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METHODS OF RECORDING AND PRESENT STATUS
OF KNOWLEDGE CONCERNING PETROGLYPHS IN CALIFORNIA.

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METHODS OF RECORDING AND PRESENT STATUS OF KNOWLEDGE CONCERNING
PETROGLYPHS IN CALIFORNIA ^{1/}

I. The Present Status of Petroglyph Research

The classic study by Julian Steward (1929) of the petroglyphs of California will form the basis for any future study of the decorated rocks of this state. As a compilation, the 130 petroglyph localities for which he presents data, represent approximately half the sites now known but his greatest contribution lies in the method by which he analyzed the data. This method consists in plotting the distribution of 45 single design elements chosen because they represent "types" of repeated occurrence. His results indicate that certain "elements have fairly well defined areal extent and a high degree of association. Moreover, they tend to group themselves according to general stylistic characteristics" (Steward, 1929, p. 55). In other words, the separate design elements behave like many other elements of culture and can be subjected to the same kinds of historical analysis. This simple demonstration establishes the usefulness of petroglyph data to historical anthropology and provides the justification for continued recording of newly discovered sites.

The map presented as figure 1 ^{2/} represents the petroglyph localities now known in California and the areas of closely related petroglyph styles. The lines dividing the areas are in part arbitrary and some sites share features of adjacent areas. Many design elements, especially the more simple ones are widespread or nearly universal in their distribution, a few are limited to one or another area. Some of the designs of widespread distribution are illustrated in figure 2; numbers 21-40.

Area I is essentially that portion of California lying east of the crest of the Sierras. The area is characterized by pecked petroglyphs, generally of simple geometric forms. Individual design elements are usually small but the area covered by petroglyphs may be several acres in extent. Distinctive design elements include: Mountain sheep (fig. 2; 1), hand and foot prints (fig. 2; 2), snakes (fig. 2; 3), circle chains (fig. 2; 4), the circular grid (fig. 2; 5), "sheep horns" (fig. 2; 6), rectangular grids (fig. 2; 7), cross hatching (fig. 2; 8), angular meander (fig. 2; 9), bird tracks (fig. 2; 10), and "rain symbols" (fig. 2; 11).

Area II, the northern Coast Ranges, is characterized by rubbed groove petroglyphs of extremely simple forms occurring on the horizontal faces of boulders or exposed bedrock, usually of steatite. The most distinctive feature of this area is the occurrence of numerous artificial cup shaped depressions averaging three inches in diameter, and less than an inch deep. Petroglyph designs are elaborations of these cup shaped depressions (fig. 2; 12).

1./ In consonance with most recent writers, the word "petroglyph" is used to describe decorated rocks without differentiating between ornamentation produced by pecking and ornamentation produced by painting.

2./ Site locations are taken from Steward (1929) with additions from the manuscript by Clarence E. Smith.

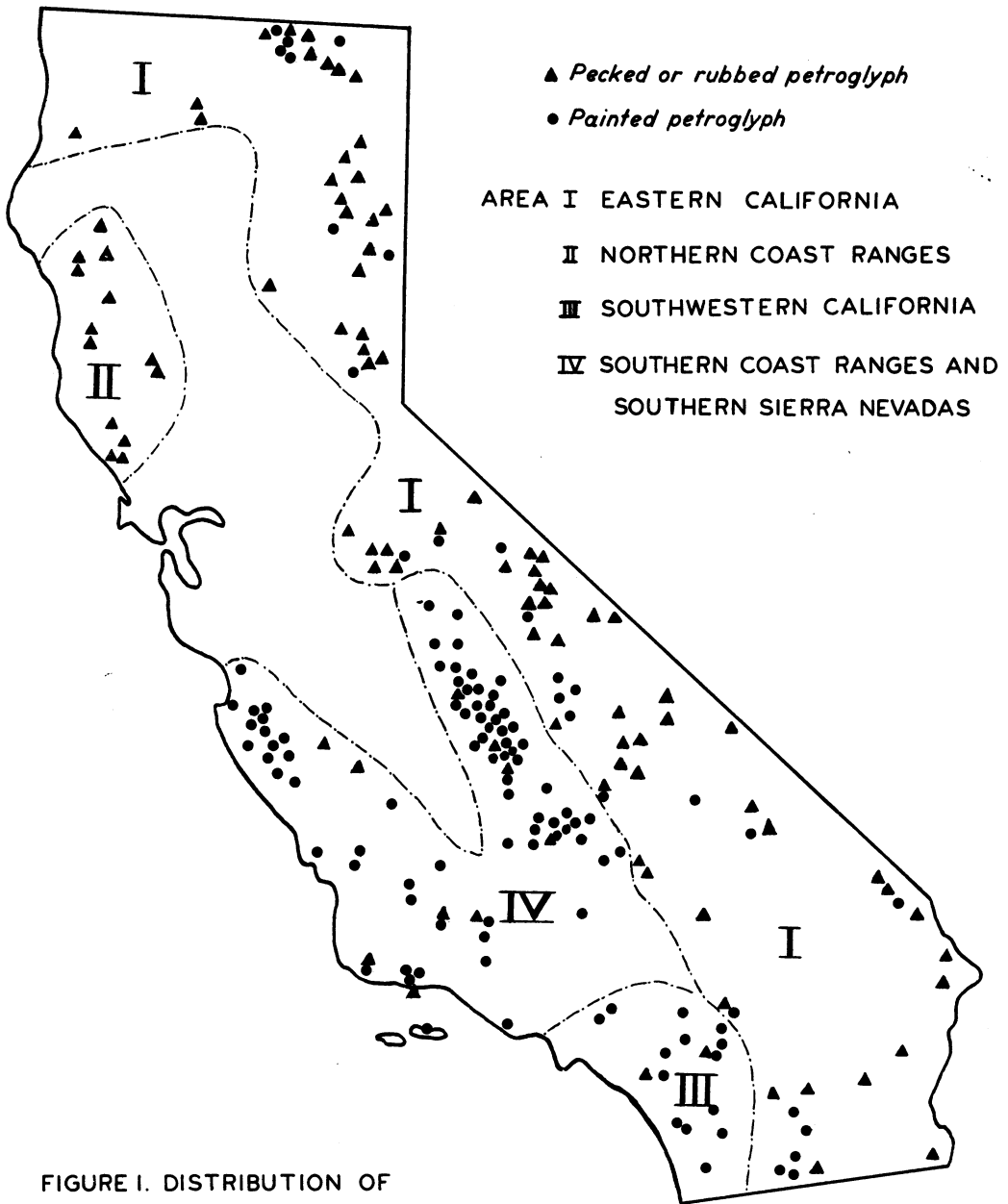


FIGURE I. DISTRIBUTION OF

PETROGLYPH SITES AND PETROGLYPH STYLE AREAS IN CALIFORNIA

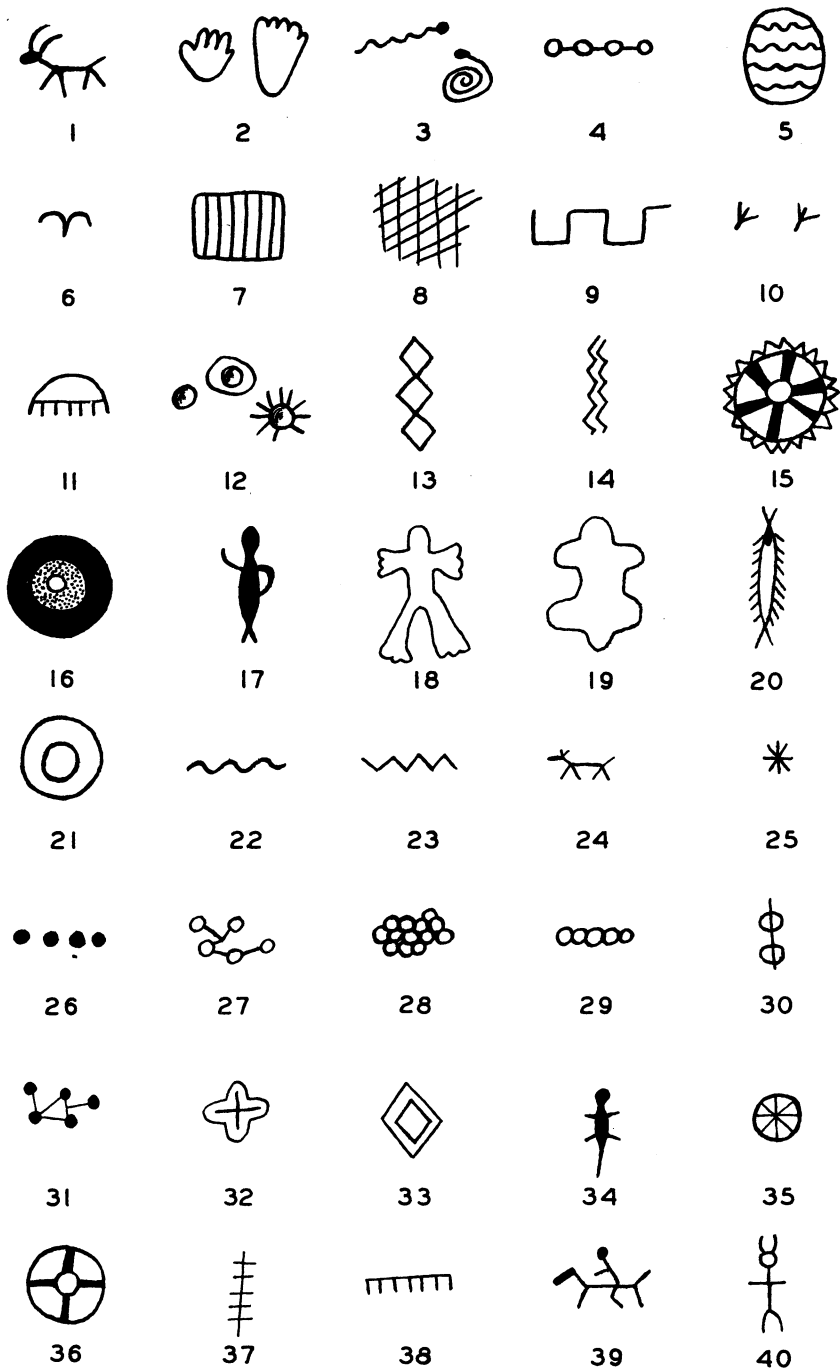


FIGURE 2. PETROGLYPH DESIGN ELEMENTS

Area III, southwestern California, is an area dominated by red painted petroglyphs of geometrical forms in linear arrangement, especially chains of diamonds (fig. 2; 13) and parallel rows of zig-zag lines (fig. 2; 14). These petroglyphs are found on the vertical faces of isolated boulders. The conditions under which they are painted have been described (Strong, 1929).

Area IV is a region in which petroglyphs are elaborate in design and painted in several colors (red is most common, yellow, black and white are frequent). Design elements are large and the designs usually occur on the vertical faces of rock cliffs. Distinctive elements include: the cogged wheel (fig. 2; 15), concentric bands of different colors (fig. 2; 16), humans with one arm akimbo (fig. 2; 17), humans with exaggerated fingers and toes (fig. 2; 18), the "pelt" (fig. 2; 19), and the centipede (fig. 2; 20).

Steward's synthesis is now twenty years old and a considerable amount of new information has been accumulated (see part 2 of the bibliography). Recent detailed surveys of small local areas indicate that the total amount of information now available for study represents a tiny fraction of the data still unrecorded. The following notes are designed to provide a systematic basis for reporting new data. This paper further constitutes the first of a series of contemplated California Archeological Survey Reports dealing with archaeological method.

II. The Use of the Petroglyph Record Form

The accompanying form is designed to facilitate the complete and accurate recording of data relating to a particular petroglyph site or to a portion of such a site. Each entry should be filled in as fully as possible and this record should be supplemented by photographs and sketches. The following information is called for by the individual entries:

1. Site. Fill in the site number or the site name.
2. Cross reference, survey record. Refer to the site survey record where-in the detailed description and location of this site is recorded.
3. Face. Where the decorated area is large in extent or complex in the relationship of ornamented planes, it will be desirable to use more than one of these sheets to describe it. In such a case, the several different areas should be labelled serially, Face 1, Face 2, etc. and each sheet should describe one such face.
4. Dimensions of decorated area. Record the area covered by petroglyphs on this particular face.
5. Horizontal location. Record the location of the face described on this sheet in relationship to the total site area. (If the site has been carefully mapped, this entry will be a measurement referred to the location of a fixed datum.)
6. Kind of rock. Define the color and mineralogical identification of the rock on which the decoration occurs (e.g. "gray granite", "buff sandstone", etc.). The National Research Council, Division of Geology and Geography, has recently published a 5 by 7½ inch set of 115 colors for determining the colors of rocks. This color chart is useful in recording the base color upon which painted designs are applied.

7. Position of rock. The position of the decorated rock should be described by such terms as "face of vertical cliff", "overhanging roof of rock shelter", or "south face of isolated boulder", etc.
8. Method of decoration. Check the appropriate entry.
9. Colors. The colors of painted petroglyphs should be defined as carefully as possible, preferably by reference to a standard color chart or color dictionary. A good substitute is the duplication of the original colors with water colors.
10. Design elements. Name, characterize or describe the individual design elements present on the petroglyph face. (The forty design elements illustrated in figure 2 are representative.)
11. Superimposition. Any instance of the overlaying of one design by another should be recorded. Such instances provide the major objective evidence of the relative ages of various petroglyph media and elements.
12. Natural defacement. Such natural agencies as spalling off of the surface, wind or water erosion, overgrowth of lichens, etc., which deface the decoration should be recorded.
13. Vandalism. Instances of recent chipping or painting of the petroglyph surface should be noted so that future investigators will not confuse the aboriginal work with newer work.
14. Associated features. Other cultural features found at the petroglyph site should be recorded. For example, small pits in horizontal rock surfaces, presumably used for grinding pigments, are frequently associated with painted petroglyphs in the southern Sierra Nevada foothills.
15. Additional remarks. This entry should be used for any relevant information not called for on the record form.
16. Published references. Cite any published source of information about the petroglyph.
17. Sketch. If the petroglyph face is sketched on the reverse of the record sheet write "over". If the sketch is separate, specify. Label all sketches and attach them to the record sheet.
18. Scale of sketch. Indicate the scale of the sketch by a representative fraction ($\frac{1}{2}$, $\frac{1}{4}$, natural size, etc.).
19. Photo nos. Record the catalog numbers of the negatives of photographs of this face.
20. Recorded by. Name of the individual who fills out this record.
21. Date. Record the date of filling out the record.

III. Methods of Copying Petroglyphs

A. Photography

Whenever it is feasible, photography provides the quickest, the least expensive, and the most objective method of copying petroglyphs. A few special techniques have been developed which contribute to the success of such photography:

Color photographs of petroglyphs are easily made by standard techniques but their usefulness is limited. They are much more expensive than black and white photographs and their usual small size obscures details. Further, they cannot be economically reproduced for publication and cannot be reproduced at all by the cheaper printing methods. They do, however, provide a method of recording the color of multi-colored painted petroglyphs.

Generally speaking, the larger the film size used, the greater the amount of detail which will be apparent in the print. Detail is enhanced by the use of a small lens aperture and a long time exposure, hence a tripod is a near necessity in petroglyph photography.

Petroglyphs pecked in low relief and subsequently exposed to weathering cannot always be distinguished in photographs. The lines of the petroglyph can be prepared so that they will show up in pictures by chalking them in very lightly. (If pastel chalks approximating the hue of the native rock are used, glaring contrasts can be avoided). Never use wax or oil based crayons or oil paint for this purpose and do not use this technique to accentuate painted petroglyphs.

Painted petroglyphs can seldom be successfully photographed in bright sunlight. Minute surface irregularities of the rock either reflect or shade the light in such a way as to mask the colored lines. Overcast days, or complete shadow for the rock face, make for much more satisfactory photographs. Some colors cannot be photographed with orthochromatic film ("Plenachrome" and "Verichrome") because the tones of the colors approximate those of the background rock. It is wise to use panchromatic types of film in photographing painted petroglyphs.

B. Sketching

Sketching offers very few problems beyond the requisite draughting ability on the part of the archaeologist. A set of colored pencils is the only necessary equipment. The reverse of the Petroglyph Record Form is designed for such sketches, the square divisions providing constant control over scale and proportions.

The size of the Petroglyph Record Sheet is such as to accommodate a drawing of an area 8' by 10' at a scale of 1/12 or a drawing of an area 4' by 5' at a scale of 1/6, etc.

C. Tracing

The necessity for a special copying technique arose out of a request from the National Park Service and the Smithsonian Institution River Basin Surveys for an accurate full scale copy of a series of painted petroglyphs which

will be inundated by the construction of the Terminus Dam in Tulare County. Here, as at many other petroglyph localities, the designs occur on different planes of a very irregular rock surface and hence, efforts to copy them by photography were unsatisfactory. The method devised, and described below, has the advantage of requiring no draughting ability on the part of the copyist:

The entire decorated surface of the rock was covered with cellophane sheets which were affixed to the stone by taping at the corners. (The trade brand, "Clearcel", .003, obtainable in 40 inch wide rolls has been used, but experimentation indicates that much thinner, hence less expensive, grades of cellophane can be used almost equally well). The designs were then traced with appropriate colored pencils of the type designed to be used for writing on glazed surfaces (Dixon, "Phano"; or Blaisdell, "Cellophane"). The separate sheets were numbered and a grid key was prepared to identify the location of each sheet. The sheets thus prepared are designed to be patterns from which a museum mural may be made but reduced scale copies can be made from them by the use of a pantograph. The colors of the original pigments were duplicated by the use of a small set of water colors and these were identified by a key to the color approximations used on the cellophane.

IV. Bibliography

This bibliographic section is divided into two parts: The first part is composed of titles which are either compilations or syntheses of data for large segments of Western North America or are theoretical and comparative in their approach. It is intended that this part provide a comparative background for generalization about California petroglyphs. The second part consists of titles, written since Steward's 1929 synthesis or overlooked by him, which provide specific new data on petroglyphs in California. This part is probably incomplete, particularly as regards unpublished manuscripts but it indicates the quantity and the geographic range of data accumulated in the last two decades.

1. General and Synthetic Studies for Western North America

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2. New California Data

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Vol. 1, no. 1, p. 53; Vol. 2, no. 1, p. 47; Vol. 3, no. 2, p. 184-186; Vol. 5, no. 1, p. 69.

- Anonymous. Tulalake Petroglyphs Believed not Ancient. The March of Pine, Vol. 5, no. 5, Klamath Falls, Oregon, 1948. (Four useful illustrations.)
- Bonner, E. C. Petroglyph Sites in Northeastern California. 1945. Manuscript on file, University of California Museum of Anthropology. (Illustrates four pecked petroglyph sites in Lassen and Modoc Counties.)
- Bruff, J. G. Indian Engravings on the Face of Rocks along Green River Valley (and) in the Sierra Nevada Range of Mountains. Smithsonian Institution Annual Report for 1872; pp. 409-412, 1873. (Description and illustration of site in Lassen County.)

- Bruff, J. G. Gold Rush. Columbia University Press, 1944. Vol. II, pp. 1192-1194 and plates opposite pages 860-861. (Reprint of Bruff cited supra with one additional illustration.)
- Dawson, E. J. Petroglyphs on Tule Lake, Modoc County. 1929. Manuscript in University of California Museum of Anthropology. (Thirteen figures.)
- Dunn, H. H. The Prehistoric Painter of Poway. Touring Topics, May, 1930., pp. 36-38, 56. (Petroglyph localities in San Diego County.)
- Fenenga, Franklin. Archaeological Work of the Sacramento Junior College in Lake County, California. 1937. Manuscript on file, California Archaeological Survey. (Illustrates and describes two rubbed groove petroglyphs at the northwest end of Clear Lake.)
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