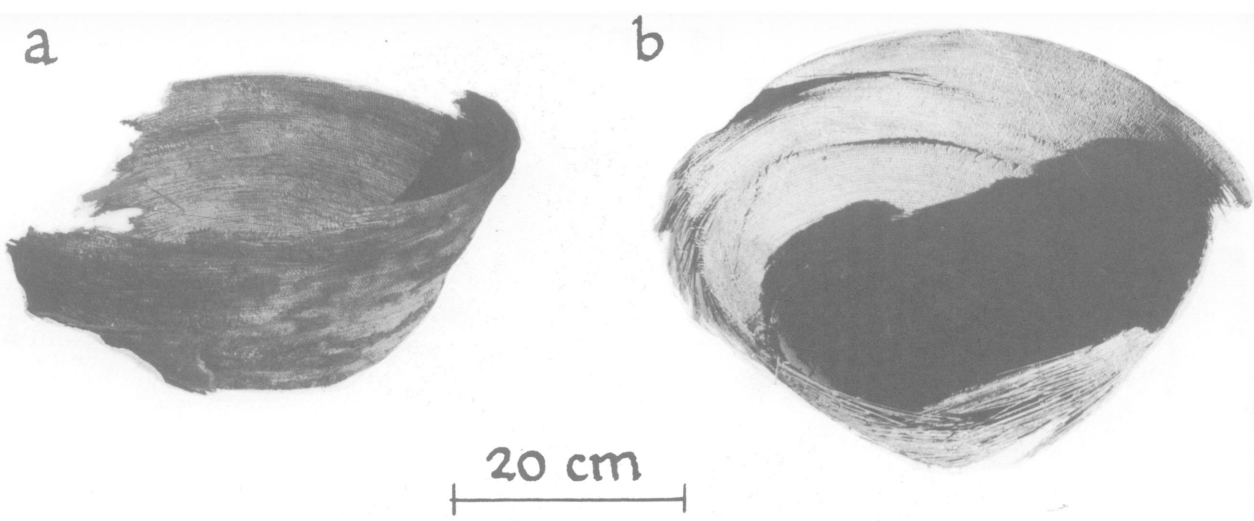
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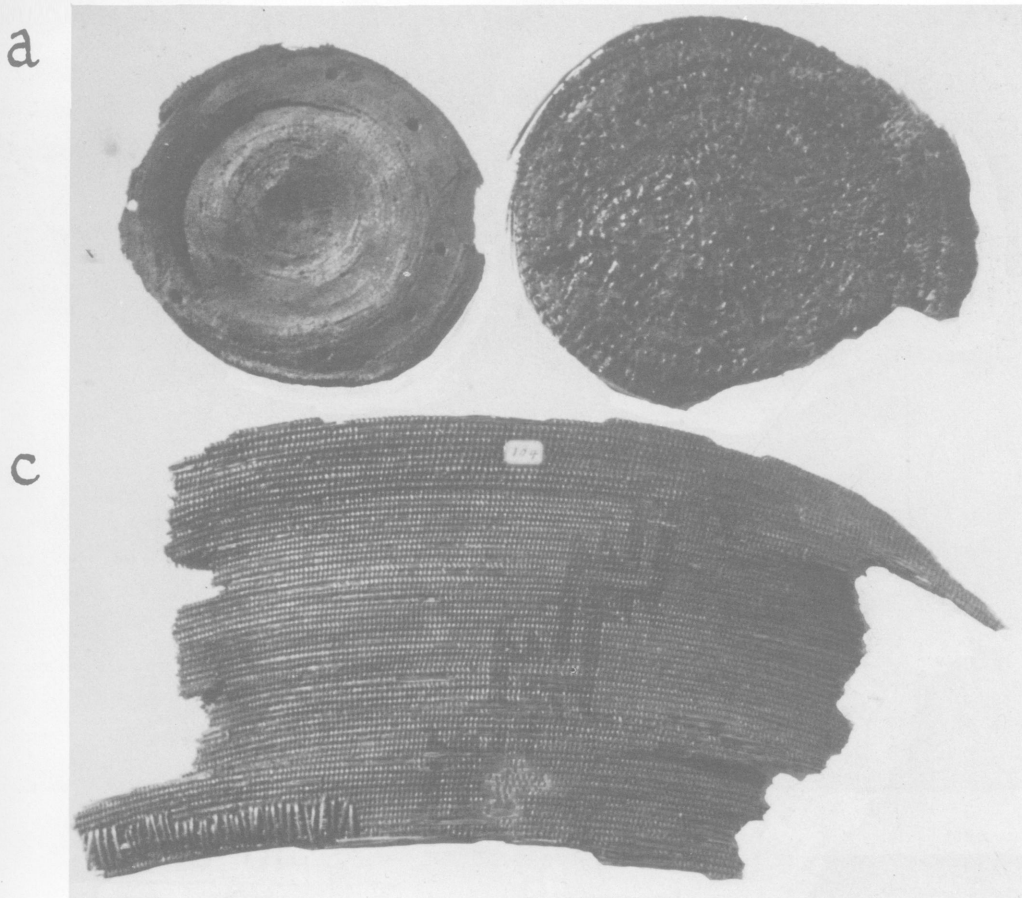
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Plate 3



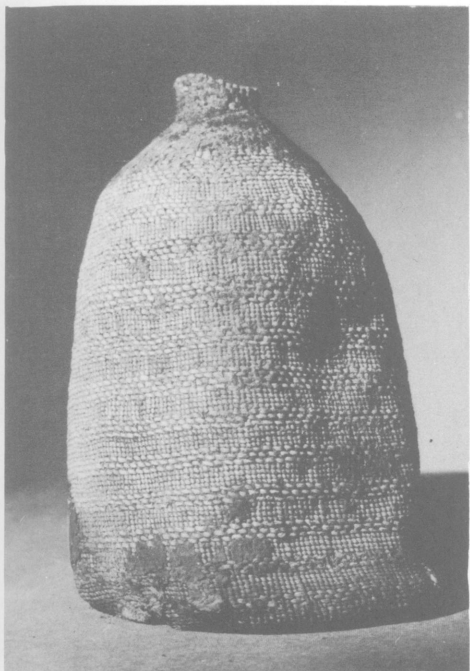






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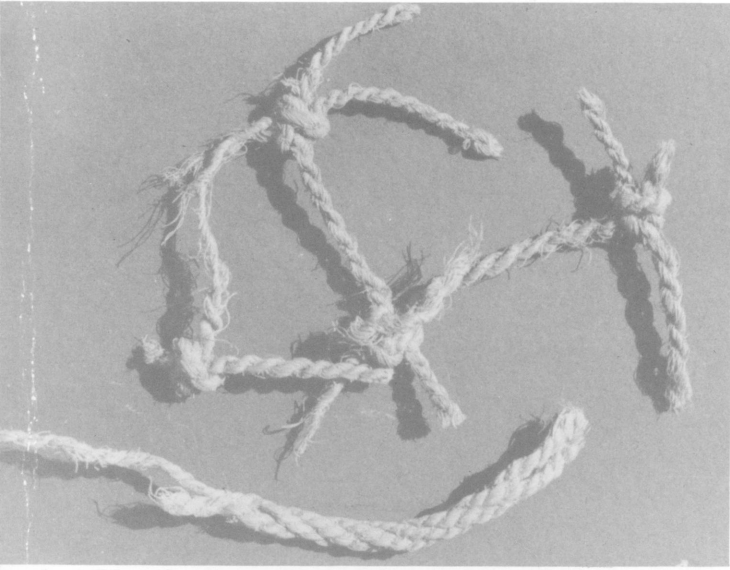
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Plate 5

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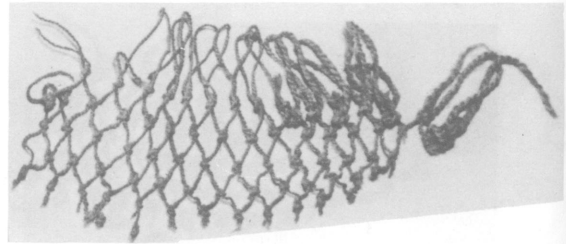


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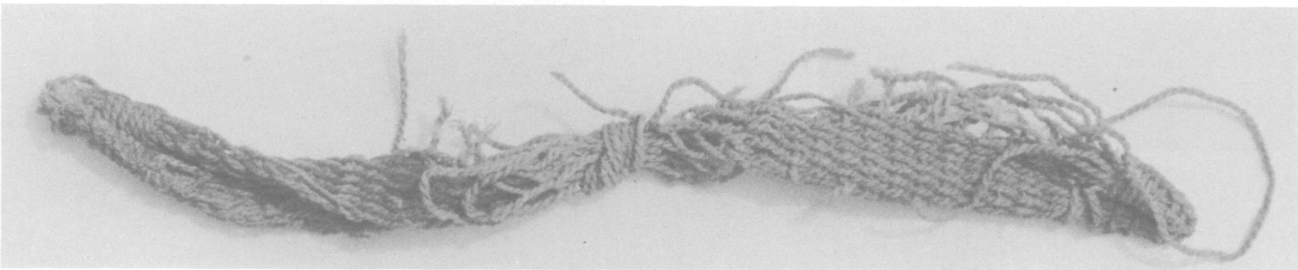
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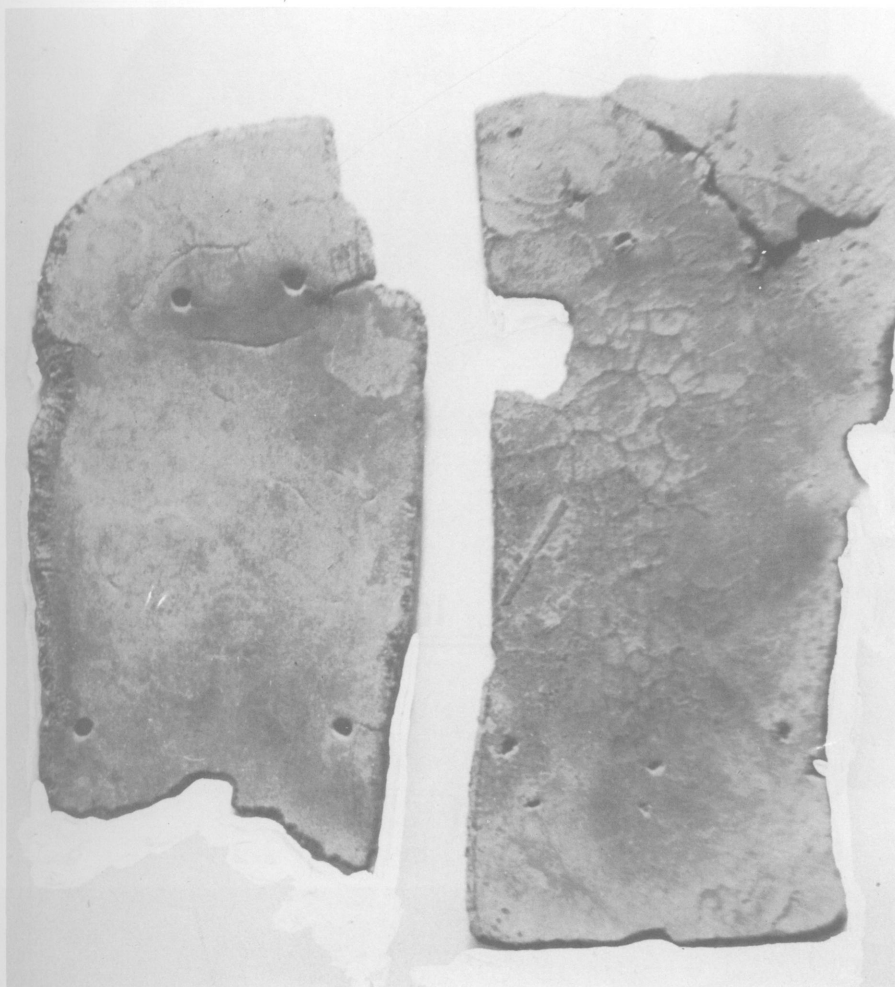
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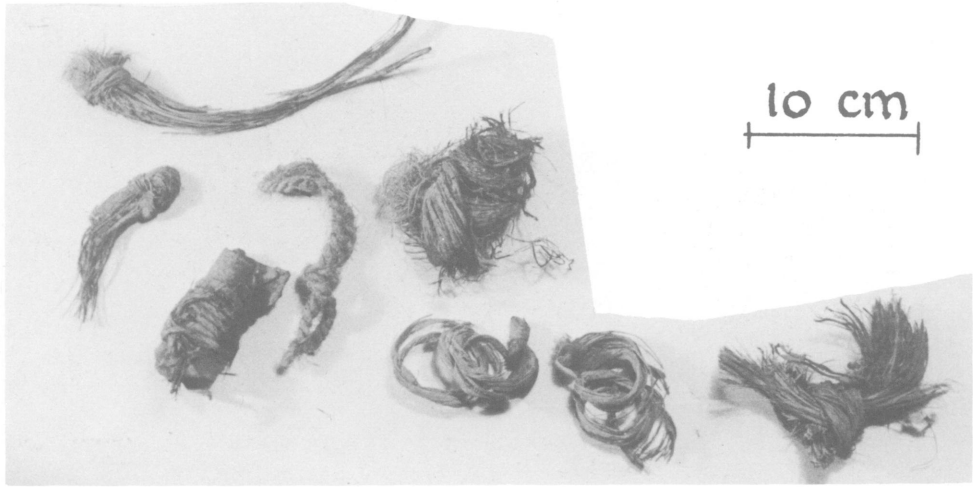
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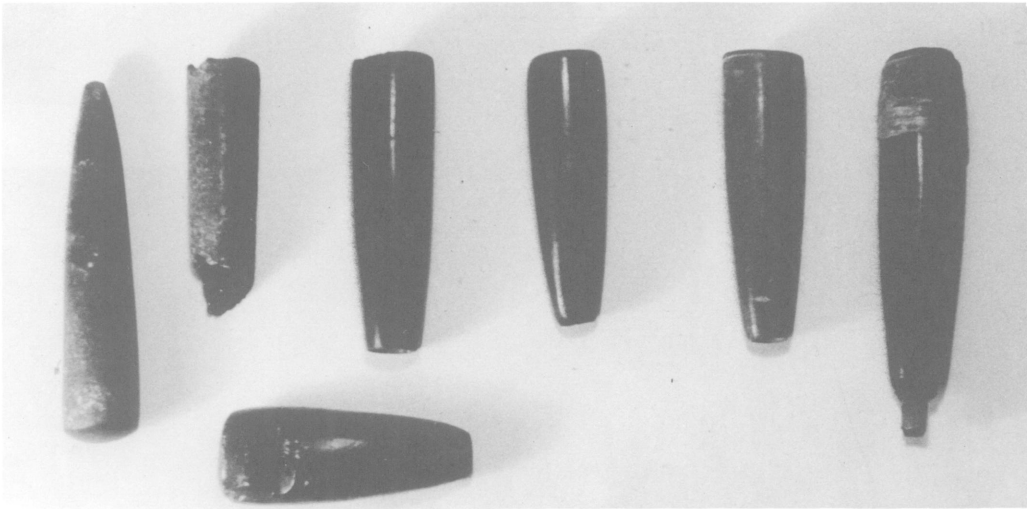


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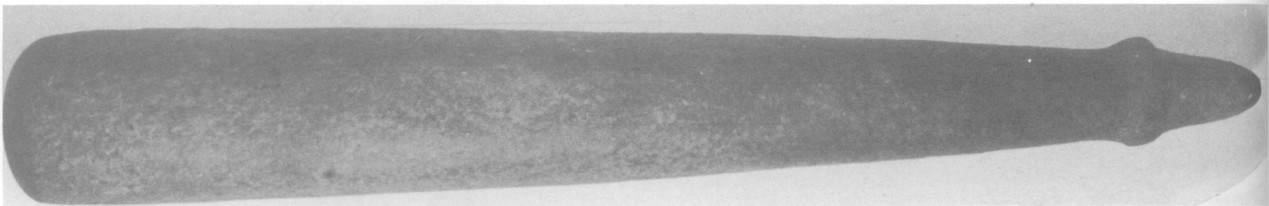
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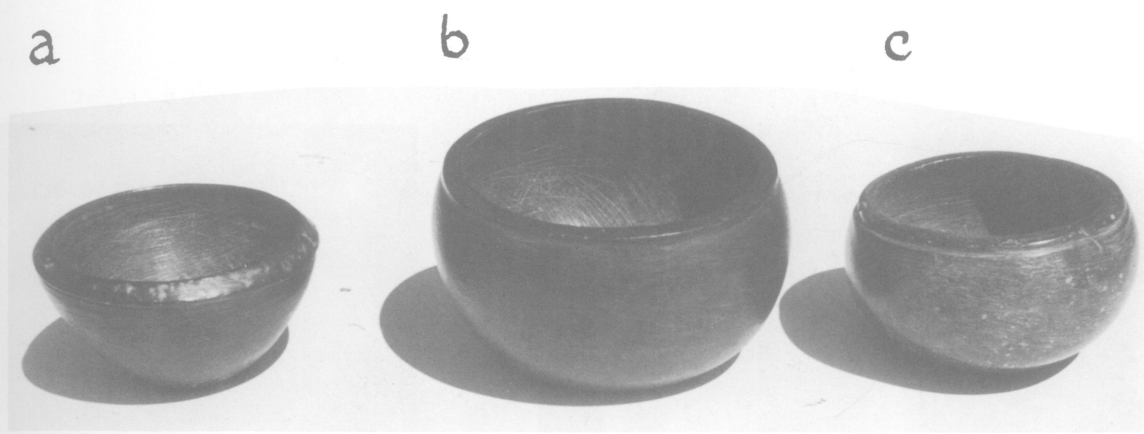
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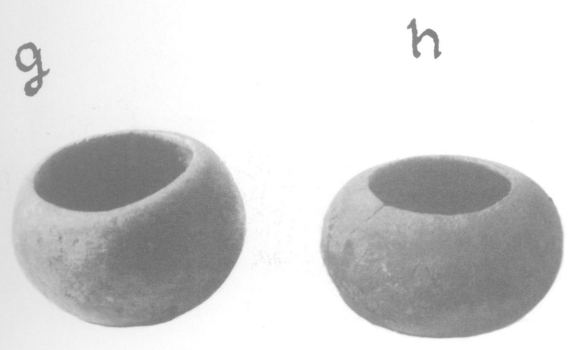
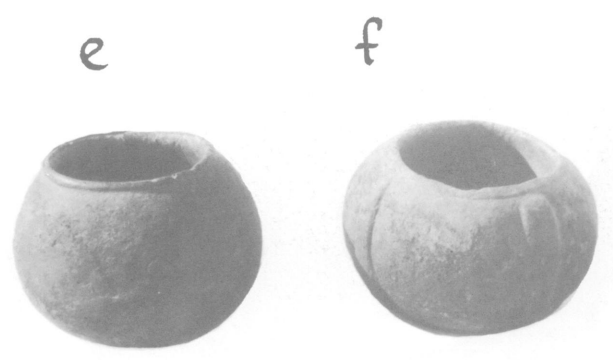
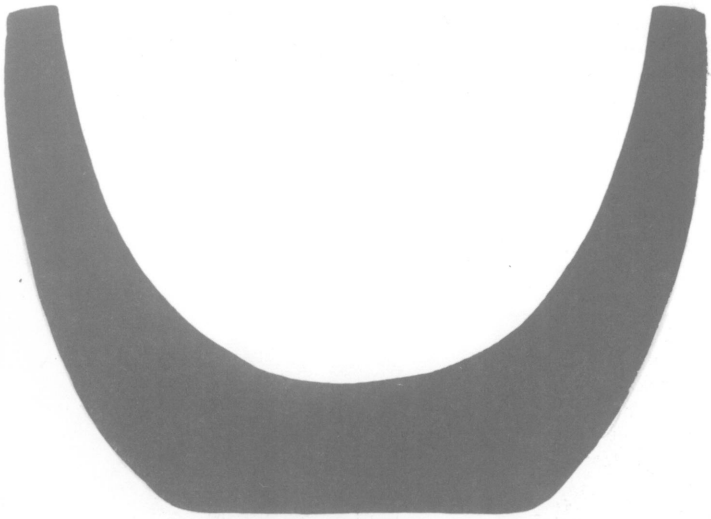
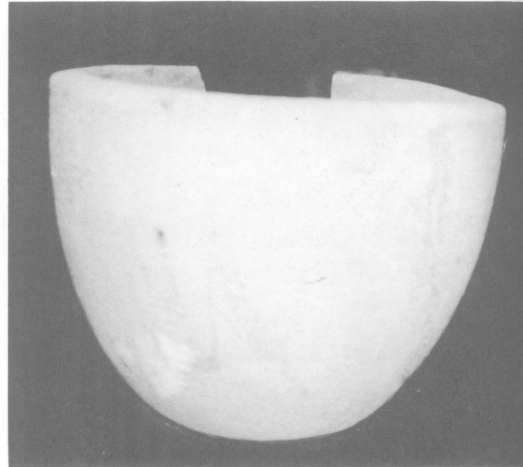


Plate 9

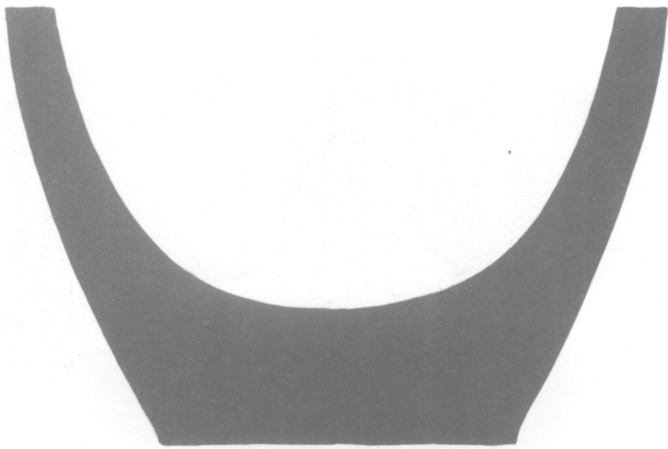
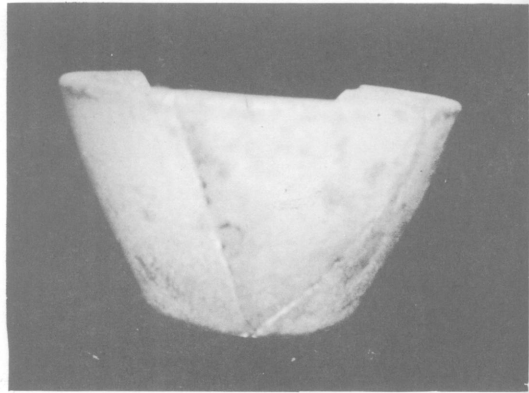


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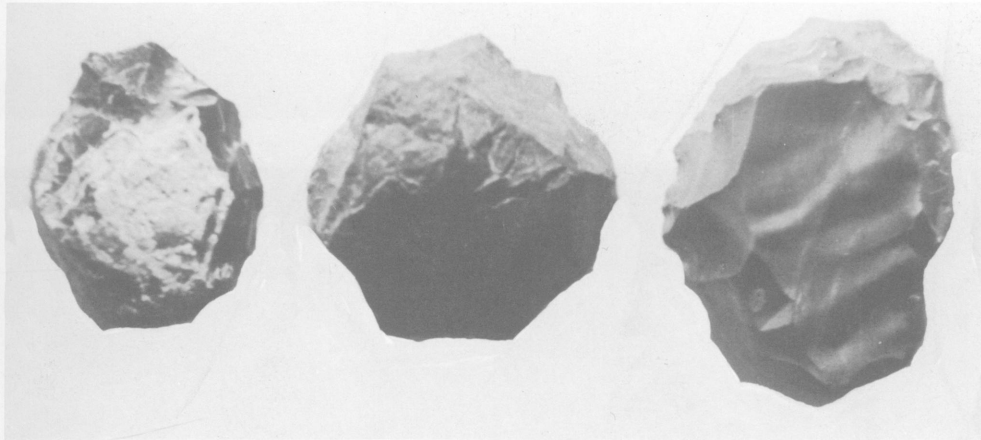


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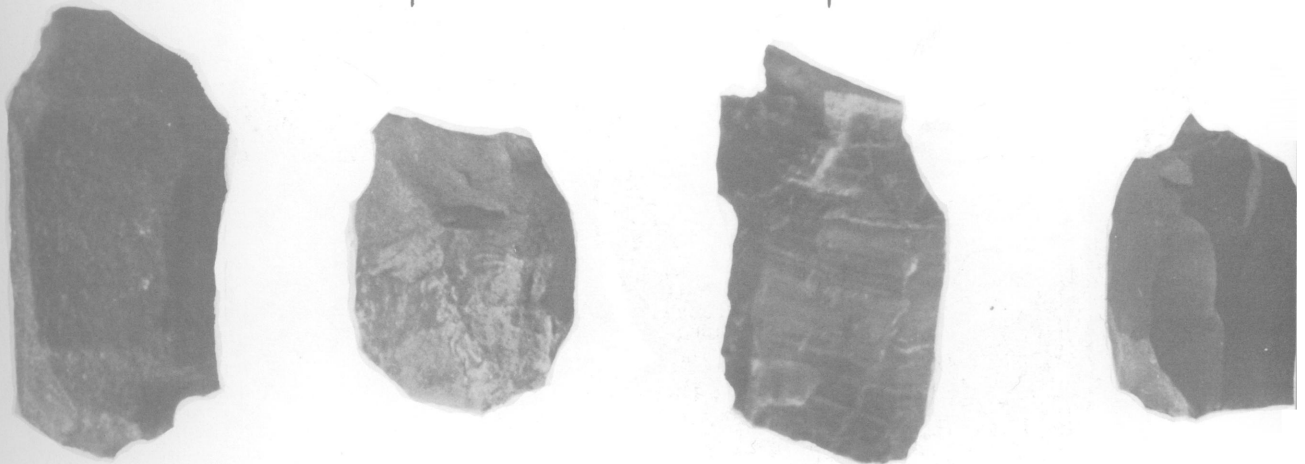
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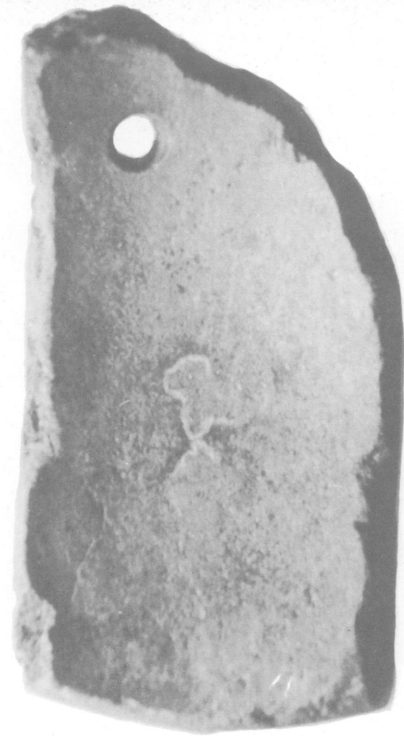
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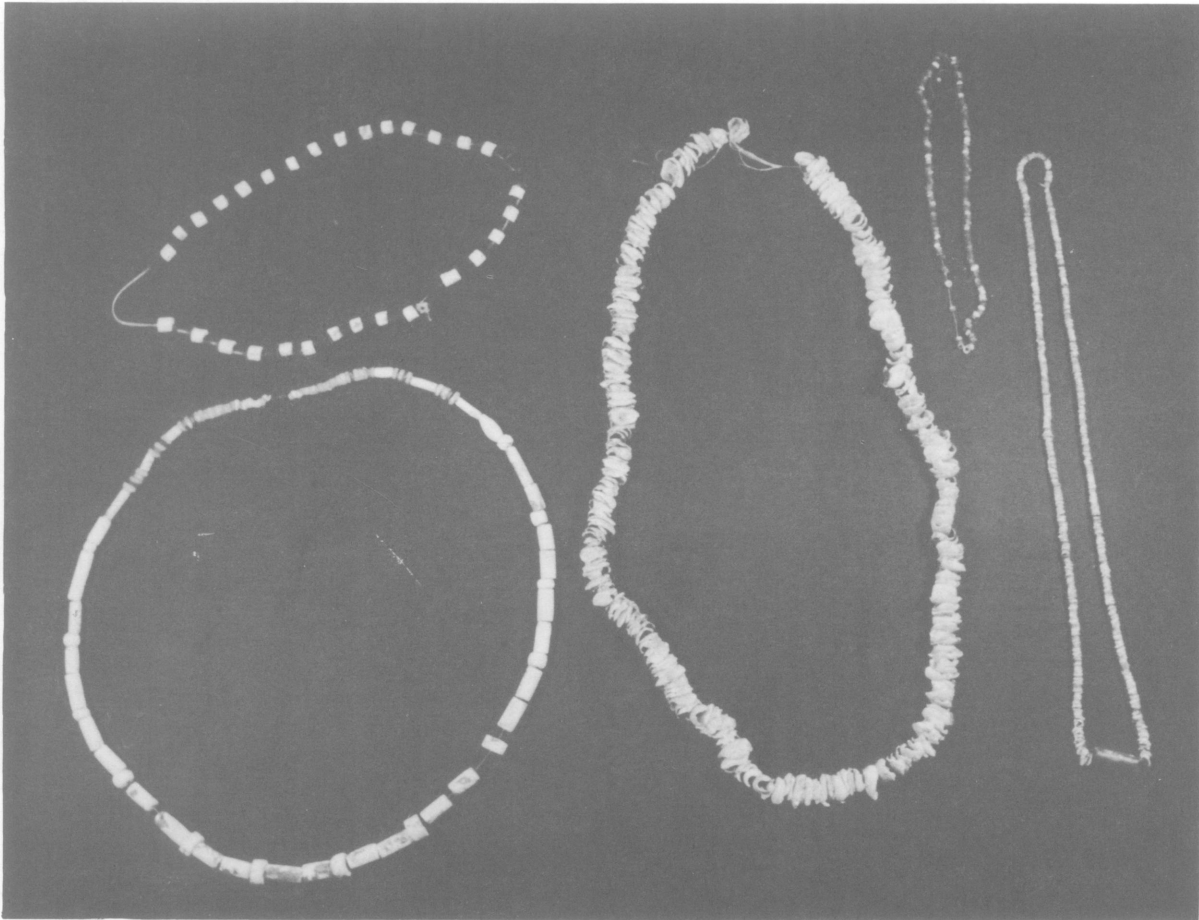
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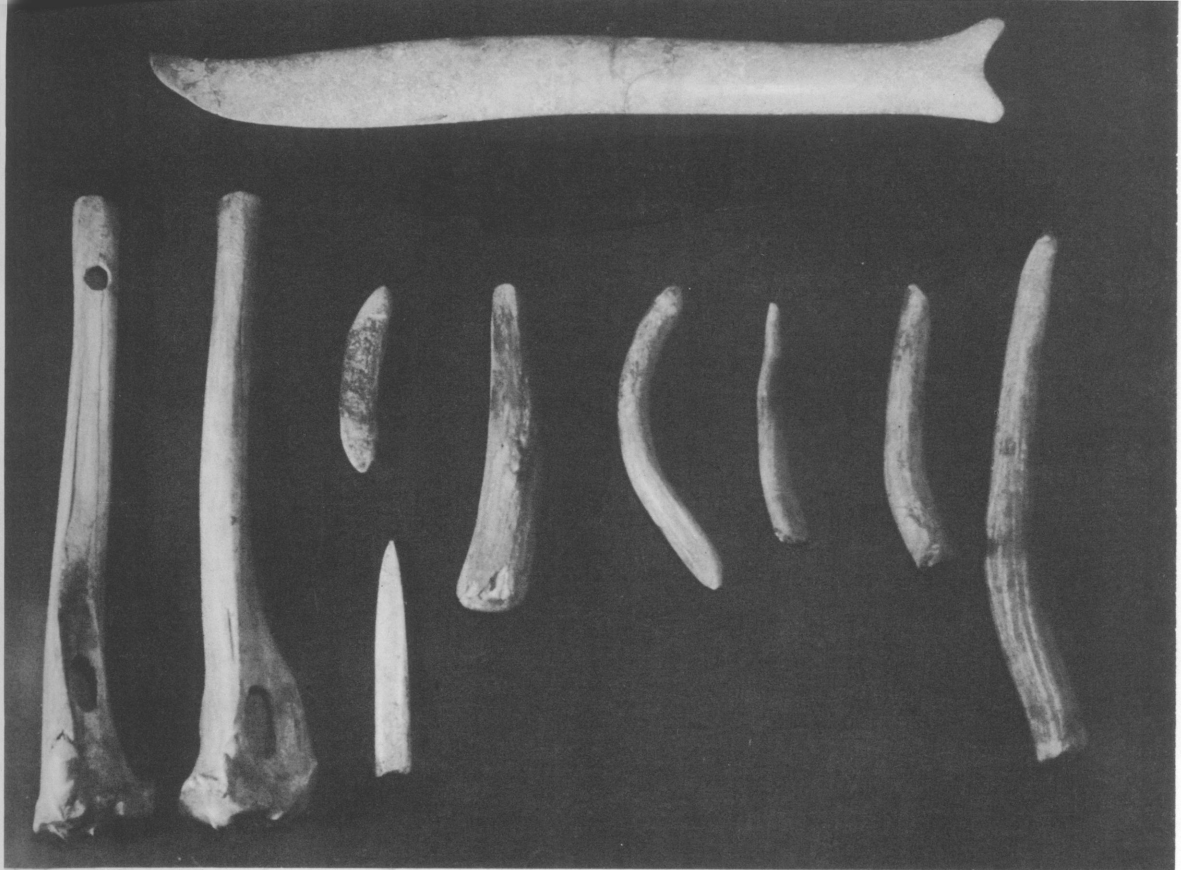
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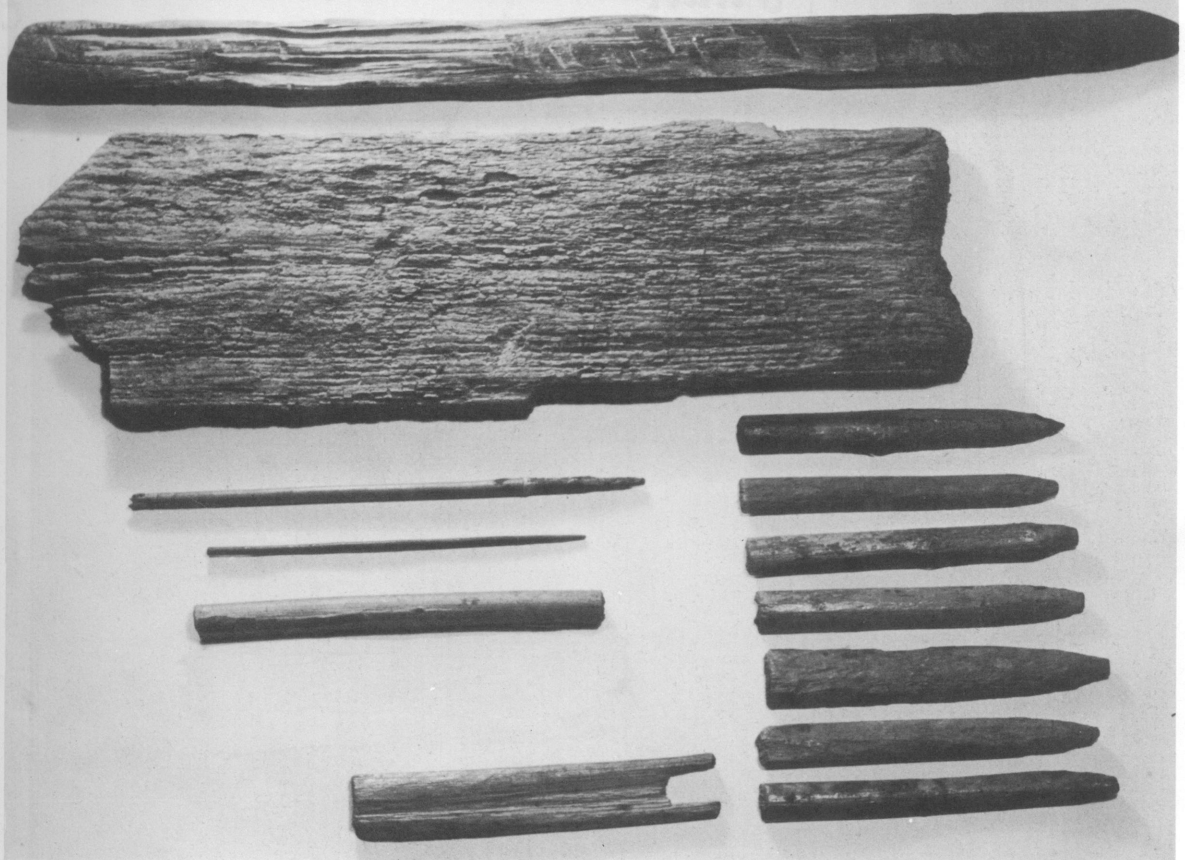
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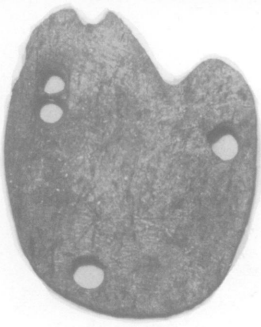
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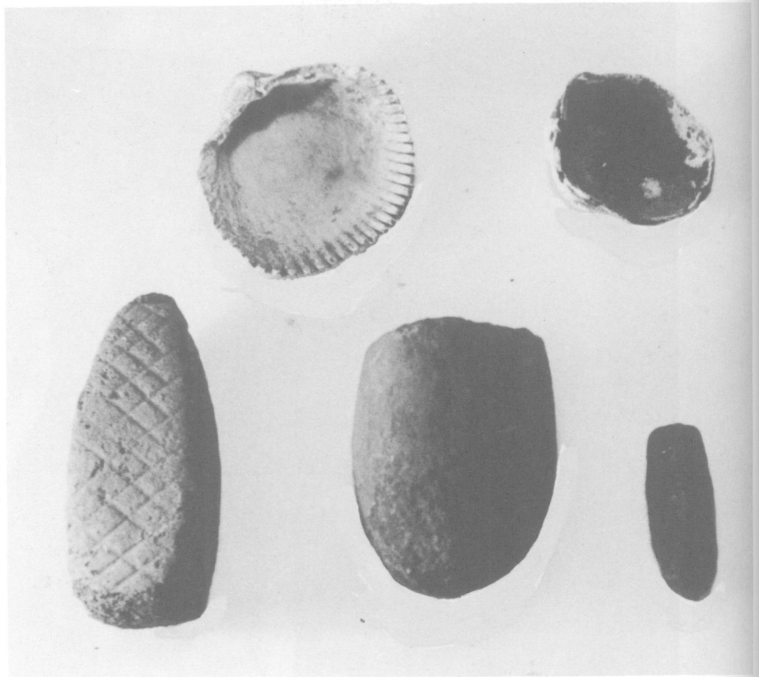
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Plate 13

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c



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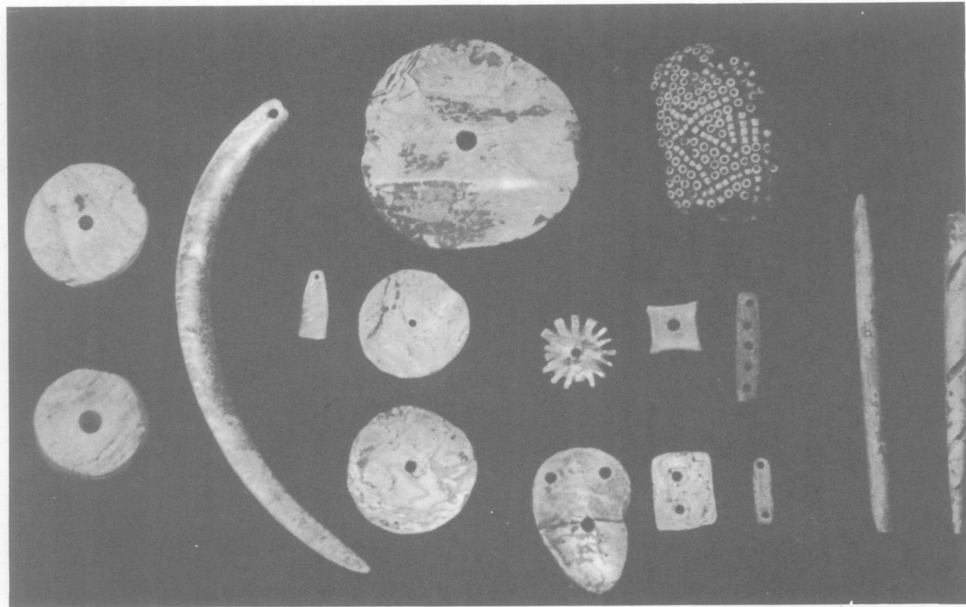
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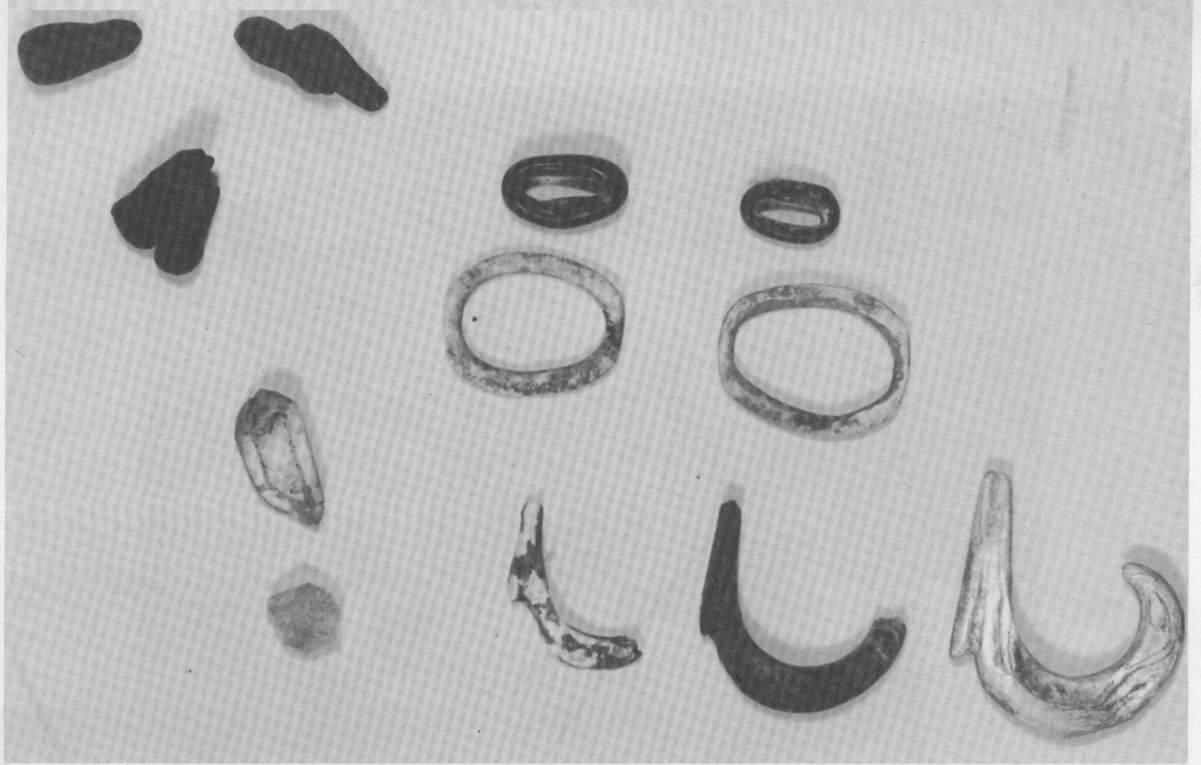
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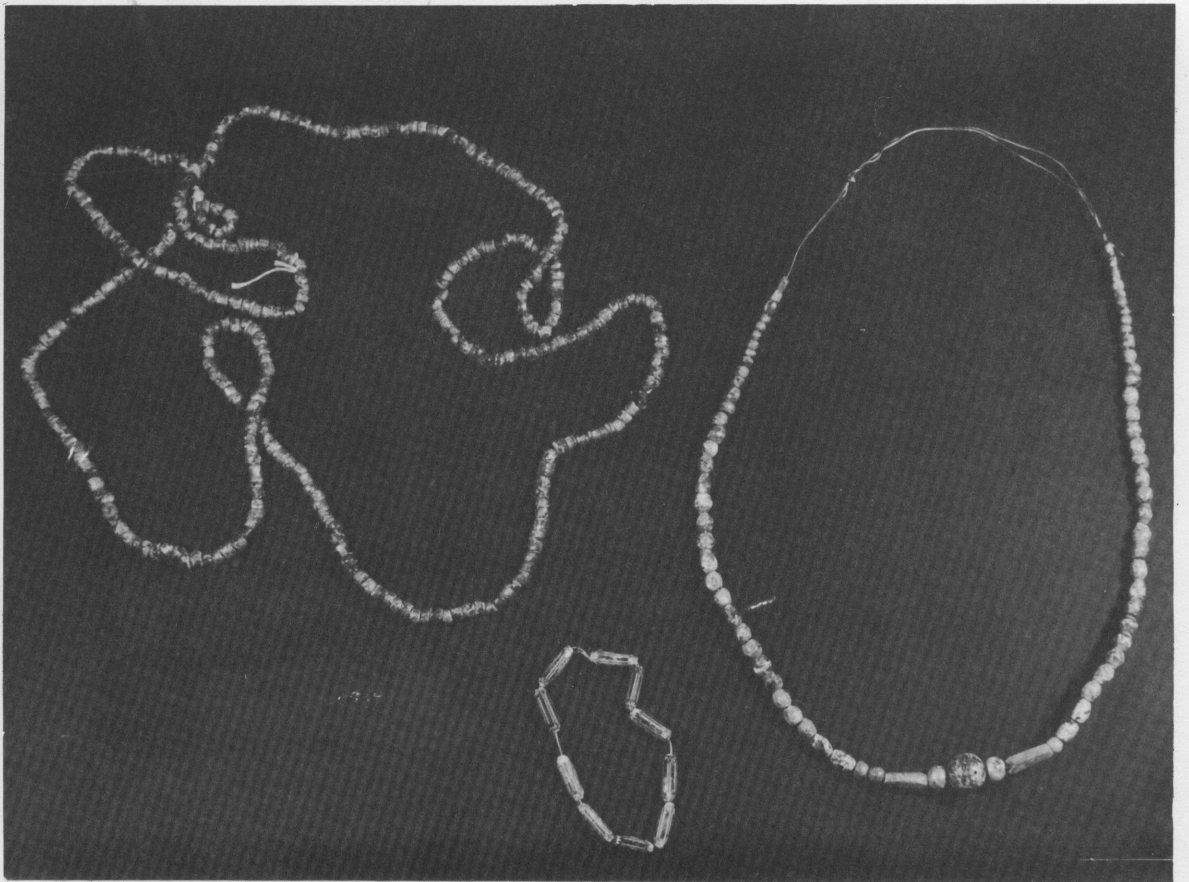


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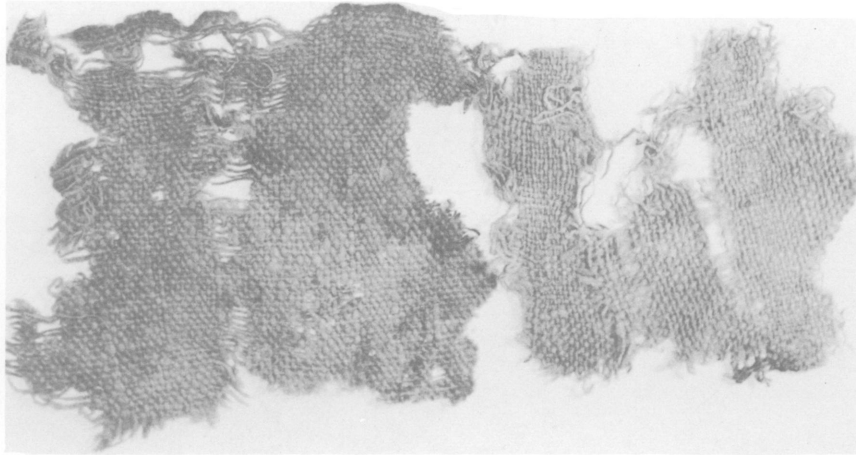


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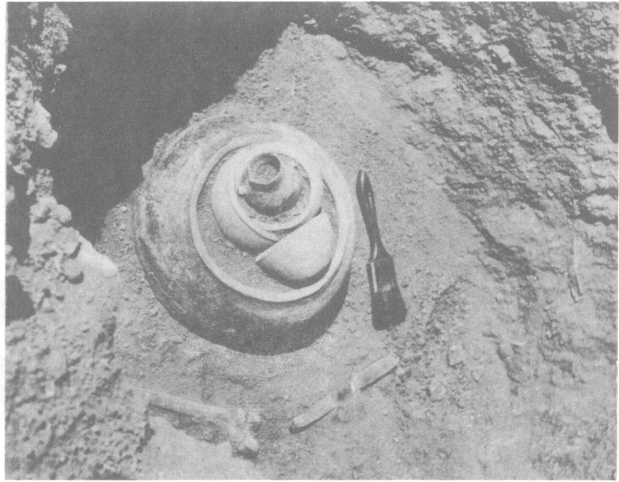
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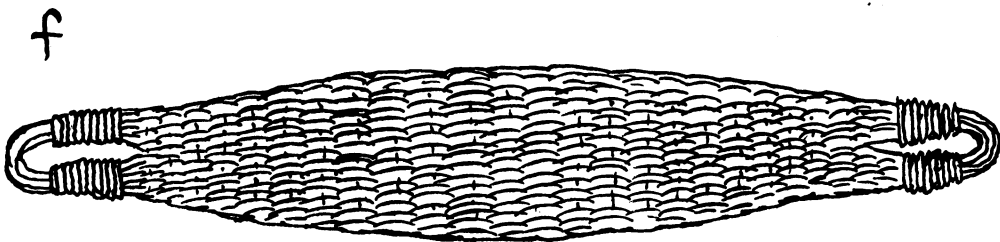
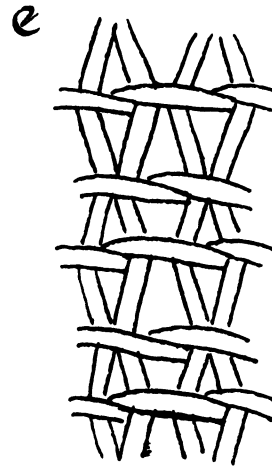
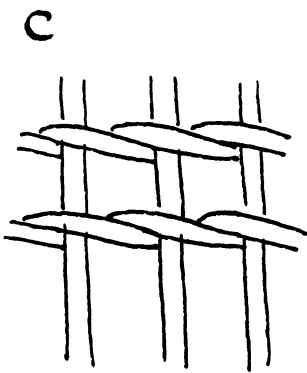
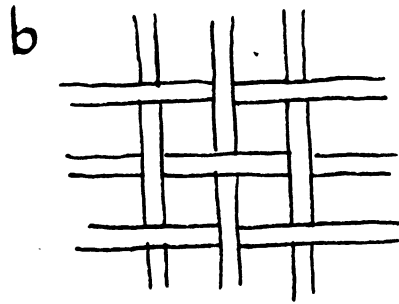
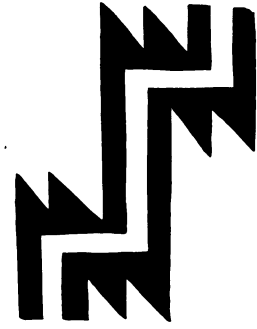
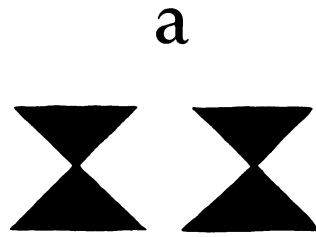
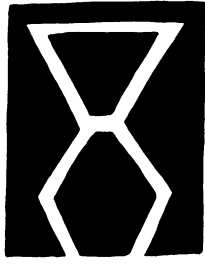


Figure 1

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