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FIRED CLAY FIGURINES FROM SAN DIEGO COUNTY, CALIFORNIA

In San Diego County clay figurines occur sporadically throughout most of the intermediate valleys, inland valleys, and mountain regions, and although of rather wide areal distribution they seem to be numerically rare.* In addition to those described in this report,

* The writer wishes to express his appreciation to C. W. Meighan, University of California at Los Angeles, for his generous help with this report. Raymond C. White, University of California at Los Angeles, offered many helpful suggestions, and data from his detailed study of Luiseño ethnology. Mr. and Mrs. Verne Jones, Valley Center, California, were most generous with their time and artifacts; 10 figurine fragments have been found by them at a site on their ranch. Mrs. Billie James kindly permitted the writer to examine figurine fragments found at the Jones site by herself and Mr. James prior to selling the property.

specimens are known to be in the possession of the Museum of Man, San Diego, and the Cuyumaca State Park Museum. A probable fragment was found by B. F. McCown in the excavations at Temecula. Other finds are occasionally reported but have not been documented or described. This report describes a total of 17 whole and fragmentary figurines from 8 sites in the central watershed of the San Luis Rey River, northern San Diego County. All were surface collected except for specimens from Valley Center, Site 29, which were excavated by their present owner, Verne Jones, in the course of various farm activities.

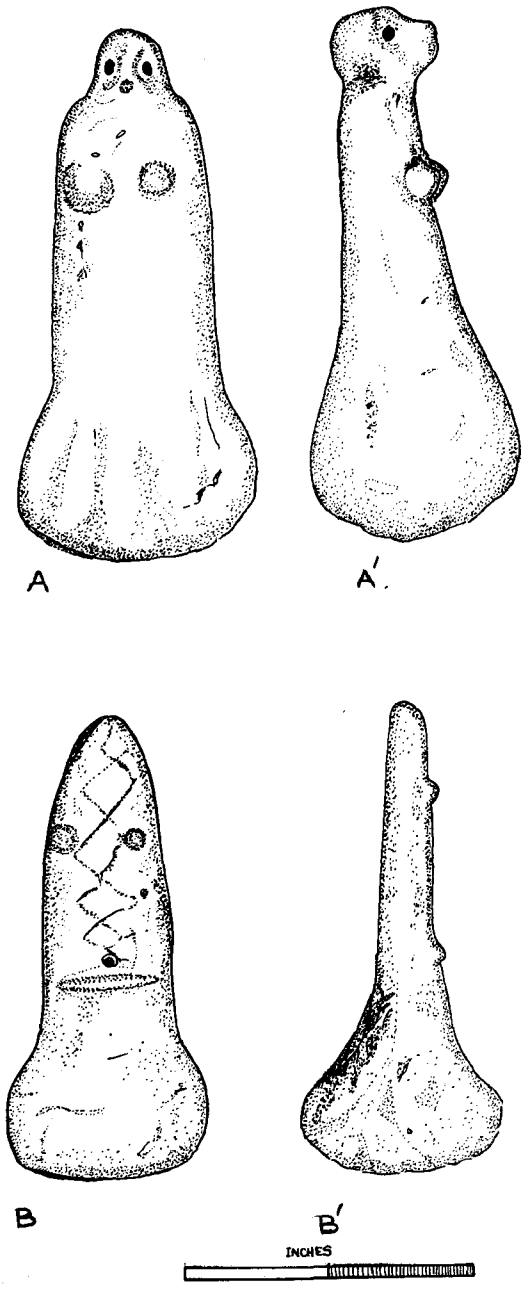

FIG. 1 [True].

The figurines were found in all cases on village locations which agree in form and content with San Luis Rey II, described by Meighan (1954) and tentatively dated by him in the 18th and 19th centuries. In 2 instances, at Rincon 4 and Valley Center 29, the figurines were found on an outlying occupation area adjacent to the main village. In both cases the sites appear to contain a heavier than normal concentration of sherds.

Anthropomorphic forms predominate, with only 3 animal figures known. Two general types are noted, those with bulbous terminations, and those which appear to have more tapering terminations. Ten specimens have blunt or rounded terminations, with one anthropomorphic and 2 animal figures showing breaks indicating probable limb terminations. Rounded fragments have been found that probably represent limb segments. Decoration in both types is limited to incising with no evidence of appliqué elements found on local specimens. The specimens displayed by the San Diego Museum of Man and Cuyumaca State Park Museum have appliqué elements for eyes. In general they do not resemble specimens described here. The dissimilarities between local forms and the figurines displayed in the San Diego Museum of Man with their appliqué "coffee bean" eyes are obvious. In spite of this some Yuman or Hohokam southwestern influence is no doubt present in the sample. All local specimens are fired. Yuman and Hohokam figurines are also fired, while most figures from Morss's Northern Tradition area are unfired (Morss 1954). In attempting the brief comparisons of local and Southwestern figurines the writer has leaned heavily on Noel Morss's monograph. The terms Northern and Southern Traditions are his and apply to figurine styles and areas of the Southwest. The naturalistic, limb-terminated anthropomorphic (Fig. 2 *E*) and animal forms (Fig. 3 *G, H, I*) are probably similar to specimens described from the Santa Cruz, Gila Butte, and possibly Snaketown phases of the Colonial and late Pioneer periods of the Hohokam. The apron termination (Fig. 2 *D*; Fig. 3 *F*) is described as typical of the Fremont area of Morss's Northern Tradition and similar to a specimen from the Pine Lawn period of the Mogollon (Morss 1954: 100, Fig. 23 *h*). In general, over-all appearances suggest both Basketmaker III and early Hohokam. Morss describes elements common to both of his Southwestern traditions as well as to some nonsouthwestern areas (Morss 1954: 27). He attributes this to a possible community of origin and influence from the south in post-Basketmaker times. The wide variation in local forms showing resemblances to both of Morss's Southwestern figurine traditions and to figures described by Heizer from central and northern California is apparent (Heizer and Beardsley 1943). However, they do not seem to be conforming to any common pattern. There exists then an as yet undefined chronological or areal variation in figurines from Southern California.

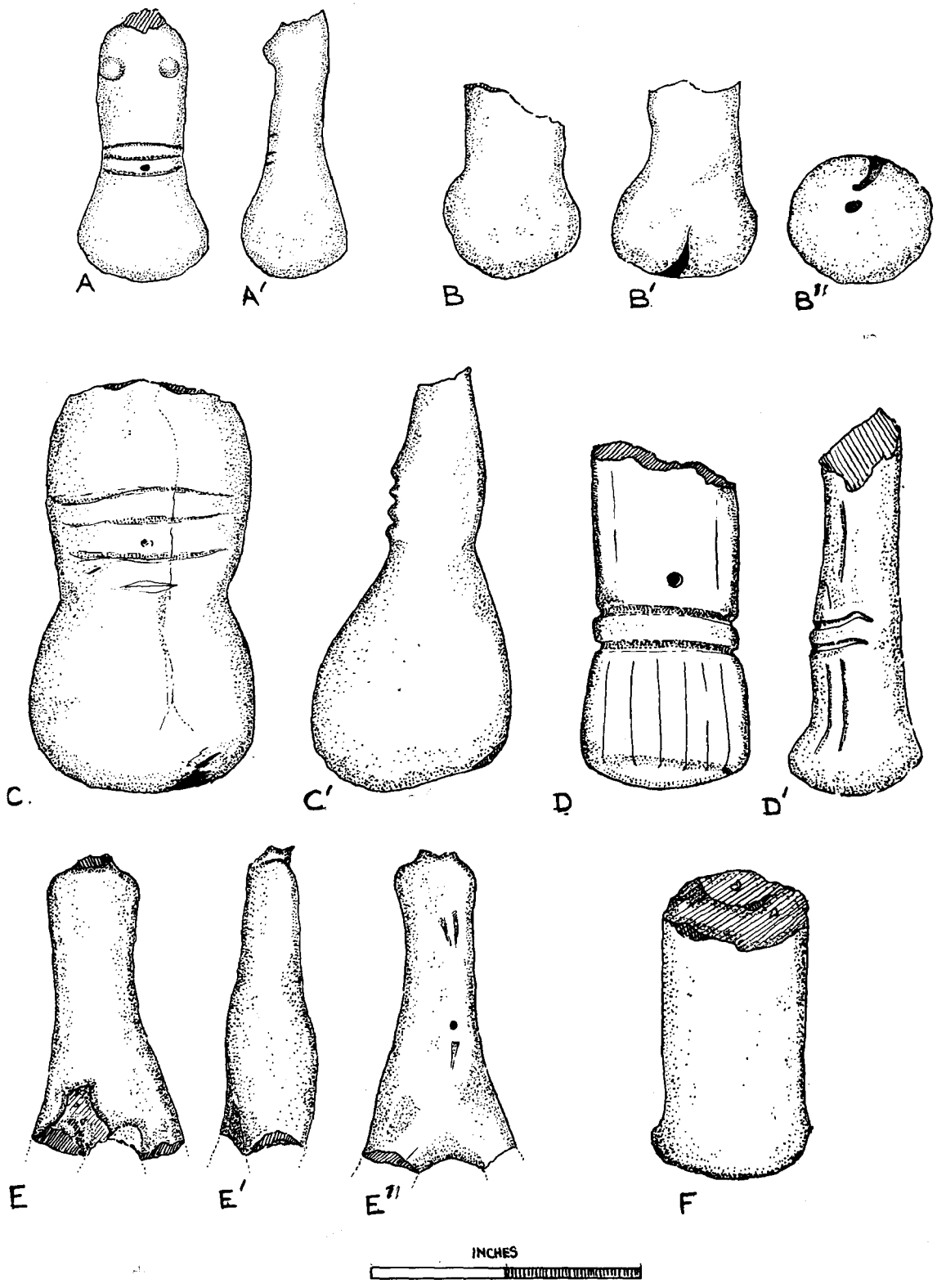

FIG. 2 [True].

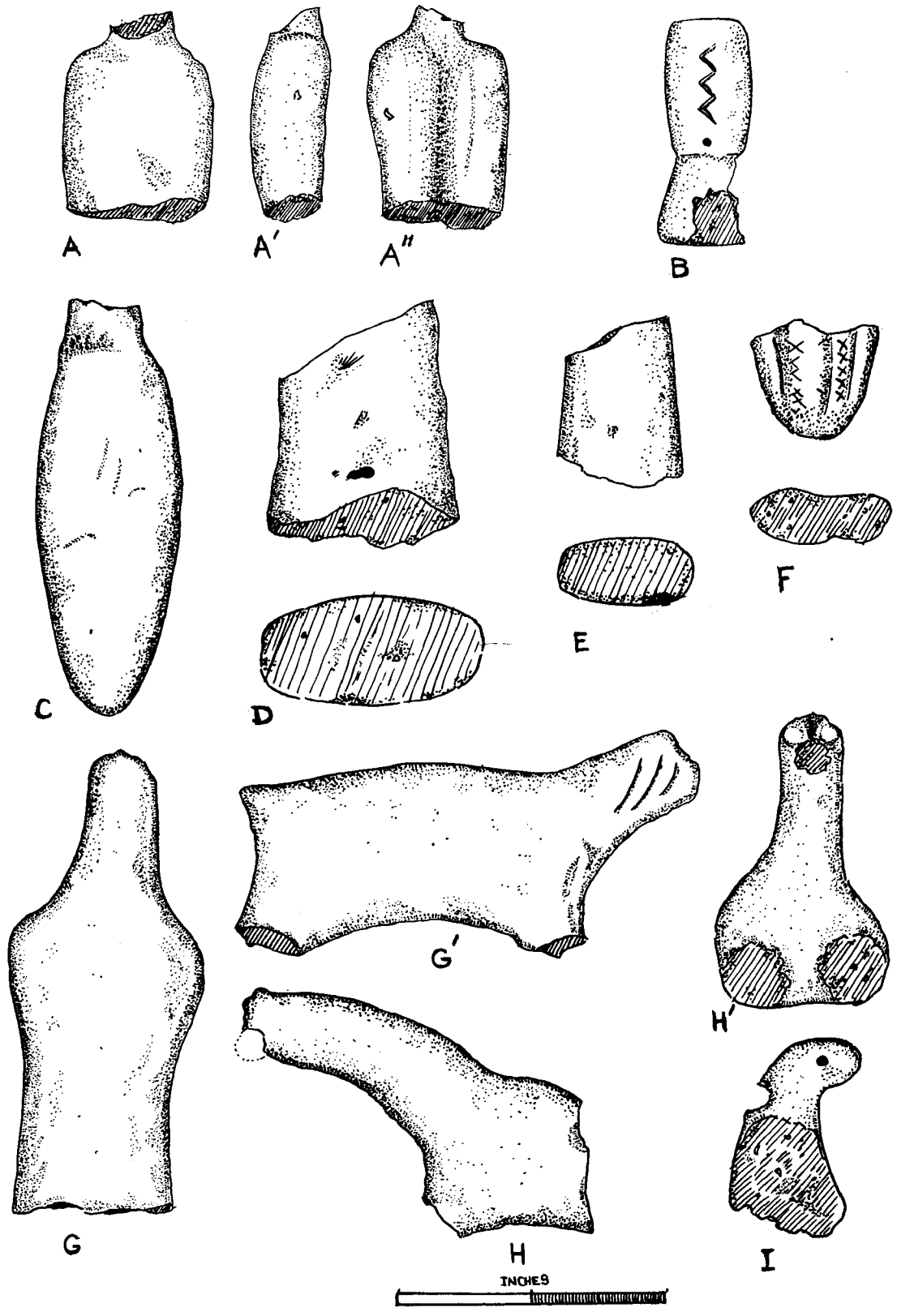

FIG. 3 [True].

Number 1 (Fig. 1 A, A^1) is a female figurine, gray-brown in color, with a slightly gritty sand finish with little smoothing. Little or no temper is noted and the texture of the material is fine. The head is modeled with muzzle-like features. There is no neck. Eyes are represented by puncture marks, shoulders are well defined, and breasts are represented by conical swellings which appear to have been bonded to the torso. The basal termination is bulbous and neither smoothed nor decorated. The section tends to be round rather than flattened. The total length is 8.9 cm., width at shoulders 2.5 cm., and width at base 4.0 cm.

Number 2 (Fig. 1 B, B^1) is a female figurine of brownish color and sandy finish and texture, with little smoothing. Feldspar and quartz inclusions or temper are noted, but they are less than 1 mm. in diameter. The torso tapers from a rounded head to bulbous base without a break and is lacking in limbs or shoulders. Sex is indicated by slight swellings in the upper third of the torso; these appear to have been pinched and modeled from the same piece of clay as the torso. A navel is indicated by a puncture mark above a horizontal ridge crossing the lower midsection. The cross section flattened and tapered except for the basal bulb which is rounded. Decoration consists of incised diamond elements between the breasts. Four punctures are found on the bottom of the basal bulb. Total length is 8.2 cm., width at breasts 1.9 cm., width at navel 2.3 cm., and width at the base 2.5 cm.

Number 3 (Fig. 2, A, A^1) is a headless torso of brownish gray colored fine-grained micaceous material, not smoothed. The upper portion suggests that shoulders were present although they are not descernible on the remaining fragment. The waist is shaped with 3 incised grooves above it on the front which do not extend to sides or back. The section is somewhat oval except for the bulbous termination which is rounded. Viewed from the side, the torso tapers slightly to the termination with a waist indentation on the dorsal as well as the ventral side. A crack runs the length of the torso where it was dropped and repaired by its present owners; another fracture line is noted on the terminal bulb, but appears to be only superficial. A slight puncture is noted between the 2 lower incised lines that could indicate a navel indentation. Total length is 7.2 cm., width at top of torso 3.6 cm., and width at base 4.1 cm.

Number 4 (Fig. 2 B, B^1, B^2) is a headless torso, brown in color, partially smoothed but not finely finished. The slightly micaceous clay contains some sand temper. Shoulders are apparent and the torso is well modeled with a well defined spinal curvature. Breasts are indicated by swellings in the chest region; these seem to have been modeled from the original clay and are not bonded to the torso. The termination is bulbous and without markings. Horizontal lines are incised across the midsection. A navel puncture is located between the 2 lower lines, which do not extend around the sides of the body. The total length is 4.9 cm., width at shoulders is 1.6 cm., width at breasts 1.7 cm., and width at the base 2.4 cm.

Number 5 (Fig. 2 C, C^1) is a probable female figurine, a semi-smoothed basal fragment, with medium-grained finish, and some fine grit temper. It is of brownish color with a trace of red pigment remaining, and no other decoration. A possible indication of female genitalia is incised into the base; this is the only suggestion of sex, as the chest region is missing. Total length is 3.7 cm., width at center 1.6 cm., and width at base 2.5 cm.

Number 6 (Fig. 2 D, D^1) is a basal fragment, slightly smoothed, although the finish is somewhat gritty. Color is gray brown. Some sandy inclusions are present, all under 1 mm. in diameter. A flattened oval in section, this fragment terminates in a rounded, slightly flared bulbous base. The back is flat and unmodeled except for a slight vertical indentation. A navel is indicated in about the center of the ventral side. Decoration which may represent clothing is shown by 2 horizontal incised lines in the lower midsection. Below these, 7 vertical lines are incised and seem to represent an apron or skirt. Above the horizontal lines multiple crosshatching is present between 2 incised vertical lines. Light crosshatching extends around the sides of the torso beyond the vertical lines but does not reach the back at any point. The back is devoid of all marking. A hole 4 mm. in diameter is located on the base of the termination. Length is 6.8 cm., width at top 2.9 cm., and width at termination 3.2 cm.

Number 7 (Fig. 3 A, A^1, A^2) is an upper torso fragment, brownish red in color, with a gritty finish with little or no smoothing. Oval in section, it tapers slightly from shoulders to midsection break. The back is modeled with a vertical depression from shoulders to midsection. It has no design or markings. Length is 3.9 cm., width at shoulders 2.8 cm., and width at midsection 2.5 cm.

Number 8 (Fig. 2 E, E^1, E^2) is a headless and legless torso, brownish red in color, with a semismoothed finish. It has a fine-grained texture, with some small inclusions, slightly micacous. The torso tapers from shoulders to bulging midsection and terminates with what appear to be legs, broken off at the base of the torso. No decoration is present. A slight puncture, possibly representing a navel is located in the center of the torso. Length is 5.9 cm., width at shoulders 1.6 cm., and width at widest point 3.2 cm.

Number 9 (Fig. 3 C) is a cylindrical torso fragment of fine-grained, slightly micaceous material. The torso tapers from the neck to a bluntly pointed termination with no modeling or decoration. Length is 7.0 cm., width at shoulders 2.2 cm., and diameter at neck 1.1 cm.

In addition to the above described figures a total of 5 additional fragments are shown (Figs. 2 F, F^1, G; 3 B, D, E, F). Of these, three are partial or complete terminations, and two are torso midsections. Other fragments of fired clay have been found that are not obvious vessel fragments and are believed to be figurine fragments. However these are not complete enough to determine original forms.

Animal representations consist of 3 fragments found on the Jones site (Fig. 3, G, G^1, H, H^1, I). Of these, two appear to be large quadrupeds and the third, which is only a neck and head, resembles a bird. All are fired clay, gray-brown to brownish red in color with a slightly smoothed gritty finish.

Scarcity of specimens and lack of knowledge among the Luiseño does not suggest common usage through any great depth of time. This plus obvious similarities to Southwestern figurines makes it unlikely that local figurine development took place independent of the Southwest.

The range of figurine types found in the Mogollon, Hohokam, and Yuman cultural areas, plus possible post-contact Mexican influence in the area could easily account for the present variety of figurine forms here. The similarities of local figurines to Basketmaker III and some Fremont figures, as well as to those found in central and northern California, are such that the possibility of influence from Morss's Northern tradition area can not be ignored. Early introduction from the Northern tradition area, some local evolution, and a late Yuman pottery influence coupled with strictly limited usage could account for both the variety of forms and scarcity of specimens. Although considered unlikely at present, lack of figurines in San Luis Rey I sites could be attributed to as yet incomplete investigation of the complex and possibly to poor preservation of unfired figures on open sites.

Little is known of the functions of figurines locally. Definition of their uses is complicated by the many variant forms, uncertain origins, and differences in chronological placement. Modern Luiseño informants' data are sketchy and the location of the figures archaeologically gives little clue to their use. Lacking a stratigraphy and specimens from earlier sites, all the present figures must be considered somewhat contemporaneous. For the most part modern Luiseño informants deny knowledge of the figurines found. It seems unlikely that

they represent children's playthings, as such toys would surely be more common. Reluctance of informants to discuss figurines or outright denial of their existence does not seem justified for common toys, particularly when these same informants can and do define the use of nearly all known elements of the San Luis Rey complex. It has been noted that such descriptions become increasingly difficult to obtain as the artifacts or elements approach or become related to certain religious rites. However, 2 informants have stated that they were used as hexing devices by witches and shamans (Raymond C. White, personal communications 1955). It was stated that at one time all such devices were made of clay but that in postcontact times cloth materials were substituted. The use of such cloth figures for hexing purposes in the old days is commonly admitted. Death or illness is reported to result from practices involving such dolls.

Association of figurines and increase rites in many early agricultural economies has been well documented, but lacking direct archaeological evidence or ethnological information the use of figurines in increase rites locally is unlikely. However, ownership of hunting grounds, oak groves, and other seed sources by individuals, families, and village complexes, suggests a grove management situation that was conceivably not far removed from early agricultural economies in other areas. Ceremonies to increase the acorn crop are said to have been performed in the old days. Details are vague but the described pattern is consistent and has been cross-checked through several informants. No living person is known to have the knowledge needed to perform this rite. The presence of a seed impression suggestive of a small acorn was found in a bulbous termination fragment recovered from Rincon 67. This is the only suggestion of local associations between figurines and increase rites. Admittedly this tiny fragment from a single site is far from adequate evidence of figurine function in increase rites. However, all evidence, however minute, deserves consideration in any determination of origins and functions of figurines in California.

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May, 1955

PICTOGRAPHS OF THE SAN LUIS REY BASIN, CALIFORNIA

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PICTOGRAPHS OF THE SAN LUIS REY BASIN, CALIFORNIA *

The San Luis Rey River flows westward across northern San Diego County, California. The area from Henshaw dam down to and including the Bonsall post office can be described as the central San Luis Rey River basin. It includes a little less than half of the total watershed area but contains many tributary streams and probably accounts for more than half of the total runoff. The area is mountainous and wooded or brush covered and is dissected by numerous small streams, many of which originate in the higher elevations of the Agua Tibia and Palomar mountain ranges.

Ample water supplies and favorable thermal zones which belt the area, coupled with a heavy growth of forest cover along the streams, provided both vegetal and animal food supplies which in turn resulted in more than average aboriginal population. The heaviest concentrations of population were in the areas now known as Pauma Valley, Rincon, The Potrero, and the La Jolla area, all of which still have sizable Indian populations living on reservations. In historic times, the region was occupied by Indians of the Luiseño stock (Kroeber, 1925, p. 648).

The pictographs described herein are located within this central basin of the San Luis Rey. A total of 15 pictograph sites was recorded in this area by the writer. Detailed descriptions of the sites are on file at the University of California at Los Angeles. The heaviest concentrations of sites are at Pauma, Rincon, and the Potrero. This concentration of pictographs is due to the large number of Luiseño village sites found in this relatively small area, and partly to more extensive survey efforts in this area.

It appears likely that there is at least one pictograph location for each village site. Of the former the majority conform closely to ethnographic descriptions. Most pictographs are located some distance from the village site on isolated boulders or rock outcrops. The remainder are at the village sites or occupation areas and in small cave shelters. Most sites are found on the rocky

* The author wishes to express his appreciation to C. W. Meighan, University of California at Los Angeles, who read an earlier version of the manuscript and offered many helpful suggestions.

points of small hills extending into the valley. Generally they are less than one hundred feet above the stream level or village level and in some cases are found at stream level, although in some isolated instances they are found higher on the hillsides. There does not seem to be any preferred direction that these paintings must face since they are found facing in almost every direction as regards both the compass and the village sites. However, there were undoubtedly requirements for locating the paintings other than that they should be conspicuous and on suitable rock surfaces. To date no information on this problem has appeared, and there are many suitable locations and rock faces which fulfil all known requirements but lack the paintings. Granitic bedrock intrusions make up the greater part of the exposed boulders and rocky ridges, with the dense weather resistant stones standing exposed on hills and slopes of decomposed granite, or on residual clay soils of granitic origin. The majority of the paintings are found on these dense exposures with a few being found on a metamorphic rock found in pegmatite dike exposures. The paintings found on the rather coarse-surfaced stone are usually found in cave shelters or on overhangs, while the exposed paintings are nearly always on granite boulders.

Most of the boulders are streaked with a travertine-like deposit or a reddish stain, and the best of the painted areas are found on the deposits or stains. Design elements on any given rock will usually range from clearly discernible elements on the stained areas to faint illegible blurs on the bare rock surfaces. It is likely that the presence of the mineral deposit provided a base into which the pigments could penetrate, thereby preserving the paintings.

The association between pictograph sites and known Luiseño village sites is clearly visible by the manner in which these sites fit the ethnological descriptions. The relatively nonpermanent nature of the medium is such as to eliminate, in almost every case, any ideas regarding pre-Luiseño painting of the pictographs. There is no evidence to date to indicate pictograph painting by any prepottery Luiseño occupants of this area. The association of these pictographic representations with certain distinctive ceremonials gives us one of the few cases in which explanations of petroglyph origins exist. Indians in other petroglyph areas usually deny knowledge of the designs and in many instances appear to be afraid of them. Here then we evidently have a documented association between petroglyphs and their makers.

The earlier ethnological accounts disagree on many of the details surrounding the ceremonies with which these rock paintings are associated, but they all agree on the general custom with which the majority of the known sites conform. This is the use of pictograph paintings as part of ceremonies that are concluded by a race, in which the participant, or a relative, ends by painting a design on a previously designated rock.

Kroeber's earlier account reports:

> The conclusion of the girls' period of restrictions at puberty was marked by paintings made by them on the smooth surfaces of large granite boulders. These paintings, some of which can still be seen, especially near the old village sites, consist of geometrical arrangements of lines in red, usually in patterns forming vertical stripes several feet high. After making her painting, a girl was again free to eat meat and salt. The paintings were called *yunnish* (Kroeber, 1908, pp. 175-76).

A variation within the ceremonies is noted in Kroeber's later account, but he again mentions the geometric designs and the race.

> The girls accompanied by friends, thereupon run a race, another ceremonial device of which the Luiseño are fond. The chief's wife again paints them. With the same paint she makes a large geometrical pattern upon a rock, or according to another account, the girls themselves do so. This face and rock painting is performed monthly three or four times (Kroeber, 1925, p. 675).

Strong again cites a variation in the ceremonial pattern, but describes the same general customs as the others, and also describes the design elements in a similar way.

> The sand painting ceremony closed with a race, called hayic (or hayish) to a certain rock. Here a relative of each girl stood with red paint, and as each girl arrived she painted a design on the rock. According to Yela Wassuk any design was permissible, but other informants said such designs were always diamond shaped and represented the rattlesnake. The known rock paintings of this type at Rincon and La Jolla are geometric with a preponderance of diamond shaped designs (Strong, 1929, p. 299).

Sparkman's account does not mention details of the race or rock paintings but does link the paintings of pictographs to the girls' puberty ceremonies. The majority of the paintings were probably made in connection with these rites, but pictograph painting is also described in connection with the boys' ant ordeal ceremony which is part of their Toloache initiation. A pattern similar to the girls' puberty race appears to apply in this case also and is referred to by both Du Bois and Strong.

> A race was then held by the candidates, probably similar to the races made at the time of the new moon; and the winner of the race painted in the designated place with red and black paint (Du Bois, 1908, p. 92; cf. Strong, 1925, p. 317).

In addition to the ant ordeal, the Toloache ceremony itself may have included pictograph painting, but the only ethnographic reference to this is a conjecture made by Du Bois (1908 p. 84). Inasmuch as the Cupeño and Serramo Toloache ceremonies were closed by such a race it is not at all difficult to imagine that the Luiseño also, at one time or another, included the race and pictographs in their Toloache ceremonies. Strong cites Du Bois' opinion and, although lacking direct evidence, admits the possibility of such a race by the Luiseño (Strong, 1929, p. 316). Descriptions of both the girls' puberty rites and the boys' ant ordeal ceremonies easily correspond to observable patterns of pictograph sites found in the San Luis Rey basin.

There is little doubt that the Luiseño confined their petroglyph activity to the painting of pictographs as no authentic pecked designs or elements have been found in their territory.

In the painted pictographs found, the colors are limited to red and black with red being the dominant color. Du Bois indicates that red, black, and white

colors were used (Du Bois, 1908, p. 96), but no white painting has been found on any site yet. Kroeber cites the use of red paint (Kroeber, 1908, p. 175-6), while Strong mentions the use of red in connection with the girls' puberty rites, and the use of red and black in the boys' ant ordeal ceremony (Strong, 1929, pp. 229, 317).

The reds vary in shade from rather deep brick reds to somewhat faded orange tints. These variations in color must be considered in terms of paint formula variations, the rock surfaces on which the paint is placed, the degree of weathering, and the relative age of the painting. Of the paint itself, little is known except from ethnological accounts. Sparkman describes it as being made of a certain pigment obtained from springs on Mount Palomar, mixed with turpentine (made from pines on Palomar) and with an oil base made of an extract from the seeds of the Chilicothe (*Echinocystis Macrocarpa*). It is probable that the seeds were ground and the oil extracted at the site of the paintings since nearly every site has many of the vines growing around the base of the painted rock. The presence of this plant is not conclusive evidence, for this is a common plant in the region. However, its presence on nearly every site checked so far does tend to strengthen the ethnological descriptions of the paint ingredients. The seeds and paint pigments are described as being ground in a small mortar made especially for this purpose. This mortar, *Tamya-mal*, is described as being polished and almost exactly round (Sparkman, 1908, p. 207). To date not one of these has been found on or near any of the pictograph sites. They do exist however, and were more than likely buried with other ceremonial devices by the person in charge of the rites. A modern Luiseño informant indicates that such ritual objects were hidden or buried by chiefs or medicine men. On many of the sites small bedrock mortars are found which were probably used in a manner similar to the *Tamya-mal*. This type of bedrock mortar is also found in association with painted petroglyphs farther north on the western slopes of the Sierra (Mallery, 1889, p. 54).

All ethnological sources agree that animal fats were not used in the paints, and these earlier accounts regarding paint constituents are further substantiated by a chemical analysis of pigment taken from painted rocks. This showed that the pigment for red was ferric oxide and for black, manganese oxide (Harrington, 1933, p. 142).

When used in red paint the chilicothe kernels were toasted, but not charred, prior to being ground. For black pigment they were charred and roasted on a piece of burning oak bark, after which they were pounded up fine and mixed with the ground manganese oxide (Harrington, 1933, p. 142).

The iron oxide is obtained from hydrated hematite which is found in local rocks and the scum from certain springs. This scum consists of depositions by bacteria; in the summer it is gathered by the Indians, dried in the sun, and then burnt on a slab of oak bark (*Quercus Kellogii* or other local oak species). For detailed descriptions of these bacteria and the processes involved in their use as paint pigments see Harrington, 1933, pp. 141-44. Other materials were used for paints ethnographically, but these were not of the permanent nature of the pigments just described and they are not found on any of the sites. Such materials as soot, charcoal, clay, and ashes could not be expected to survive for any length of time on exposed rock faces.

Steward has defined southwestern California as a distinctive petroglyph area (his area C). He describes the characteristic elements as follows:

> They stand apart from zig zags found elsewhere, not only in being painted and assembled in a characteristic manner but because they are connected with the girls' puberty ceremonies. In this region zig zags are combined in many ways. Generally there are several groups. These are made up of a number of parallel zig zags placed close together, or of zig zags superimposed in such a way as to form chains of diamonds. The color is almost invariably red. Their distribution falls entirely in southern California. . . . Few other designs occur in this area (Steward, 1929, p. 203).

Fenenga's later report describes the design elements somewhat further and characterizes them as being dominated by red painted petroglyphs of geometrical forms in linear arrangement, especially chains of diamonds and parallel rows of zigzag lines. These are found on the vertical faces of isolated boulders (Fenenga, 1949, p. 2 and fig. 1).

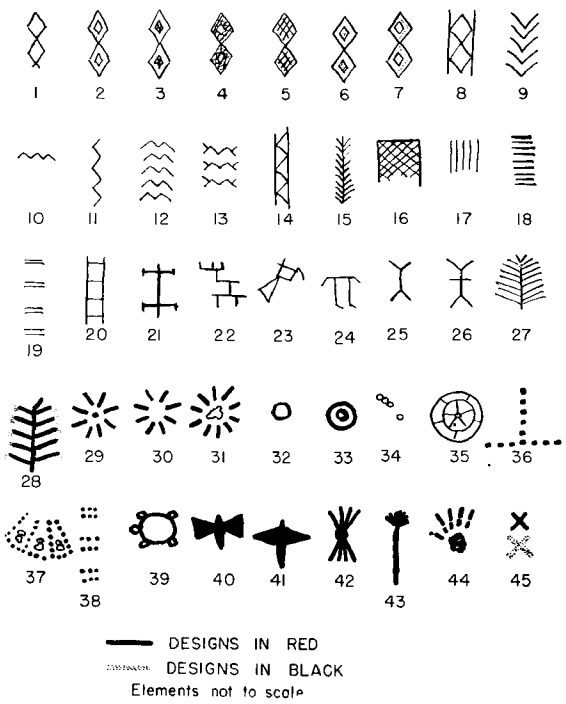

FIG. 29. Pictograph design elements, San Luis Rey basin, California.

Simple geometric forms greatly predominate in the pictographs. Quadruped animal representations are absent and anthropomorphic figures are exceedingly rare, even including highly stylized figures which are rather dubious man-like representations. Spirals and snake forms, common in many other areas are not found.

It is possible that some of the elements found in Luiseño rock paintings represent the Chingichnich cult animal forms. The manner in which these paintings are directly associated with religious rites and the fact that many of the rites involved the use, in one form or another, of the cult animal forms leads to this conjecture. One of the most commonly used forms in Chingichnich rites is the rattlesnake. The possibility that the diamond chain pattern represents the rattlesnake is suggested in Strong's account (Strong, 1929, p. 299). The diamond chain is the most common of all the elements used in Luiseño pictographs.

In this survey of fifteen sites which form a representative sample of all the known pictograph sites in the area, we find that there is considerable variation as regards the assembly of the typical chevrons, diamonds, and zigzags and also regarding the types of units in a given design. The recognizable variations total about thirty separate design elements. This does not take into consideration minor variations nor does it include the many blobs and blurs which occur on almost every site. Of these elements eight are identical to those illustrated by Fenenga. (Fenenga, 1949, Fig. 2, design elements 8, 13, 14, 21, 23, 25, 26, 33.) There are three others that are similar but not identical to numbers 12, 22, 37 of Fenenga's Fig. 2. This leaves over twenty elements or variations which have not been previously reported and which represent less common petroglyph designs in Southern California.

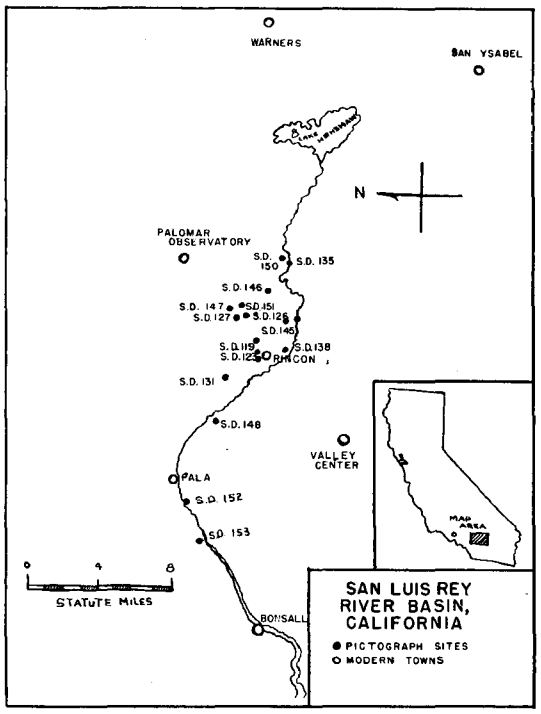

FIG. 30. Distribution of pictograph sites, San Luis Rey basin, California.

The elements found in this region can be separated into two general classes: those which are geometrical patterns and those which appear to represent natural forms. The geometrical forms make up the bulk of the paintings and can be divided into various units, the most obvious of which are the diamonds which make up the chains, the chevrons which make up the zigzag lines, simple crosses, X's and straight lines assembled in various ways. The most common is the simple single line diamond unit (Fig. 29, *1*). Variations of this element are shown in Figure 29, *2-7*. The manner in which these diamond units are assembled is variable as to the size and number of units which are put together, but they are always assembled vertically to form chain designs (except when found as single motifs). Occasionally they are found inclosed in vertical lines.

Chevrons which are combined to form the various zigzag line elements are found in several patterns (see Fig. 29, *9-15*). The use of lines to create crosshatching, single vertical lines, single horizontal lines, and groups of both vertical and horizontal lines in some manner of assembly is common (Fig. 29, *16-19*). Ladder forms are found, but are not common (Fig. 29, *20*). Other single line forms are found occasionally (Fig. 29, *21-23*). The double Y and a modification are found only occasionally (Fig. 29, *25, 26*). The single lined circle and concentric circles or target forms are not common but have been recorded from several sites (Fig. 29, *32, 34*). A more complex form of the circle or target element is found in the wheel form which is found only at site S.D. 151 (Fig. 29, 35). The use of small dots in vertical or horizontal rows is found on only one site so far (site S. D. 151), but at this site it is the dominating element (Fig. 29, 36). A variation of this design is the cage-like enclosures containing elements which appear to be figure eights (Fig. 29, *37*). Further use of small dots is made in elements in which the dots are assembled in groups of six, into squares about one and one half inches across, and which are grouped in lines about three fourths of an inch a part. These groups are made into chains, usually straight but sometimes having a curve on one end.

Although elements that resemble natural forms are rare, a few such elements have been found. These are summarized as follows:

1. Tree-like figures, one of which has the tips of the "branches" tipped in black (Fig. 29, *27*, 28).

2. "Sun figures" or elements with lines radiating from a central spot. These are widely distributed and are found with several variations (Fig. 29, *29-31*).

3. A turtle-like figure at site S.D. 152 (Fig. 29, 39).

4. Bird and insect-like forms at Potrero Indian reservation (Fig. 1, *40-42*).

5. A figure which appears to be a palm tree at one La Jolla site (Fig. 29, *43*).

6. Hand prints, which appear on several sites (Fig. 29, *44*).

7. A possible schematic representation of a human at site S. D. 153. The visible portion extends from a rather confused mass of blurred elements. This problematical figure represents the only anthropomorphic element from the region.

Such elements as diamonds, chevrons, dots, and simple line forms can be traced in petroglyphs throughout California and the southwest. It is only in the characteristic manner of assembly and the circumstances under which they were made that the pictographs of this area become especially distinctive. The distinctive use of the geometric forms and the almost complete absence of many elements common to other petroglyph areas cause the designs of this region to stand out in a comparative study.

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