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Petroglyphs of Oregon

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FOREWORD

To secure information concerning the location of the material upon which this study is based, I depended mainly upon letters, and upon leads given by informants in different parts of the state as I met them in the field. Letters were sent asking for information concerning the location of "rock writings," among other types of archaeological remains, to all (over 400) postmasters, forest rangers, state police, game wardens, newspaper editors, and highway engineers in Oregon east of the summit of the Cascades. Many other persons, notably Mr. Lewis A. McArthur, state geographer, and Mr. Stanley B. Jewett, director of the U. S. Biological Survey in Oregon, were consulted. In the smaller but more heavily populated section of the state west of the Cascades the state highway engineers for the different districts and private individuals were depended upon for information. In addition to these sources, various published monographs and papers were, of course, used.

The record of pictographs and petroglyphs upon which this monograph is based was gathered during a period of three years. By far the greater part of the photographs were secured during the latter part of August and the first three weeks in September 1932. The writer, accompanied by Mr. Howard Stafford, at that time a graduate student in geology at the University of Oregon, travelled by car approximately 2,500 miles to secure the photographs. From time to time during the next three years short trips were made to secure additional pictures, and in the summer of 1933 a week was spent in south central Oregon, mostly in the Warner Valley country. The archaeological survey of the University of Oregon and Stanford University in Guano Valley in August 1934 provided the opportunity for securing photographs of the sites in eastern Lake and western Harney counties, an area which had previously been touched only on the extreme western and eastern boundaries.

Because of the great expense of publication of photographs, the designs have been reduced to black-and-white drawings. While this has its disadvantages, it also has the advantage of isolating the design elements from the background of landscape. In the drawings, natural groupings have frequently been broken up and rearranged for compactness and economy. Where there is any evidence of an attempt at composition, however, the natural groupings have been retained.

Wherever possible, all sites were photographed and observations were taken on the type of rock on which the design was applied, its exposure to the weather, the degree of weathering shown by the designs, evidence of occupation in the immediate vicinity, and other information which might be pertinent. Much of the geological information collected is preserved in our files; it did not seem advisable in most cases to present it with this study. Most of the designs were outlined in chalk to produce a clear-cut photograph. When my assistant and I could not agree on the outline of the design because of its indistinctness, we photographed it without chalking.

The question naturally arises, "How nearly complete is the list of sites?" That is difficult to answer accurately. However, subsequent checkup in the field, interrogation of people who know the country, the frequency with which the same sites were listed in our correspondence, and failure to elicit further information which

was sought concerning additional sites while the known ones were being examined, lead the writer to believe that probably ninety per cent or more of all the "rock writings" in Oregon have been studied. There are some isolated sites referred to in this paper which were not visited. In some cases, as where the site is a series of playa lakes with an area from a half-mile to a mile and a half square, some designs may have been missed; but it may be assumed that the general characters of the designs of such a site have been indicated in those recorded. Even if this estimate is unduly optimistic, there is certainly not the least doubt that an excellent and representative sample has been collected.

To all the people who assisted with the study the author wishes to express his appreciation. The simple and genuine hospitality shown at many an isolated ranch house, the willingness with which a man would drop what he was doing or make arrangements in his work, so that he might guide us to an isolated site or even furnish horses when the distance was too great for walking and no trails were available for a car, are memories of generosity and hospitality which I shall always cherish.

I wish also to acknowledge various grants-in-aid from the Social Science Research Council of the University of Oregon and a grant-in-aid of \$100 from the National Research Council of Washington, D. C., in December 1931 for miscellaneous field equipment, mostly photographic materials. Stanford University joined in financing the survey of 1934, and the Simmons Company, Ford dealers, Eugene, Oregon, furnished transportation, enabling us to secure records in the Guano Valley region. Miss Frances Helfrich working under a FERA assignment made the drawings, and Mr. Fred Hoffstead under the same kind of grant made the maps and carried out the classifications under the author's direction. The map which shows roughly the major physiographic features of the state was drawn by Mr. Harry McCallum. The chemical analysis of the red pigment was made by Mr. Howard Stafford. Dr. Julian B. Stewart, Dr. Melville Jacobs, and Dr. Leslie Spier read the manuscript and made various suggestions for improving the original draft. Whatever smoothness of style the monograph may possess is largely due to careful editing by Mr. George N. Belknap, University Editor. But responsibility for opinions, unless otherwise indicated, rests entirely with the writer.

The following people provided photographs for use in connection with this study: Judge Robert Sawyer and Mr. Phil Brogan, both of Bend, Oregon; Mr. Victor W. Johnson and Mrs. Anne Neilon of Lakeview, Mrs. J. O. Darr of Diamond (photographs on the "P" Ranch); and Mrs. Walter Perry (photographs at Watson and Hole-in-the-Ground); Mr. J. D. Howard of Klamath Falls (prints of some of the Picture Pass petroglyphs). Mr. R. A. Booth of Eugene, Mr. Laurence E. Spraker of Condon, and Mr. Merle Jacobs of Adel gave valuable assistance. To the many other individuals whose help made possible the accomplishment of this work, I wish to make grateful acknowledgement. Finally, my wife shares responsibility for the completion of the task by assisting in a multitude of ways; and to her I acknowledge my indebtedness.

Petroglyphs of Oregon

INTRODUCTION

Few things in aboriginal American life have so intrigued popular fancy as the so-called "rock writings" which are to be found in some form throughout the length and breadth of the western hemisphere. With few exceptions living Indians deny knowledge of their meaning. Eager amateurs in the Pacific Northwest and elsewhere have suggested all kinds of absurdities to explain their significance; but too little scientific attention has been devoted to them.

The prehistoric art of the Old World, depicted on cliffs and on the walls of caves, has long been a subject of scientific interest and has attracted the attention of many distinguished scholars. In the New World there is the work of Mallery on the general subject,¹ Steward's monograph on the southwestern states,² and scattered papers in learned journals, monographs, and semi-popular periodicals.

But, before there can be any hope of interpretation of the petroglyphs in a general sense as a phase of culture or for particular meaning, we must face the task of establishing an accurate record of their distribution both in extent and by types. The present monograph is devoted to filling the gap in our record between the southern boundary of Oregon, the northern limit of Steward's study, and the Columbia River. It is primarily a study in distribution. Since there are few petroglyphs on the south bank of the Columbia in Oregon and since these have been more or less adequately described,³ our work was directed toward those in the rest of the state. The state lines were fixed as the limit because state research grants must, as a rule, be spent within the state.

There has been little agreement in the past on the terms to be used in the discussion of this phase of aboriginal culture. As a general rule, in dealing with the palaeolithic art, the problem of differentiating between a design applied to the wall of a cave or a cliff by means of pigment or by means of incised lines does not occur. The latter type of design is usually though not always found on small objects such as antlers, pieces of ivory, or bone—art work which can be classed as art mobilier, in contrast with that which used a fixed surface (*i.e.*, cave wall or roof) as the field to which to apply the design. In aboriginal American decoration there is a large field of art mobilier such as the pottery of the Southwest, crests and masks of the Northwest, lithic carvings from the lower Columbia, and textile and basketry designs.

Textiles may have designs applied by means of paint; different colors may be used in various parts of the warp and woof; or there may be variations in the weave,

¹ Mallery, Garrick, "Pictographs of the American Indians. A Preliminary Paper." *Fourth Annual Report of the Bureau of Ethnology* (1886), pp. 3-256; "Picture-Writing of the American Indians." *Tenth Annual Report of the Bureau of Ethnology* (1893), pp. 5-822.

² Steward, Julian H., "Petroglyphs of California and Adjoining States." *University of California Publications in American Archaeology and Ethnology*, vol. XXIV, no. 2 (1929), pp. 47-238.

³ Strong, W. D., Schenck, W. E., and Steward, J. H., "Archaeology of the Dalles-Deschutes Region." *University of California Publications in American Archaeology and Ethnology*, vol. XXIX, no. 1 (1930).

in which case it is the form of the object which gives rise to the decoration. The same is true for basketry, which is largely the application of a textile art to a different medium. Pottery, wood, ivory, and antlers all permit painting or carving or both as the means of applying a design. In the study of these types of art, the differentiation is not made primarily between those with a painted and with a cut or incised design.

However, in recent years in the study of the aboriginal "rock writings," two types have been distinguished depending upon the technique of applying the designs; painted designs have come to be called "pictographs," and designs cut into the surface of the rock have been called "petroglyphs." The word "petrography" has been used to designate this whole aspect of culture. This is unfortunate because of the definite use and meaning of the word in geology. However, "pictography" would be equally unfortunate, since it has long been used to designate that phase in the history of the development of writing in which the object the illustrator had in mind was shown by representative designs.

Some nomenclature, however, must be used; and, in view of the current acceptance of the words "pictograph" and "petroglyph," we shall use those words in this monograph. A pictograph is any design applied by the medium of pigment, while a petroglyph is any design cut into the rock either in silhouette or as a solid figure. We are forced to use another expression, "combined design," in connection with certain marginal sites where there is a combination of the two media. The term "petroglyph" is used also as a general term to designate the several types of rock designs. We use this nomenclature as the best available at this time for this phase of aboriginal cultures.

If we try to use the word "art" to describe these designs, we immediately plunge ourselves into controversial difficulties. When does a thing such as one of these designs on the rocks become art? There is certainly a wide range of variation in the quality of the different designs. Many are clearly identifiable, while others are simply a series of rambling or involved lines. The fact that the present-day observer can recognize what the aboriginal artist (?) put on the surface of a column of basalt does not mean at all that we understand why he put it there.

The difficulty in applying any name is that a name should accurately describe that to which it is given and clearly set it off from all other objects. Further, any name which tends to give a character to an object about the identity of which there is no agreement is an unhappy choice. Any name, therefore, applied to these designs on the rocks must be either a temporary expedient or else a gesture indicating that we know the true nature of the thing we are writing about and that others will readily recognize it with us.

It is obvious that in many cases the labels applied to design elements in this monograph reflect largely the observer's experience. The use of these names does not indicate in every case that the Indian artist meant to put that type of design on the rock. In the case of naturalistic designs, he undoubtedly meant to make such a record. However, such designs as those we have called rakes, ladders, etc., are probably conventionalized and perhaps symbolic. Certainly a rake was foreign to the Indian's experience; a ladder, used in climbing into a semi-underground house, was known to him. The names used in this study for designs which are not clearly

naturalistic are simply convenient designations. The designs distinguished are defined below :

- ANTELOPE (DEER). Quadruped with forward-projecting horns.
- ARROW. Figure formed by dropping a line from the apex of the angle formed by two short lines.
- BEAR OR HUMAN TRACK. Representation of the footprints of bear or human.
- BIRD TRACK. Short straight line terminating in three diverging lines.
- BISECTED CIRCLE. Circle bisected by a straight line.
- BOWMAN. Human figure with a bow.
- CIRCLE. Representation of a simple circle.
- CIRCLES IN SERIES. Series of circles not joined to one another.
- COG WHEEL. Circle with a series of external projections suggestive of a cog wheel.
- COMPLEX DESIGN. Intricate design which cannot be related to any element of our experience.
- CONCENTRIC CIRCLE. Series of circles one within the other.
- CONNECTED CIRCLES. Circles joined by a connecting line.
- COYOTE. Representation of coyote.
- CRESCENT. Simple crescent-shaped line.
- DIAMOND SERIES. Repeated diamond design, joined at the point of the short axis.
- DOT SERIES. Series of dots in a straight line or in a scattered distribution.
- DOUBLE LOOP. Design made by a bifurcation curved back upon the original straight line of the two parts.
- ELK. Quadruped with multiple-tined antlers.
- FLORAL DESIGN. Representation of some floral element. This may, however, simply be a complex design without the character our name suggests.
- HAND. Anatomically correct representation of hand, probably made by outlining the hand laid against the surface of the rock.
- HORNED HUMAN. Human figure with two projections, from the head suggestive of horns.
- HORNED TOAD. Representation of the horned toad. A stocky creature with the legs curved forward.
- HORSE. Representation of horse.
- HUMAN FIGURE. Representation of human figure.
- HUMAN WITH HEADDRESS. Human figure shown with headdress.
- LADDER. Straight line crossed at right angles by a series of short lines.
- LIZARD. Representation of a lizard.
- MOUNTAIN SHEEP. Quadruped with long recurving horns; a conventionalized figure.
- MOUNTED HUMAN. Human figure on horseback.
- PELT. Design suggestive of the stretched pelt of an animal.
- RAIN SYMBOL. Figure suggestive of rain-symbol design from the Southwest.
- RAKE. Horizontal line with a series of shorter, parallel, perpendicular lines dropped from it.
- RECTANGULAR GRID. Rectangular field cut into smaller rectangles by a series of parallel lines, one set at right angles to the other.
- RIFLEMAN. Human figure with a rifle.
- SAW. Straight line with dependent triangles attached at their bases. The base line is continuous.
- SERIES OF SHORT LINES. Series of short straight lines arranged parallel to one another.
- SHEEP HORNS. Two diverging, recurving lines suggestive of the horns of the mountain sheep.
- SNAKE. Similar to the spiral; but the outer end of the line is enlarged to indicate a head. In one case the snake is indicated in movement and rattles are shown.
- SPIRAL. Curvilinear design starting from a central point, gradually uncoiling in enlarging circles.
- SPOKED WHEEL. Circle divided into segments by a series of radii.
- STAR. Number of short straight lines arranged in pairs which cross each other at right angles in the middle, each line bisecting the right angle formed by the arrangement of another pair.
- SUN DISK. Circle with radiating lines.
- TARGET. Series of concentric circles with a center indicated.
- WAVY OR ZIGZAG LINE. Series of waves or clearly defined angular zigzags.

Perhaps in some places these designs are "hunting magic"—in others only efforts to amuse, the purpose of many an artist in all times—in others representative

forms—in still others, symbolism of a high order. The Zuñi deer, the Southwest rain design, and the zigzag lines in textiles or basketry are studied as art forms of the particular culture in which they are found. The characteristically elongated horse of the Plains paintings, the typical mountain sheep of western rock designs, the concentric circles and zigzag lines cut into and painted on the rocks—these, it would seem, should if possible be studied in the same way as other designs from aboriginal art. Where this has been done, the mystery that has surrounded some of these paintings has disappeared and the part they played in the contemporary culture has been explained.

We feel that the point should be emphasized that we will never understand this phase of Indian life if we treat it as some unique product of the native mind that can be isolated from the culture of which it is a part. To understand it, we must apply to it the scientific canons and methods of the ethnological study of the art of an area—as these canons and methods are applied to the study of the decorated arrow shaft, the Plains warrior's shield, the moccasin, household wares, decorated religious paraphernalia, illustrated records of events, and sculptured facades of temples. However, in the study of petroglyphs, the difficulty in applying these methods is that we are often unable to find a temporal correlation of the petroglyphs with the other cultural products of the area.

In this monograph the materials are first listed and described by sites. The location of each site, its classification as a pictograph or petroglyph site, and the types of design elements are given. The same degree of fullness of description is not used in each case. Where a set of type designs has been once described, economy forbids repetition of words when the general type can be referred to and the site in question can be classified accordingly.

After these detailed descriptions, there are chapters on the distribution of pictographs and petroglyphs and on the distribution of design types, illustrated by maps. Distributions of all designs should be given, but again economy imposes limits. A final short section deals with possibilities of interpretation of the significance of this phase of Indian culture. A separate paper on interpretations is planned for a future date.

No bibliography is given at the end of this study because it is based almost entirely upon field work. When use is made of other studies, reference is made in the text.

PART I. DESCRIPTION OF SITES

SITE 1. GASTON, PETROGLYPH.

"Mr. Albert S. Gatschet reports the discovery of rock etchings near Gaston, Oregon, in 1878, which are said to be near the ancient settlement of the Tuálati (or, Atfálati) Indians, according to the statement of these people. These etchings are about 100 feet above the valley bottom, and occur on six rocks of soft sandstone, projecting from the grassy hillside of Patten's Valley, opposite Darling Smith's farm, and are surrounded with timber on two sides. The distance from Gaston is about 4 miles; from the old Tuálati settlement probably not more than 2½ miles in an air-line.

"This sandstone ledge extends for one-eighth of a mile horizontally along the hillside, upon the projecting portions of which the inscriptions are found. These rocks differ greatly in size, and slant forwards so that the inscribed portions are exposed to the frequent rains of that region.



PICTOGRAPH RED



PICTOGRAPH BLUE GREEN



PICTOGRAPH YELLOW



PICTOGRAPH BLACK



PICTOGRAPH OVER PETROGLYPH



PETROGLYPH



PETROGLYPH

KEY TO FIGURES.

The first rock, or that one nearest the mouth of the cañon, consists of horizontal zigzag lines, and a detached straight line, also horizontal. On another side of the same rock is a series of oblique parallel lines. Some of the most striking characters found upon other exposed portions of the rock appear to be human figures, *i.e.*, circles to which radiating lines are attached, and bearing indications of eyes and mouth, long vertical lines running downward as if to represent the body, and terminating in a bifurcation, as if intended for legs, toes, etc. To the right of one figure is an arm and three-fingered hand (similar to some of the Moki characters), bent downward from the elbow, the humerus extending at a right angle from the body. Horizontal rows of short vertical lines are placed below and between some of the figures, probably numerical marks of some kind.

"Other characters occur of various forms, the most striking being an arrow pointing upward with two horizontal lines drawn across the shaft, vertical lines having short oblique lines attached thereto.

"Mr. Gatschet, furthermore, remarks that the Tuálati attach a trivial story to the origin of these pictures, the substance of which is as follows: The Tillamuk warriors living on the Pacific coast were often at variance with the several Kalapuya tribes. One day, passing through Patten's Valley to invade the country of the Tuálati, they inquired of a passing woman how far they were from their camp. The woman, desirous not to betray her own countrymen, said that they were yet at a distance of one (or two?) days' travel. This made them reflect over the intended invasion, and holding a council they preferred to retire. In commemoration of this the inscription with its numeration marks, was incised by the Tuálati."⁴

SITE 2. CASCADIA, PETROGLYPH (FIG. 1)

These petroglyphs are under a rock ledge located on the north side of the south fork of the Santiam River. The ledge forms an undercut cliff 35 to 40 feet long of a probably Pleistocene or pre-Pleistocene river bed. It is now approximately 75 yards from the nearest point of the river,

⁴ Mallery, Garrick, "Pictographs of the North American Indians. A Preliminary Paper," pp. 25-26.

and 40 or 50 feet above the river bed, with an intervening terrace running from the base of the ledge to the present river. The material at the base of the cliff is river-laid silt, eroded material from the top of the ledge, and forest debris. The designs run up from the base of the rock to a height of approximately 6 feet or slightly more at the highest point. They are incised to a depth of about a quarter of an inch and average at the surface about three-eighths of an inch in width. The incision in the rock is in each case V-shaped; *i. e.*, three-eighths of an inch wide at the top and coming to a point at the bottom. None of the petroglyphs has been colored. Many of them have been defaced by the work of vandals. The designs represent a series of wavy lines. There are three designs which suggest bear paws. There is lack of uniformity or conventionalization such as occurs in the Northwest Coast art. But the designs are not particularly realistic.

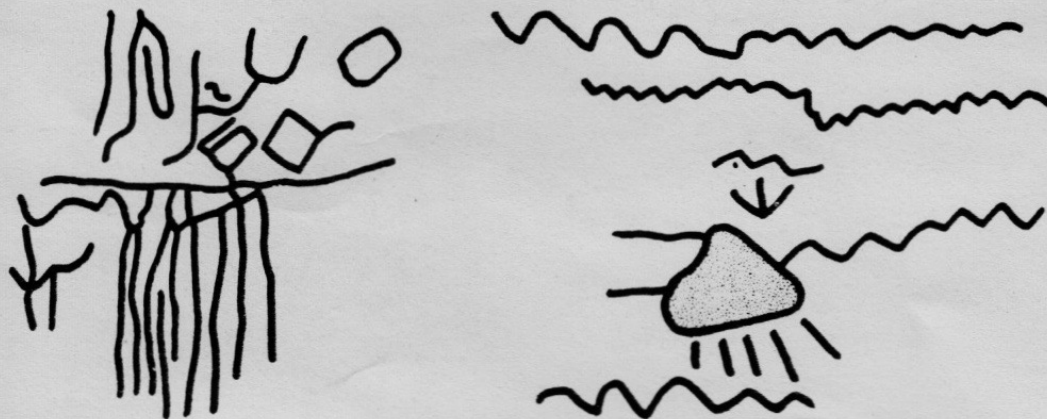


FIG. 1. Site 2, Cascadia.

Two of the smaller designs occur side by side; a larger one appears about halfway toward the eastern end of the rock above the smaller inscriptions. Two other designs, which tend to approximate these drawings, may have been made by vandals; a slightly different type of carving has been used, and the designs are somewhat different. Of the three genuine designs, two have eight claws (?) each, and the third six. Each of the designs that may have been made by vandals have five claws (?).

There is a remote possibility that one design is a rain symbol. We have, however, questioned the identification on our map.

The soil at the base of the cliff had been much disturbed by "relic hunters." One place which seemed to show the least sign of being disturbed was examined for artifacts. A trench about 1 foot wide and 5 feet long was cut through this to a depth of 2 feet for the first half, beginning from the east; very little sign of occupation appeared except scattered bits of charcoal. This soil seemed to have been disturbed earlier. The second half of the trench, however, did not give evidence of a previous disturbance. At the depth of 1 foot the trench revealed a compact charcoal deposit of about 3 inches in depth, with a further depth of about 1 foot of fire-reddened earth. On top of the charcoal were found fragments of obsidian chips, pieces of split bone, and a fairly well-preserved arrowhead. Below the depth of two feet the soil seemed to be undisturbed river-deposited silt. No further excavation was made.

SITE 3. YONCALLA, PETROGLYPH (PLATE I)

Petroglyphs are found on an isolated boulder of Tyee sandstone on a ridge in a grove of small oaks. The rock is about 60 inches wide, 83 inches long, and 48 inches high. The site is approximately 3 miles east of Yoncalla and 300 yards north of the highway.

The designs are applied in a series of horizontal bands across the top on the west end, and in a series of bands running around the north side and west end of the rock. These bands seem

to be separated by a deeply incised line which in some places follows the weathering cracks in the rock. There are some other scattered designs on the top and west end.

The rock is soft and can be easily cut. It is covered with lichen, and the petroglyphs show the same discoloration as the rest of the rock's surface.

The recurrent short vertical lines and V-shaped designs are suggestive of the Tule Lake variety from northeastern California.

The only suggestion of a real design element is on the lower series of marks on the end, where a set of four vertical strokes is divided nearly in half by a transverse line. This group is then caught in a loop, the top of which runs in a nearly straight line across the end of the rock. The loop is at the left end facing the rock. The two sides of the loop plus the vertical strokes and cross bar make a combination of seven. Under the extended lines is a series of seven vertical strokes.

There is a remote possibility that one design is a rain symbol. But we have questioned the identification on the map.

SITE 4. INDIAN CAVES, PICTOGRAPH (PLATE II)

The site is located on Barker Trail, Umpqua National Forest. I am indebted to Judge Robert H. Sawyer of Bend, Mr. J. R. Wharton of Roseburg, and Mr. Thomas H. Burgess, formerly assistant supervisor of the Umpqua National Forest, for different photographs of these pictographs. I have not had the opportunity to examine it in person. The site is not far west of the summit of the Cascades on the headwaters of the north fork of the Umpqua River. Camp sites and a burial ground are reported in this same area. There are also camas meadows. The area can be reached more readily from the country east of the mountains than from the west. The region is in that occupied, according to Spier,⁵ by the southern branch of the Molalla, although this habitat is denied them by others.

The paintings in red are on the face of a large rock which appears to provide an overhang or shelter. Trappers camp here frequently, and the smoke from their fires has smudged many of the designs so that they are not readily decipherable. The photograph reproduced in Plate II was taken after an attempt to outline the designs with chalk. How much of the resulting figures are designs of the native artists and how much designs of the photographer it is difficult to say. One has the feeling from the clean-cut character of the designs, which differ in that respect from practically all those examined in the field, that the designs represent to a considerable extent the photographer's ability in outlining them. The use of chalk gives a rather spurious definition to the design.

The various elements of this decoration are scattered with such profusion about and over one another that the total result is confusion. There are however certain elements which stand out. These are large pelts, horses, a man on a galloping horse, human figures wearing skirts, probably females; the more usual type of human figure and other animal figures also appear. In the upper left-hand corner is something remarkably like an ordinary milk cow. If we do have here a representation of the cow, this might give a clue to the Indians who painted these pictures. Cattle were driven up from California to Vancouver in 1837. These herds were raided by the Indians and some cattle were lost. However, there might have been cattle lost from some of the ships along the coast before that date. Another possibility is that the design might be the result of contact with an immigrant train east of the Cascades.

There remains, of course, the possibility that the figure was not a cow in the original design. Blurred paint sometimes takes strange forms on these rocks; and it is difficult to resist the temptation to improve the forms for a good photograph—with no intent to deceive. The tendency to interpretation is subtle in its workings.

The presence of horsemen in European dress or uniform effectually dates the picture. There is real vitality in the designs; the sense of movement which is so seldom realized by native artists is here achieved with marked success.

⁵ Spier, Leslie, "Tribal Distribution in Southwestern Oregon," *Oregon Historical Quarterly*, vol. XXVII (1927), pp. 358-365.

SITE 5. DEVIL'S LAKE, PICTOGRAPH (FIG. 2)

These paintings are on a fragment of basalt column standing by the Century Drive near Devil's Lake. The exposure, roughly northeast, has produced marked weathering.

The designs are painted in red. A photograph of this site was provided by Mr. Phil Brogan of Bend. We did not visit the site. Preservation is good in spite of the weathering.

SITE 6. TUMALO CREEK TRAIL, PICTOGRAPH (FIG. 3)

About 20 miles west of Bend in the wooded Cascades, at an altitude of roughly 5,500 feet, is a small lake (now dry). At one time the outlet was closed by a beaver dam, so that there was a body of water about one-half mile long and something less in width. Approximately one-half mile from the beaver dam, down the trail which lies near the bottom of the ravine on the east side, there are two large boulders which have rolled down from the cliff which tops the east side of the ravine. One of these boulders is broken in such a manner that the end toward the trail leans forwards beyond the vertical, forming an overhang or protected surface. The pictographs are on this protected end of the rock. They are painted in red.

There are two sets of designs one above the other. In each case there is a tripod with out-and-downward curved arms, and to the right a straight horizontal line somewhat longer than the vertical figure. The upper design is the simpler. Under each of the arms or branches is a circle. Below the circle on the left are four straight horizontal lines. The same series appears on the right, but the bottom line is extended into the long horizontal line mentioned above. This line gives the impression of pointing toward the vertical figure.

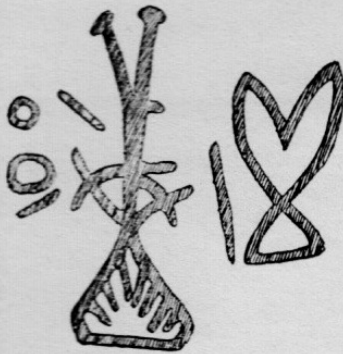


FIG. 2. Site 5, Devil's Lake.

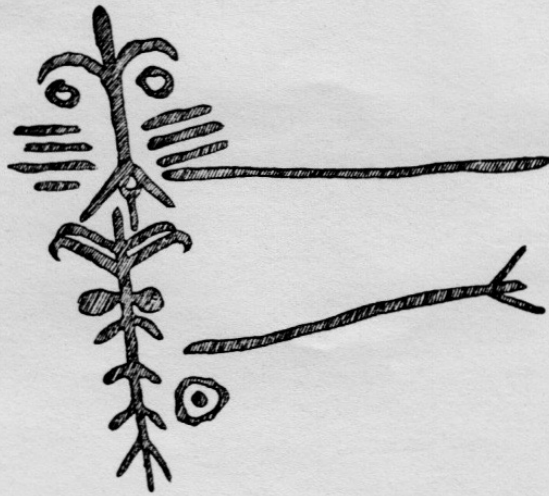


FIG. 3. Site 6, Tumalo Creek Trail.

The lower vertical figure has, above the three legs, three evenly spaced short lines (about the size of the legs) inclining at an angle of between 40° and 45° below the horizontal. Above these lines on each side, projecting at an angle, are two oval patterns attached to the central stem by short lines. Above these, two sets of arms branch off at an angle of about 35° to 40° above the horizontal with slight pendulous tips. As in the case of the upper design, the stem projects just above the height of the branches. On the right side, between the second and third side lines, there is a long line drawn with a slight downward slant toward the vertical design. This, as in the upper design, is slightly longer than the vertical figure. But, unlike the upper design, the end away from the vertical figure terminates in a bisected V. Under the end of the horizontal line, close to the vertical figure there is a circle with a central dot. One has the very definite impression that this is a trail marker pointing to something represented by the upright designs; we had the impression immediately that camas meadows were indicated.

SITE 7. TUMALO, PICTOGRAPH (FIG. 4)

The Deschutes River has cut its way through a lava flow at this point and an old terrace of the river stretches west from the present gorge to a low exposed rim. The pictographs are on a boulder detached from this rim about one-half mile south of Tumalo and 50 yards west of



FIG. 4. Site 7, Tumalo.

the highway. A juniper about 10 inches in diameter has grown against the rock since it was lodged there. But the juniper has not in any way affected the pictographs, and hence cannot be used for dating. The painted surface is protected from the full effects of weathering because of its general eastern exposure and the juniper cover. The boulder shows signs of marked weathering; the edges and cracked surfaces are becoming rounded. In one place a picture was painted over a crack, while in another the crack appears to be subsequent to the painting. Some of the designs are fairly clear, while others are badly weathered. One gets the impression of great age, in view of the sheltered surface and the general badly weathered condition of the pictographs.

The designs are painted in the usual red. There are pelts, human figures, a masked human (?) or one in ceremonial costume, a figure that is possibly a fish, a rake (it is curved instead of straight across the base), and a vertical shaft with two cross bars, one near each end.

The pelt designs are strikingly like those from Indian Cave (Site 4). If they are to be identified with the Indian Cave series, and if that series is to be considered as a whole applied to the rock over a relatively few years, no great age can be attached to either site, because of the horse design on the Indian Cave rock.

SITE 8. WHITE ROCK RANCH, PICTOGRAPH

This site is on the Deschutes River, 4 miles northeast of Tumalo, in Wildcat Canyon. The river has been deflected out of the canyon, and has cut into the basalt, making a U-shaped curve to the east through deep strata of tuff and agglomeratic material, then swinging back again after about 300 yards to the original gorge. On the lowest stratum of the bluff just above the slope there is a series of pictographs. This site was examined through field glasses from across the river. It was impossible to approach closer except by swimming; and, because of the lateness of the hour when we visited this locality, we could not take the time for this.

The only design observable was a red circle with a red dot in the center. Our informant indicated that there were few designs at this site.

SITE 9. DRY RIVER GORGE, PICTOGRAPH (FIG. 5)

This site is about 25 miles east of Bend, and in the gorge 75 yards east of the junction of the Bend-Fort Rock roads. The gorge runs in a line N 60° W at this point. It is probably dry except for a time when the spring freshet is draining. The basalt is roughly columnar and an overhang has been formed by the breaking out of the columns at the base. There are several flows of lava, and the pseudo-bedding provided the footing for the artist to reach the upper part of the rock. There is a small sandy beach about 8 feet above the bottom of the gorge directly against the base of the rock. This was undoubtedly a camp site.

Pictographs cover a surface 25.5 feet long by 12 to 13 feet in height. They are painted in red with the exception of the highest, which has a yellow center in a circle. There are rectilinear and curvilinear designs, as well as animal figures. Among the latter is a small horse about 4 inches long and 2 inches high, at the extreme right (not in the figure). The horse does not show as much weathering as some other designs. Other animal figures are the mountain

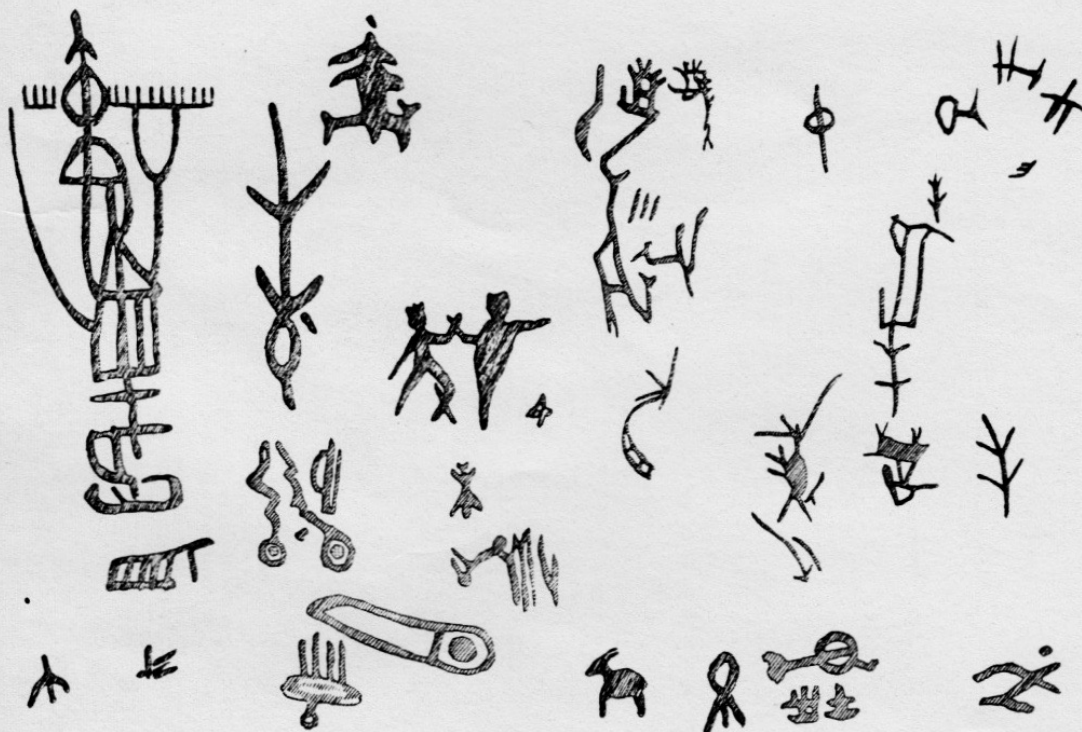


FIG. 5. Site 9, Dry River Gorge.

sheep and the lizard, a small creature which darts about the rocks and sagebrush of this arid country. At an earlier date Judge Robert H. Sawyer and Mr. Phil Brogan, both of Bend, excavated to a depth of 3 feet at the base of the rock; at 12 inches they found obsidian flakes. Charcoal, animal bones, and flakes continued to the bottom of the excavation.

In addition to the animal designs, there are wavy lines terminating in circles with a dot in the center, series of short vertical lines, grids, concentric circles, circles in series, circles connected by a bisecting line, and human figures.

SITE 10. CROOKED RIVER GORGE, PICTOGRAPH (FIGS. 6 AND 7)

About five miles down from High Bridge at the Dalles-California Highway crossing, the Crooked River has cut a narrow gorge about 900 feet deep through successive flows of lava. The river carries little water in the summer. A cattle trail wanders back and forth along the precipitous side down to the river. The pictographs are on both sides of the river on the face of columns of basalt exposed by the fallen boulders. To reach them one must stand on the boulders.

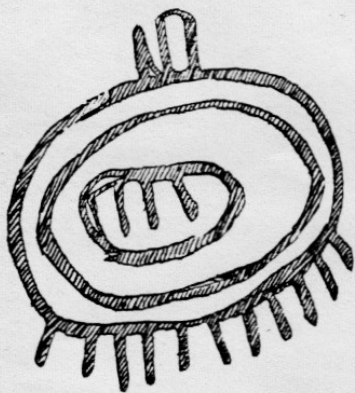


FIG. 6. Site 10, Crooked River Gorge. (White)

All the designs are in red, with one exception which is in white. The badly faded white pictograph is shown in Fig. 6, and has been listed as a possible rain design. It consists of three concentric circles with three vertical lines, within the inner circle. Projecting from the top of the outside circle are three vertical lines and eleven lines about the same length project somewhat fanwise from the bottom of the outside circle.

One pictograph in red is an especially intriguing one (Fig. 7). It is a design composed of roughly rectangular spaces with an upper border of irregularly but cleverly outlined surfaces which fit into the general pattern of straight-line design. The design is divided into three horizontal fields by cross lines or lines and dots. The upper border of irregularly outlined "patches" takes up about one-fourth of the entire space. This is divided from the second band by a solid line running from the left just over half way beyond

the middle and by a series of twenty short vertical dashes for the rest of the way. The second band is just less than one-half as wide as the first. It is divided from the bottom or third section by a solid transverse line. Six vertical lines fan slightly out and down from this line, dividing the bottom section into five oblong parts. Within each of these, near the top, is a rectangular figure conforming to the line and angle pattern of the design.

The entire design is very successfully tied together, but there is not the least evidence of what it means. Perhaps it was only a piece of decorative design applied to this rather attractive surface. We have classified it as a "complex design" in the absence of anything more definite. Is it an elaborated rectangular grid?

There are some additional scattered designs: a pair of wavy lines, some geometric figures, and some "arrow" designs pointing up (inverted V's with a straight line projecting down from the apex).

Among some of the pictographs on the west side of the river, which here runs sharply to the north, was found a series of seven short vertical incised lines (about 4 inches long). These are probably to be counted a petroglyph; if so, this is the only petroglyph design found in this entire area. It is definitely an erratic element, and so raises the question of its authenticity.

SITE 11. CROOKED RIVER, PICTOGRAPH

This site is slightly up stream from Site 10, on the north side of the river. There are designs which are possibly bird tracks, although they have but two arms, as an inverted V, instead of three. There is a series of short lines and circles. Another figure suggestive of the complex design in Site 10 is found at the extreme right. This consists of two vertical parallelograms of unequal width. The left one is the larger and contains two circles of the same size. One is higher in the design field than the other. A long vertical line is drawn just to the left of the parallelogram but is not connected with it. Roughly parallel with the bottom, at a distance about equal to the width of the left design, there is a straight line running the full width of the parallelogram but not connected with it. In the left section of the parallelogram is a series of eight short vertical lines, and in the right section there are four short vertical lines. Evidently associated with these are twelve short vertical lines dropped from the separate horizontal line. This suggests a counting device and system of totalling.

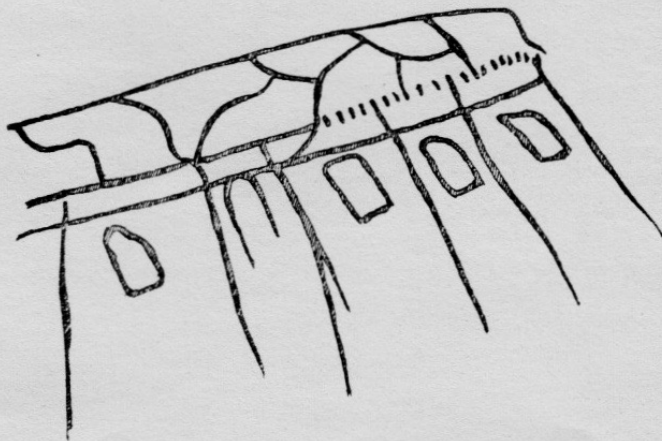


FIG. 7. Site 10, Crooked River Gorge.

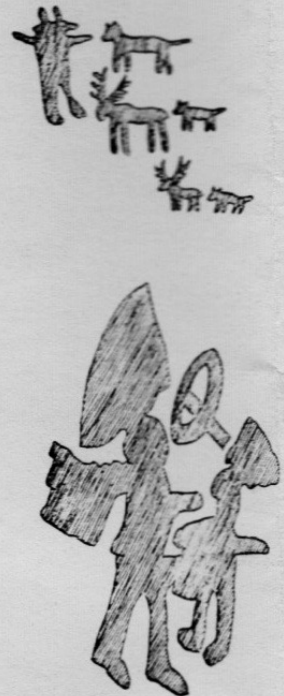


FIG. 8. Site 12, McKay Creek.

SITE 12. MCKAY CREEK, PICTOGRAPH. (FIG. 8)

This site is on the Alex Hinton Ranch, 9 miles north of Prineville. The paintings are on exposed lava above the talus slope. They are in two groups; both groups are efforts at realistic designs. The paintings are well preserved and so placed as to be free from excessive weathering. The first group consists of a number of human and animal designs. There is one masked human figure. The association with animals suggests that the mask is worn as a decoy device. There are two elk, as indicated by their tined antlers; these are pursued by coyotes (?), bushy-tailed animals with open mouths. Another coyote with close mouth is standing apart from the others.

The second group appears on another face of the cliff but close to the first. There are two figures of different height facing each other. Each wears a full headdress and carries a blanket over the right arm. The two figures are joined at the abdomen by a connecting bar of paint. Between the headdresses there is a circle cut by a bar beginning at the left circumference and projecting downward and beyond the right side toward the smaller figure. The position of this circle design suggests that it is related to the larger of the figures, but evidence of its significance is lacking.

SITE 13. POWELL RANCH, PICTOGRAPH (FIG. 9)

This site is 90 miles east of Prineville. A small creek has cut its way through the lava, exposing low rims on either side. The pictographs are on an exposed surface on the south side of the creek. A heavy section of basalt projects horizontally about 12 feet from the rim. It is 7 feet wide and the same distance above the ground, so that one can readily walk under it. On the ground on the north side is a heavy boulder about 5 feet in each dimension; it is probable that the Indian who made the pictograph stood on this boulder to reach the side surface of this projecting rock.

There are two sets of designs, one on the north surface of the overhanging rock and another under it on the vertical surface of the rock wall. There seems to be little difference in weathering; one would judge the designs to be of relatively the same age. This disposes of any theory that the painting on the projecting rock was made before the soil under it had been eroded away.

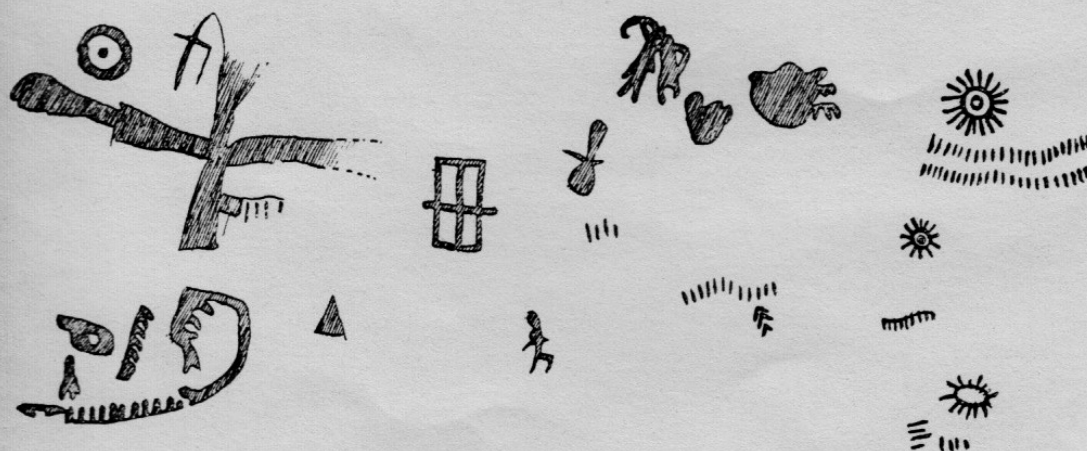


FIG. 9. Site 13, Powell Ranch.

The designs are in the customary red paint. The two sets consist of different elements. Those on the vertical surface are humans with headdress, sundisk, bear or human tracks, and series of short lines. The surface of the overhang shows a target, a rectangular grid, a triangle (perhaps tipi), a complex figure in the shape of a cross. The weathering has obliterated the termination of two arms of the cross, but one (the upper) seems to be bifurcated, with the left border curving back and ending in another cross made by a single line which bends at a right angle on the inner side. The vertical end of the bend runs parallel to and about the same

distance as the main line. The arm which projects downward is broken about midway on the right side (facing the design) by a bar of the same width as that from which it protrudes. This bar runs but a few inches when it changes into a series of short vertical lines. The weathering is so advanced that the continuation of the lines is illegible.

SITE 14. SHEARER'S BRIDGE, PETROGLYPH (FIG. 10)

The site is on the west bank of the Deschutes River. The designs are cut into the rock to a depth of from one-eighth to one-quarter of an inch, while the width varies from one-quarter to one-half inch. The design surface shows but slightly less discoloration from weathering than the rock surface. The rock is columnar basalt.

There is a human figure in headdress and another with a rifle in the act of aiming. There is a spoked wheel, probably sheep's horns, a dot series, a rake, and a face which is strikingly suggestive of the figures on sculptured mortars of the Columbia River in the Dalles-Deschutes region. This site represents undoubtedly an extension of the Columbia River stone-sculpture complex.

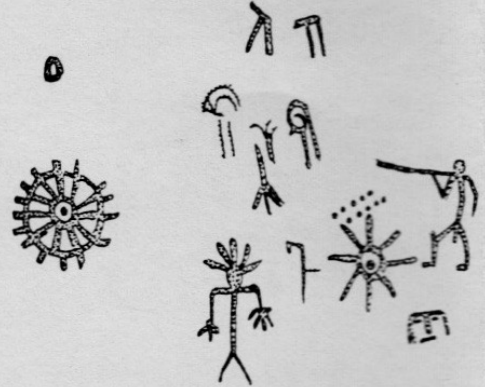


FIG. 10. Site 14. Shearer's Bridge.

SITE 15. FISHER'S RANCH NEAR ANTELOPE, PICTOGRAPH (FIG. 11)

These designs are in red on the narrow surfaces of columnar basalt above a spring from which flows sufficient water to make a small swamp. The designs appear to be modifications of the "ladder;" one is perhaps a human figure executed in this unusual style.

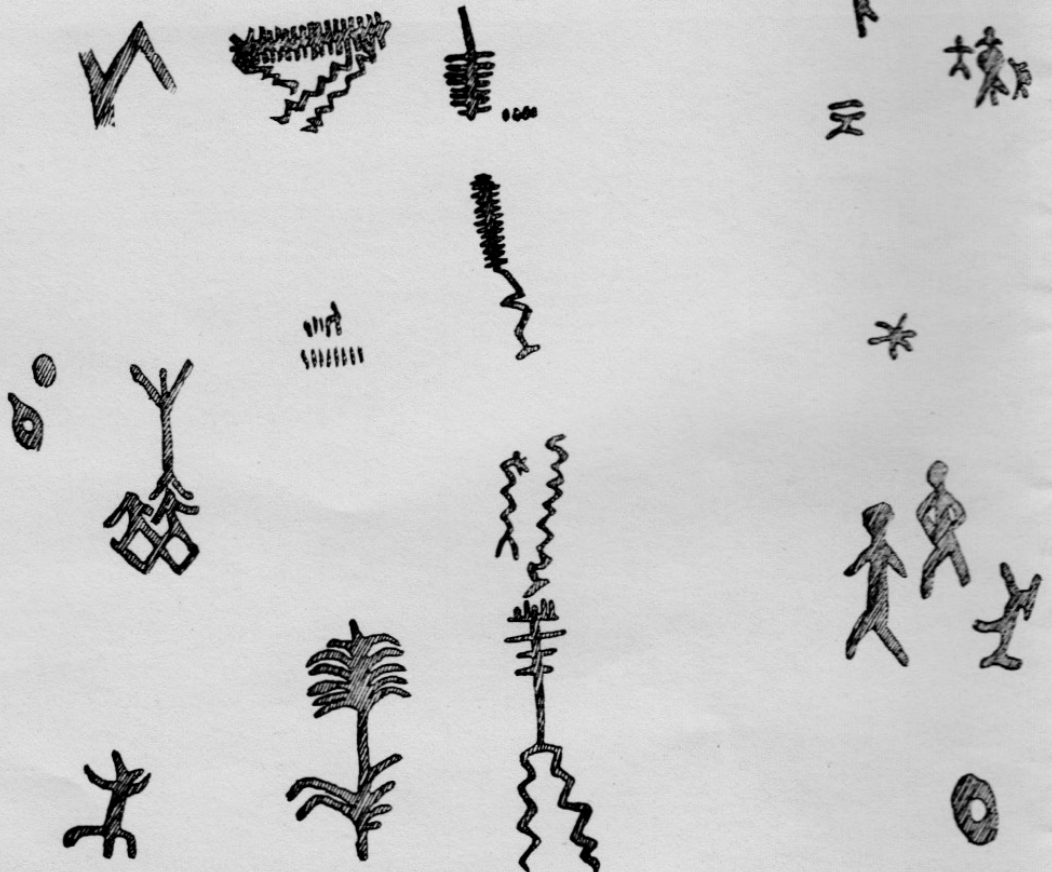


FIG. 11. Site 15, Fisher's Ranch.

FIG. 12. Site 16, King's Canyon.

SITE 16. KING'S CANYON, PICTOGRAPH (FIG. 12)

This site is 5 miles southeast of Antelope, 300 yards up the canyon from the highway. The small group of red pictographs includes both realistic and geometric designs. There are circles, stars, and human figures. The designs do not show any great degree of weathering. They are protected by a slight overhang, but all show desert polish.

SITE 17. CLARNO, PICTOGRAPH (FIG. 13)

This site is about 3 miles south of the bridge over the John Day River. There is a very elaborate series of both geometric and realistic designs on the smooth face of a cliff just above a bench on the east bank of the John Day River. There is a marked difference in the degree of weathering. Some of the designs are well preserved, as though made yesterday, while others are weathered to a mere indistinguishable blur. One would judge that the pictographs have been made at different times, although there is no clear superimposition. The difference in degree of weathering may possibly be due to the type of pigment used and the amount that was applied.

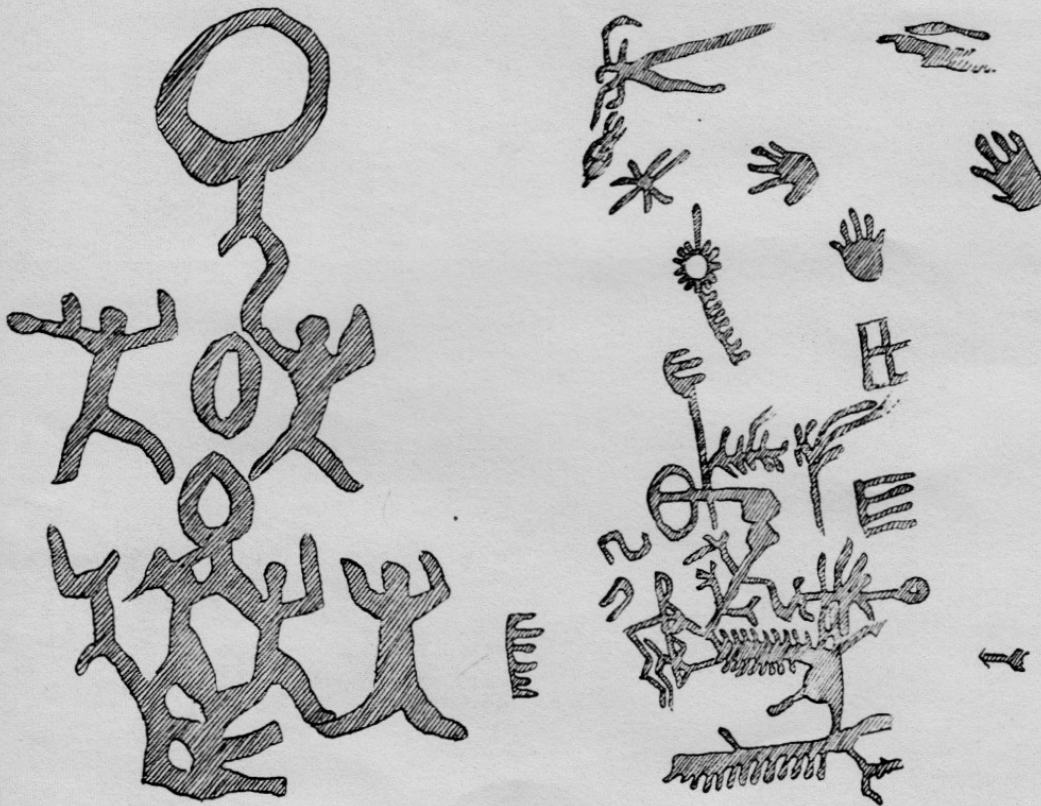
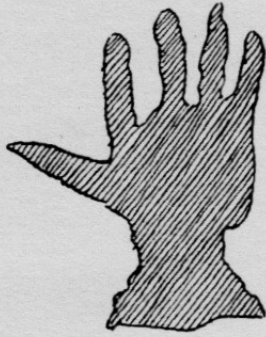


FIG. 13. Site 17, Clarno.

The rock is dense and fine grained, providing an excellent field for pigment. The designs include a human figure, a dance design, a series of very clearly defined hands in natural size, bear or human tracks, rectangular gridirons, lizards, ladders, rakes, floral designs, double loops, circles, stars, and a complex design which could not be separated from the general mass of paintings on the rock. Just to the north about 100 yards is a small cave, too small to stand erect in. On the walls there are a number of very faint designs of human figures, a sun, and a circle.



SITE 18. MIKKALO, PICTOGRAPH (FIG. 14)

This site is about 18 miles up the John Day River from the Columbia, at the base of the rim at the top of the talus slope on the east bank of the river. There is one clear pictograph, a life-sized hand in solid red, which gives the appearance of having been outlined from a real hand and then filled in. The design is similar to those at Site 17 but more clearly defined. There are remains of pictographs close by, but these are now weathered to an illegible blur.

FIG. 14. Site 18, Mikkalo.

SITE 19. LONEROCK (GILLIAM COUNTY), PICTOGRAPH

A rancher reports that there are red paintings in a cave in the Lonerock district. This site was not visited, nor was the writer able to secure a clear description of the paintings.

SITE 20. PICTURE GORGE, PICTOGRAPH (FIG. 15)

There is a small group of designs, geometric for the most part, but including one lizard, on the cliff which forms the west bank of the John Day River just to the east of the highway. The other designs are ladders, crescents, double loops, and circles. These are for the most part quite clear, although some are mere blurs. These designs are covered at certain times by flood waters of the river.



FIG. 15. Site 20, Picture Gorge.

SITE 21. PICTURE GORGE, PICTOGRAPH (FIG. 16)

The designs are on the face of the cliff on the west side of the gorge. They are only a short distance, perhaps 40 feet, from Site 20, but they seem to represent different types of design and have thus been listed separately. There is clear evidence of superimposition, weathered red blurs covered with fresher designs. Some of the older forms are quite illegible, and the mixture of paints of the old and the new renders tracing in many cases quite impossible. One

has the feeling that some of the complicated designs represent the free fancy of the artist as he experimented with his paint on the available rock surface. The designs include concentric circles, human figures, human figures with headdress, ladders, and floral designs.



FIG. 16. Site 21, Picture Gorge.

SITE 22. DAYVILLE, PICTOGRAPH (FIG. 17)

This site is 1 mile east of the iron bridge over the John Day River on the bluff on the north side of the highway. There are a great many figures in this series, in fact the largest number of pictographs seen anywhere in the state. But weather and vandalism have destroyed



FIG. 17. Site 22, Dayville.

many of them, in many cases turning the pigment into a blurred red mass. But some of the designs which are beyond the reach of the ordinary "relic" hunters have not been touched. These were photographed from a position on the rocks at the base. The higher ones were protected from the weather by an overhang.

The design elements are human figures, sun disks, dot series, floral designs, crescents, cog-wheel, and some which could not be identified. One of the human figures is headless. At the extreme right there is a human figure carrying an object, alongside of which is a series of thirteen dots. If this design is a unit it suggests a tally to indicate the number of times the object carried in the hand occurred. Perhaps it is a scalp or some game object, and the dots represent the number of times a scalp was taken or game secured.

SITE 23. HALL RANCH, PICTOGRAPH (FIG. 18)

This site is 3 miles west of Prairie City. Two sets of designs occur at this place, one on the northeast face of a bluff, the other on the southwest side. The bluff is at the end of a beautiful meadow through which flows the John Day River. According to early settlers who were consulted, the area was a favorite hunting ground for the Nez Percé Indians. Ownership was disputed by the Nez Percé and others, and fights occurred for the hunting privileges.

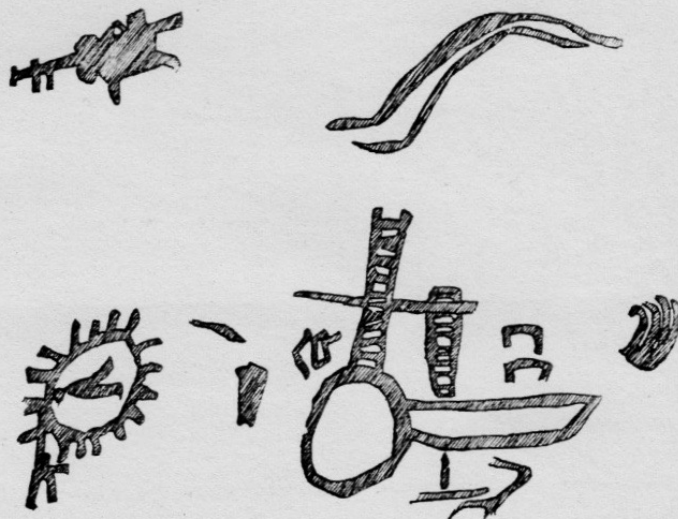


FIG. 18. Site 23, Hall Ranch.

possible that these rather complex designs are some kind of clan marks indicating ownership of this hunting area.

The design elements are the wavy or zigzag line, bear or human track, circle, and a complex design which it is impossible to interpret. Modifications of a cross in the design on the southwest face of the cliff suggest a certain similarity to the design at Site 13 on Powell Ranch. This may be purely chance and may imply no relationship, although the areas are not far apart geographically. It is possible

SITE 24. CHILOQUIN, PICTOGRAPH

This site is on the rim on the north bank of the Williamson River. The pictographs are painted in white, and consist for the most part of geometrical designs, although the horned human figure, concentric circles, wavy or zigzag lines, and circles also appear. These are in the general Klamath area and are a phase of the distinctive colored pigments used in that area, which stretches down into the Modoc country in California.

SITE 25. BIG WOCAS, PICTOGRAPH (FIGS. 19, 19a)

These red and copper blue-green pictographs occur on the western horn of a crescent-shaped rimrock formation about 100 yards east of an old lake bed in the forest. At the base of the rim on the west are the remains of a cremation pit, while along the edge of the forest are the remains of an old village site. Large yellow pines now grow out of the pits where the old houses stood. This site is approximately 30 miles north of Chiloquin. This village is probably Village 3, Gupguaks, on Spier's map of the Klamath villages.⁶

⁶ Spier, *op. cit.*, fig 2, p. 12.

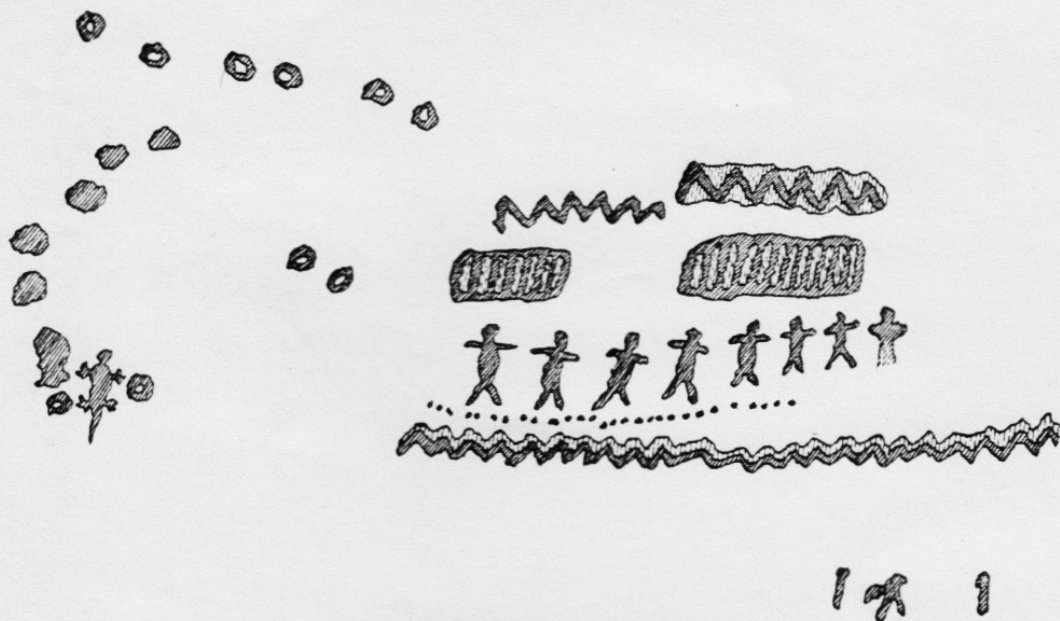


FIG. 19. Site 25, Big Wocas.

The designs are wavy or zigzag lines, human figures, circles in series, rectangular gridiron, bird track, lizard, and circles. The rectangular gridiron is curiously like a conventionalized shield design. The human figures are arranged in an effort at composition representing a dance. The feet of the dancers are spread apart and the arms are held horizontal from the shoulders. Underneath and above the dancers are series of zigzag lines. These lines are unique in that, in order to make the red stand out in relief, the triangular area between each converging pair of zigzags is painted in copper blue-green color. This is the only case in the whole of Oregon where this device of the use of two colors, the one to emphasize the other, has occurred, at least so far as the writer's knowledge goes. A yellow center to a red circle occurs at Site 9, but it does not seem to have the function of throwing the red into relief. The same device is used on a shield (?) or rectangular grid on the west side of the rim (Fig. 19a). The shield (?) is high up and difficult of access. These represent the northern extension of the Modoc-Klamath use of various pigments in the same design.

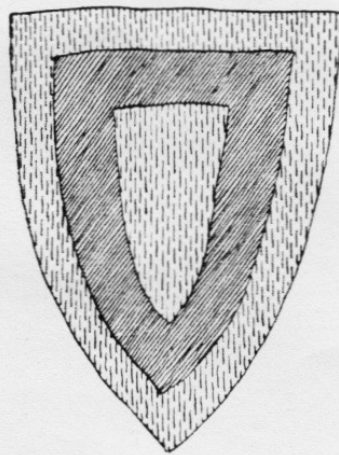


FIG. 19a. Site 25, Big Wocas.

SITE 26. PICTURE PASS, PETROGLYPH (FIGS. 20, 20a)

These petroglyphs occur south of the highway at the summit of the pass between Silver and Summer Lakes, north of the highway at the bottom of the first grade going toward Summer Lake after crossing the summit, and on Squaw Butte some distance to the north of the highway.

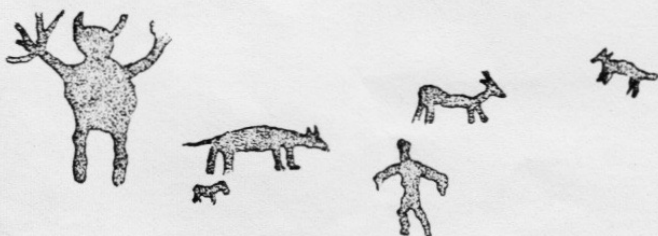


FIG. 20. Site 26, Picture Pass.

The designs consist of human figures, concentric circles, rectangular gridirons, horned human, coyote, horses, and mounted humans, together with various complex designs. There is a great deal of variation in the degree of preservation of the different elements of these designs,

which probably indicates in this case that the elements were cut into the rock at different periods. On the other hand, the depth to which the designs were cut may determine the length of time they persist. The horse designs are not very well executed, especially as compared with those from Site 37 (Fig. 27). I am indebted to Mr. J. D. Howard of Klamath Falls for photographs of the Squaw Butte petroglyphs. His apt comment on the horse designs was "a horse or something."

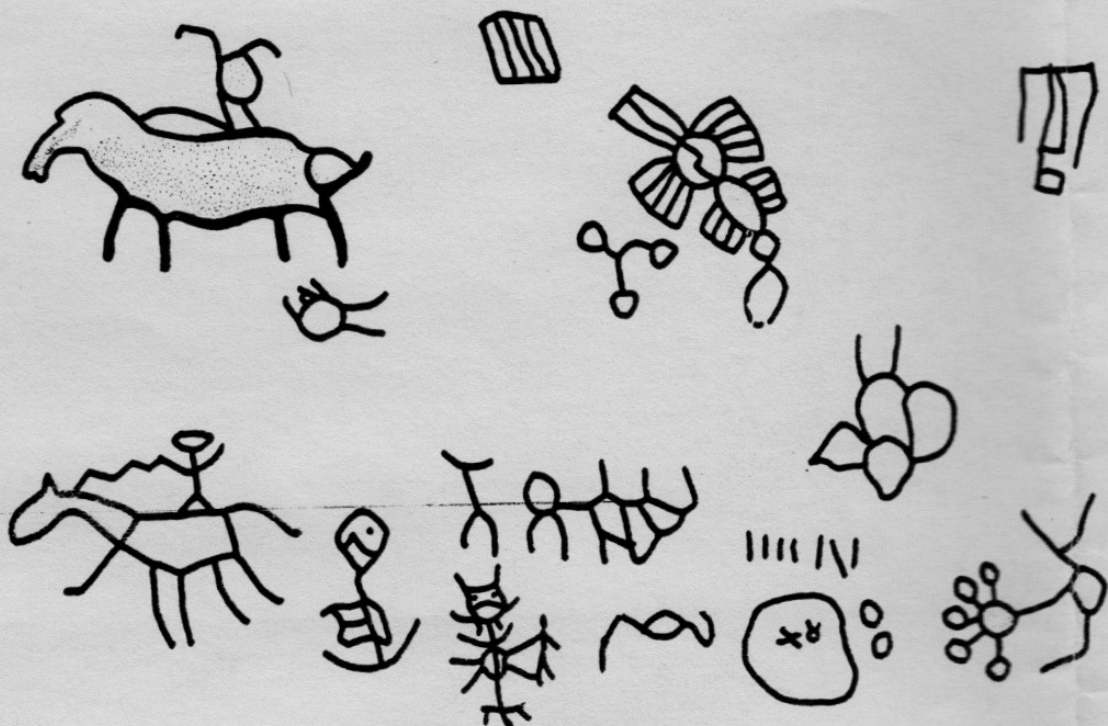


FIG. 20a. Site 26, Picture Pass.

SITE 27. BLY, PETROGLYPH

Designs are reported as concentric circles. In the same area in isolated parts of the mountains pictographs have also been reported, but no clear description of the designs has been secured. The site was not visited, and efforts to secure photographs from persons who knew the location were without success.

SITE 28. YOCOM, PICTOGRAPH

This site was not visited by the writer. No clear description of the designs could be secured, nor was it certain beyond a doubt that they were pictographs. The area is in a very isolated, mountainous region west and slightly south of Lakeview.

SITE 29. WILLOW CREEK, PETROGLYPH AND PICTOGRAPH (FIG. 21)

This site is 6 miles west of Valley Falls. A combined pictograph and petroglyph design occurs on an exposed face of rhyolitic tuff. The design consists of concentric circles and a very large rectangular gridiron, together with double loops. The problem faced in putting a petroglyph design on this material was quite different from the problem of cutting designs in basalt, with its black surface but underlying grey. When he worked with basalt, the artist needed only to cut through the black surface; but here there was no contrasting color to speak of between the surface and the interior, except the slight contrast due to patination. This suggests that the reason for covering the original design with red pigment was to throw the design into relief. The site is, however, in a marginal area and may be simply a case, as in several other instances to be described later, of the overlapping of two techniques in the margin of two different areas.

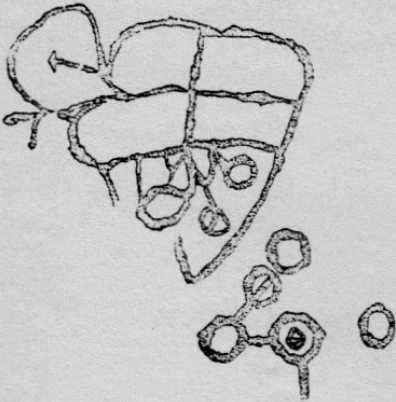


FIG. 21. Site 29, Willow Creek.

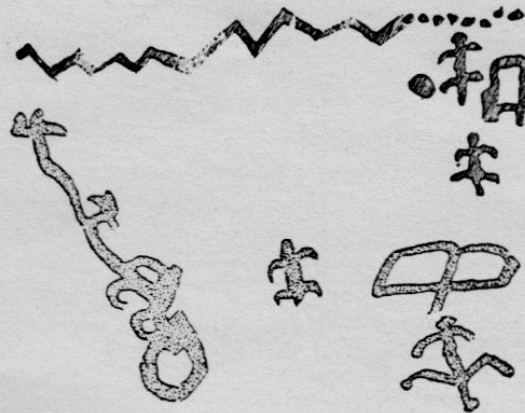


FIG. 22. Site 30, Albert Rim.

The situation is confused by the fact that the original petroglyph design is only partially covered by paint. It may have been entirely covered and partially weathered away, or only partially painted. Therefore we give the possible descriptions and use the petroglyph key in the drawing.

SITE 30. ABERT RIM, PICTOGRAPH AND PETROGLYPH (FIG 22)

Along the east side of Abert Lake and on an old beach line about 80 feet above the present lake, along which runs the Yellowstone Cutoff, appears a series of pictographs, petroglyphs, and combinations of the two. These are all upon loose boulders which have rolled down from the rim. The area is marked by burials, old camp sites, many remains of mortars, and other signs of habitation.

The designs are snakes, lizards, horned toad, double loop, circle, and certain complex designs. The snake is obviously a rattlesnake, since a series of eight rattles is clearly indicated. The snakes and the circles are pictographs. One lizard, unfigured, which we have listed as a combined design, should perhaps be reported as two distinct designs, a petroglyph superimposed on a pictograph from an earlier time.

SITE 31. STONE BRIDGE (AT FOOT OF SOUTH END OF HART MOUNTAIN), PETROGLYPH AND PICTOGRAPH (FIG. 23)

At Stone Bridge, on the loose boulders which have rolled down from the rim above, is one of the richest sites of petroglyphs in Oregon. Hart Lake, which is dry with the exception of a small peat bog, lies just along the line of these boulders. There is evidence of camp sites here. There are some fire-broken stones, and the ground is strewn with chips of obsidian. The majority of the designs are petroglyphs; but two pictographs occur and three petroglyphs in combination with pictographs. The designs are both geometric and realistic and, as the chart shows, cover a wide range of the designs found in the state, including concentric circles, wavy or zigzag lines, human figure, human with headdress, sun disk, snake, lizard, ladder, target, horned human, double loop, circle, mountain sheep, elk, bowmen, and some complex designs.

The petroglyphs show evidence of rather marked difference in weathering, but there is little evidence of superimposition. One of the combined designs shows an interesting technique; a petroglyph is outlined in red. Close to this design, at the left, is a combined petroglyph and pictograph of the usual type—painting over a petroglyph. The technique of the outlined petroglyph reminds one of the two-pigment variety at Big Wocas (Site 25). The design is shown in Fig. 23. This site is a definitely marginal area lying between the Southwest-Basin area of southeastern Oregon and the plateau region of the north and west.

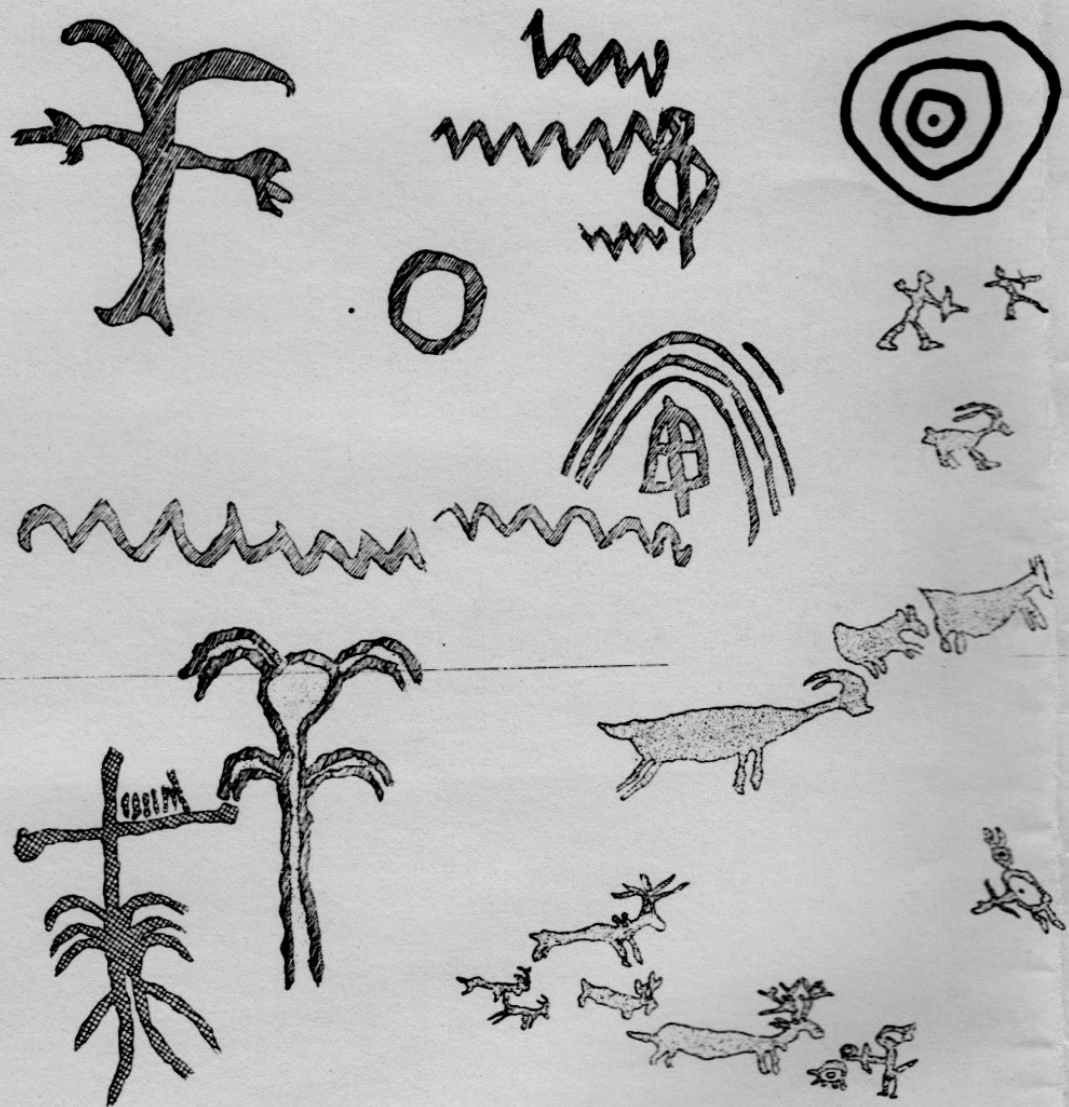


FIG. 23. Site 31, Stone Bridge.

SITE 32. ADEL, PETROGLYPH (FIG. 24)

There are several designs cut into loose boulders between the west shore of Crump Lake and the eastern escarpment of the Warner Mountains. There are wavy and zigzag figures, concentric circles, and circles in series. This is a part of the long series of scattered petroglyphs on loose boulders, which extends the whole length of Warner Valley.

SITE 33. SUCKER CREEK, COMBINED DESIGN (FIG. 25)

This site is about five miles south and east from the lower part of Warner Valley. The designs are a combination of petroglyphs and pictographs. The petroglyphs have been first cut into the rock and then completely painted over with a rather bright red. There are a number of designs which are illegible because of excessive weathering. Others are very clearly distinguishable. The designs are bear or human

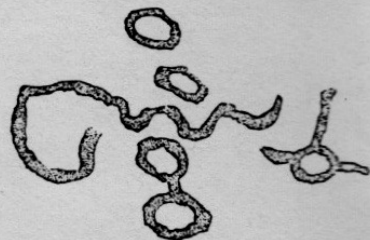


FIG. 24. Site 32, Adel.

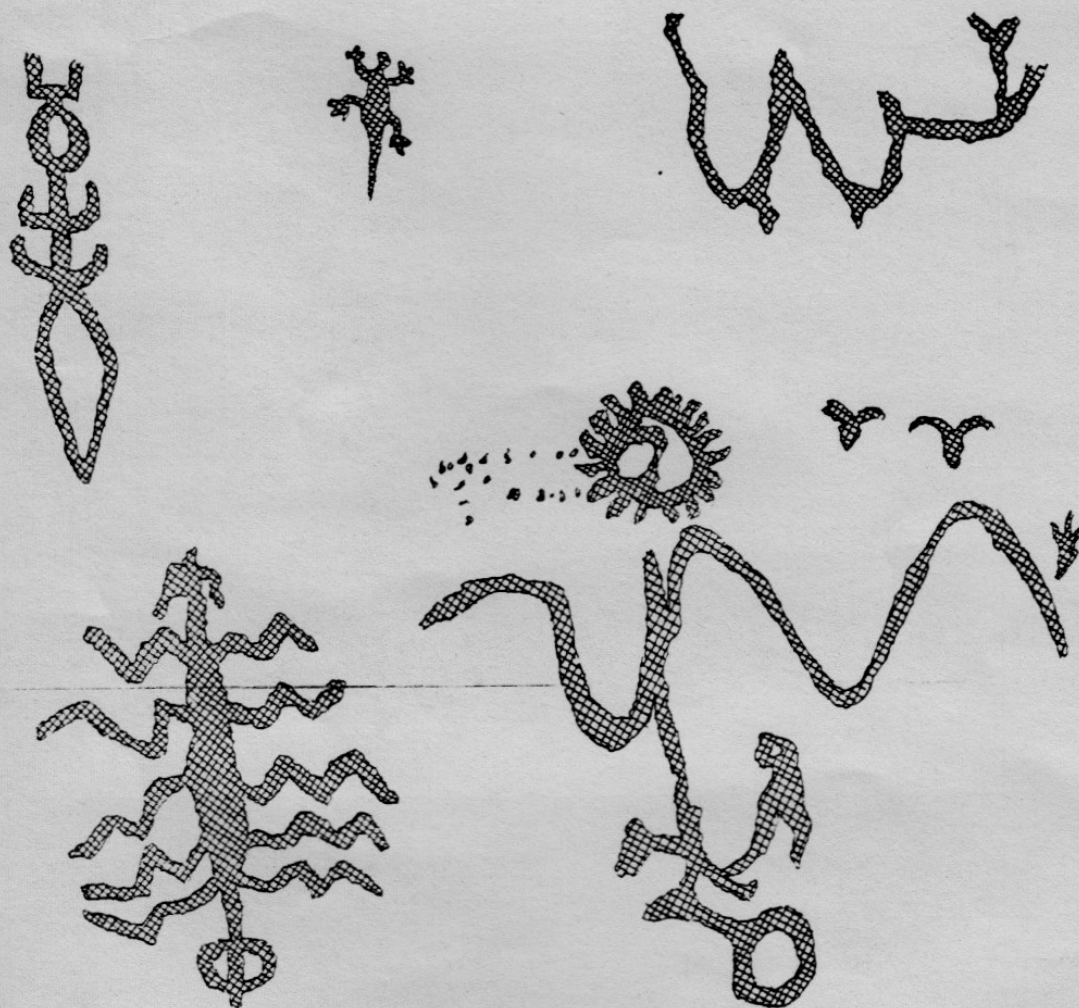


FIG. 25. Site 33. Sucker Creek.

tracks, dot series, sheep horns, lizard, cogwheel, and a complex curvilinear design characteristic of this area. This site, like Site 31, is a sample of the marginal overlaying of the two types.

SITE 34. WARNER VALLEY, PETROGLYPH

There is a complicated design on a single boulder along the west side of the valley. The site is an extension of the line of loose-boulder designs referred to in connection with Site 32 at Adel.

SITE 35. TWELVE MILE CANYON

There is a very blurred design on a loose boulder some 6 to 8 miles up the canyon leading into the southern end of Warner Valley. It is impossible to say what the design originally was, because it is now an illegible blur. It appears to be a pictograph, inasmuch as the surface of the rock appears to have no different texture under the design than elsewhere. However, it may be an old pictograph over a petroglyph; the design may have lost its original rough surface.

SITE 36. LONG LAKE, PETROGLYPH (FIG. 26)

Long Lake is a playa lake, the form of which is indicated by its name, lying between Warner and Guano valleys and south of Guano Creek. This site is part of a high tableland area con-

sisting of a series of parallel rims and lake beds running roughly northwest to southeast. Site 37 is in the same area. Within an area of six square miles, with Long Lake as the southern border, is the richest series of designs of any place studied in Oregon. Long Lake seems evidently the southern limit of an area of occupation in this playa-lake country. Other lakes close by have no petroglyphs, while Long Lake and certain others have them in great profusion. Some of the lakes where there are petroglyphs show evidence of camp sites. At others there are camp sites but no petroglyphs. There is very little evidence of camp sites at Long Lake, although in the northwestern end a number of mullers and a metate were found. The designs at Long Lake evidently extend over a very long period of time. Many of them are on the face of a low rim about 20 feet high, while others are on the surfaces of huge boulders which long ago fell out of the rim. Many of the designs are weathered until they show the same patination as the original surface of the rock into which they were once cut. From the different degrees of discoloration by weathering, it may be concluded that later designs have been superimposed on the oldest designs, and still others on the second series.

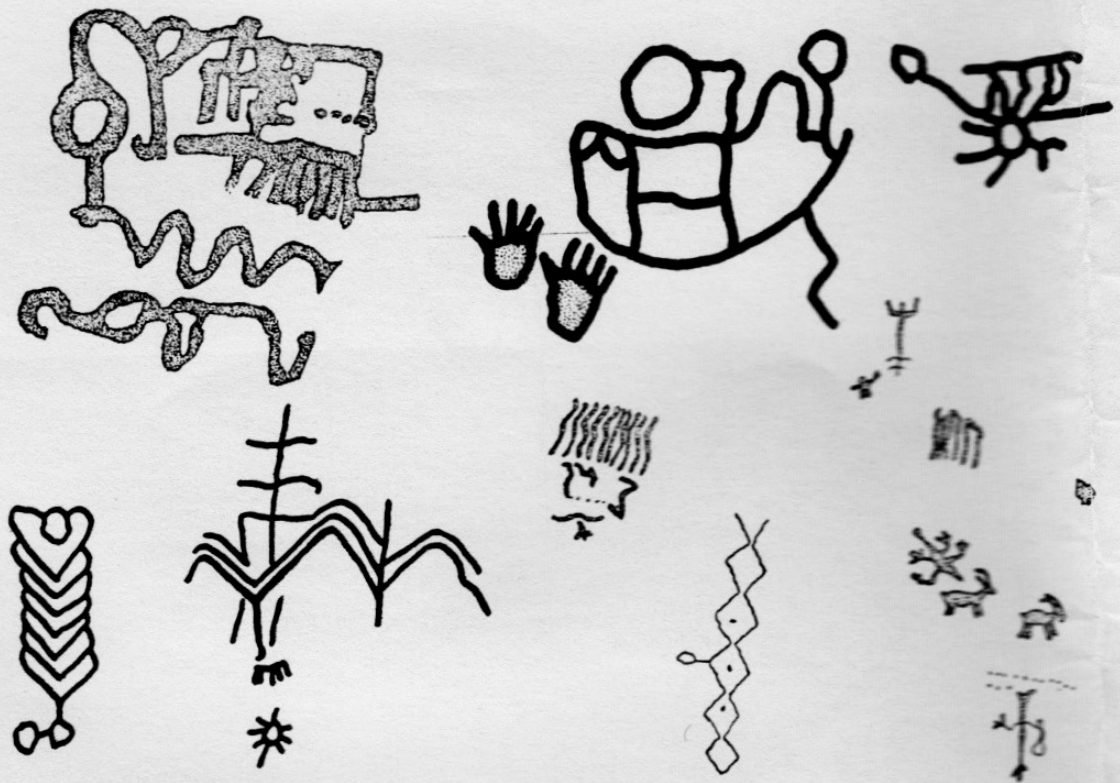


FIG. 26. Site 36, Long Lake.

The designs cover a wide range of subjects, but there is no horse design or anything in this particular series to indicate recency. (Some distance away, perhaps 3 miles, in the series included in the next site, there are horse designs.) The designs at Long Lake include wavy or zigzag lines (probably most numerous), human figure, sun disk, hands, bear or human track, snake, dot series, rectangular gridiron, rain symbol, diamond series, lizard, ladder, horned human, crescent, series of short lines, circle, cogwheel, mountain sheep, and a complex design of a curvilinear variety. There is one specimen of a pictograph over a petroglyph, but this has faded into an indecipherable blur.

One has the impression from this series that it represents the longest sequence of occupation of any studied in the state.

SITE 37. RIMS NORTH OF LONG LAKE, PETROGLYPH (FIG. 27 AND PLATE III)

This site might, perhaps, have been included with Site 36; but it has been separated here because of certain different designs which occur and because of the fact that it is 2 to 3 miles from Long Lake. The site is a series of rims roughly parallel to the Long Lake rim, all on the south side of a series of playa lakes. These lakes have names known only to the natives and are in a country that is not mapped. Most of the smaller lakes have no names even among the natives.

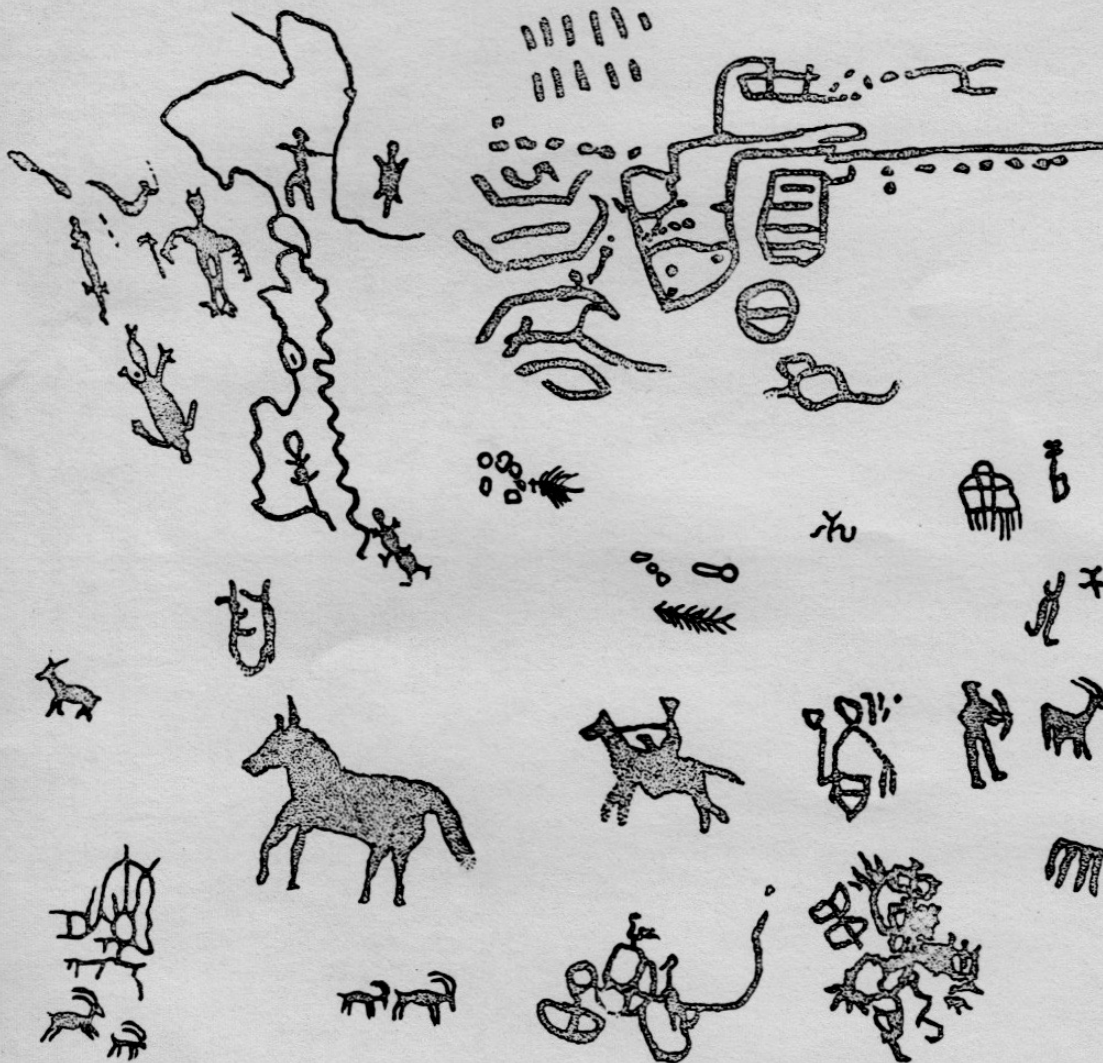


FIG. 27. Site 37, Rims North of Long Lake.

The designs are petroglyphs. The design elements are the wavy or zigzag line, human figure, snake, dot series, connected circles, circle series, bisected circles, rectangular grid-iron, rain symbol, ladder, rake, horned human, series of short lines, double loop, circle, horses, mounted human, mountain sheep, various complex designs, and bowmen. The horse designs appear at a place somewhat separate from the main series; in all likelihood, however, they should be considered a part of the main series. The designs of the horsemen are particularly fine. The sense of movement has been caught to an unusual degree. The horse design is strikingly different from the horse in the pictographic art of the Plains, where the elongated body appears. The proportions in the designs at this site are much closer to nature.

SITE 38. LYON RANCH (HART MOUNTAIN), PETROGLYPH (FIG. 28)

There is but one design here. I am indebted to Mrs. Anne Neilon of Lakeview, Oregon for the photograph of this design. I have not visited the site myself.

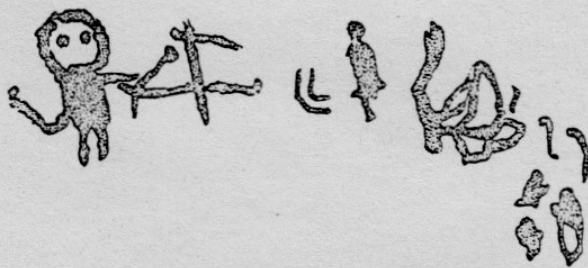


FIG. 28. Site 38, Lyon Ranch.

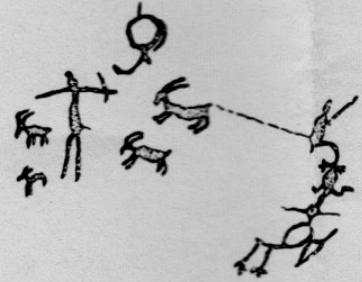


FIG. 29. Site 40, Pot Holes.

SITE 39. DESERT LAKE, PETROGLYPH (PLATE IV)

Desert Lake lies some 8 miles to the north of Long Lake. It is a camp site evidently frequented by large numbers of Indians. A canyon which runs into the south side of the lake was named Waterhole Canyon by our party, because of the plunge pool which provided the only water for the fauna in many square miles of territory. That Waterhole Canyon has been used for camping is clear from the great profusion of obsidian chips lying about, together with implements which were recovered during the archaeological work of the University of Oregon and Stanford University survey in 1934. Petroglyphs occur in this canyon on the east side and at one place on the north rim across the lake.

They consist of wavy and zigzag line, bear or human tracks, mountain sheep, a human figure, double loops, horse, and certain complex designs which we could not decipher. The fire-broken stones and the extensive distribution of obsidian chips show that the west end of Desert Lake was probably occupied for a long time. The surface is an indurated tuff from which all topsoil has been blown away. Test pits sunk at various places within the camp area showed no sign of any human occupation below the surface—a characteristic of every camp site examined throughout this whole area, except certain caves. On the north side of Desert Lake there is a slight beach running the whole length of the lake. At one place on this beach there is a "blowout." This place yielded many arrow points, mullers, metates, together with the usual camp debris. However, petroglyphs appear at only one place on the rim along the north side of the lake. This is a striking example of a long-occupied camp area with an amazingly small number of petroglyphs.

SITE 40. POT HOLES, PETROGLYPH (FIG. 29)

The Pot Holes is the name given by the natives to a canyon some 5 or 6 miles east of Guano Lake, because of certain circular depressions which in a season of reasonable rainfall hold water for a considerable length of time. Along the south wall of this rather shallow canyon there is a series of petroglyphs. Many of these are weathered beyond recognition, but others are fairly clear.

The design elements consist of the human figure, lizard, antelope, circle, complex design, and bowman.

SITE 41. SILVER LAKE (HARNEY COUNTY), PICTOGRAPH (FIG. 30)

A small number of designs are found on the west rim of this playa lake. There is a dot series and a complex design, together with some others which are weathered beyond any chance of reproduction.

SITE 42. SILVER LAKE, PICTOGRAPH

These pictographs occur on a series of loose boulders about 2 miles east of Site 41. There is one very clear saw design and a circle-in-series design.

SITE 43. NARROWS. PICTOGRAPH (FIG. 31)

The pictographs occur on the northern rim of a small, mesalike elevation along what was at one time the Malheur Lake bed. There are wavy or zigzag lines, human figures, circles in series, lizards, and a complex design. Particularly interesting is an attempt at composition. Two warriors are fighting; one has thrust the other through with a spear. This is interesting also from an ethnological point of view. The spear is not known archaeologically here; but it does appear in the Plains after the introduction of the horse, and there is a possibility that we have here evidence of its having been diffused into eastern Oregon. The horse, however, does not appear in this series of designs. It might be a case, of course, of the horseman fighting on foot; or it might conceivably be a case of the existence of the spear before the introduction of the horse. If the horse were involved, one would be inclined to expect it to appear some place in the picture.

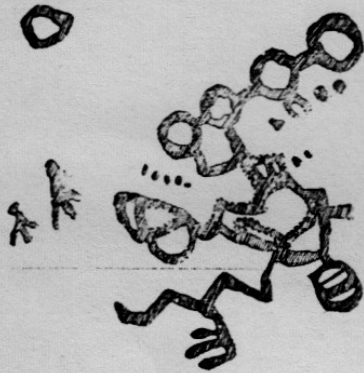


FIG. 30. Site 41, Silver Lake.



FIG. 31. Site 43, Narrows.

These last three sites (Sites 41, 42, 43) represent the southern limit of the purely pictograph area in this part of the state. The sites described below represent the northern boundary of the petroglyph area; along the marginal area there is an overlapping of designs, as one would expect.

SITE 44. BUENA VISTA RANCH, PETROGLYPH (FIG. 32)

Buena Vista Ranch is 42 miles south of Burns. About 100 yards north of the ranch house there is a ridge of rimrock, probably rhyolitic tuff, with a reddish brown surface and a lighter undercolor. The eastern side of this rim has several V-shaped crevices, formed when great boulders fell out. In these crevices the surface is protected from weathering. From the rim one looks out over a vast expanse of meadows stretching away toward the Steens Mountain on the east. The Blitzen River flows through the meadows. It is difficult to conceive of a more impressively beautiful scene on a late afternoon in the early autumn, than that furnished by this landscape of meadows and mountain, with the meadows dotted with thousands of head of grazing cattle. It must, in the aboriginal days, have been a paradise for game.

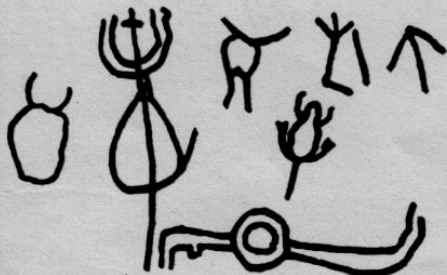


FIG. 32. Site 44, Buena Vista Ranch.

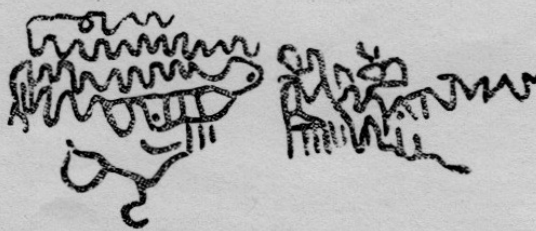


FIG. 33. Site 45, Bull Rock.

In certain of these V-shaped crevices of the rim there are petroglyphs. They have been somewhat defaced by vandalism, and it is impossible to determine accurately which designs were made by the Indians and which were made by whites. Some can obviously be eliminated. There is a date, 1879, together with initials. This date seemed to show a surface no differently weathered than the surface of most of the other designs. However, superimpositions seem to indicate that many of the designs were made at a much earlier date. In reproducing the designs from this site, I have attempted to include only those which are clearly of Indian origin. The designs have been cut into the rock by strokes of a stone rather than pecked in, a technique which occurs most frequently in basalt. This rock is considerably softer than basalt.

The identifiable design elements are human figures, lizard, and horned toads. Other designs can neither be called complex nor identified. One which ordinarily would be identified as a floral design appears to me definitely to have been made by later people than those who made the aboriginal designs. A design, not listed on our chart, suggests a buffalo head. It appears in the left margin of Fig. 32. A similar design appears at the top of the figure; lines projecting from the lower part of the head (?) suggest the beard of a buffalo bull. That there were buffalo in the Harney-Malheur Basin we know not only from the reports of early travelers but also from scattered remains which have been recovered since the drying up of Malheur Lake. The distance of 40 miles up these rich meadows of the Blitzen would be a short journey.

SITE 45. BULL ROCK. COMBINED DESIGN (FIG. 33)

These designs occur on a boulder measuring perhaps 10 feet in each dimension, which has rolled down from the high rim to the west, at a point about 10 miles north of French Glen. Petroglyphs have been cut into the rock and then painted over in red. The designs consist of wavy or zigzag lines, what is perhaps a rain symbol, and a complex design. It is difficult to isolate the different parts of the design because of the fact that the boulder is split four ways by enormous cracks. The design is on the upper quarters; the separation of the design in the middle into two parts may be due simply to the break in the rock at that point. As we go south, Site 45 is the

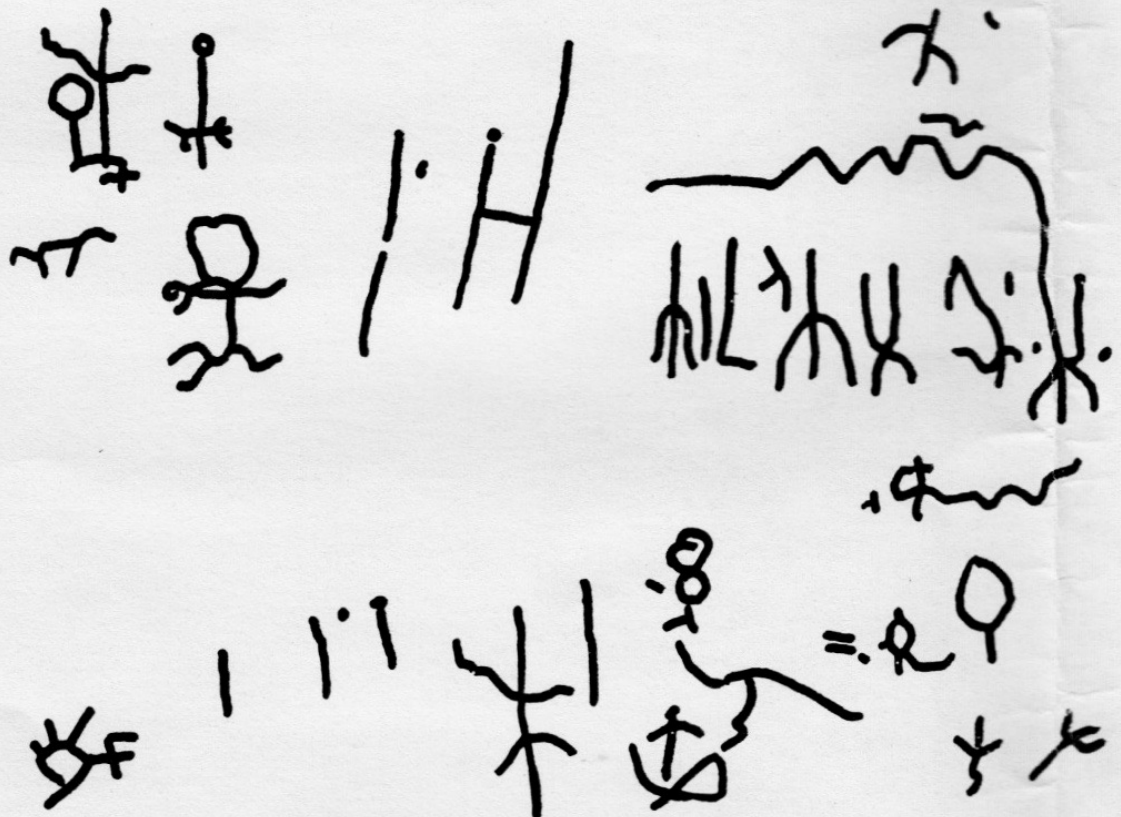


FIG. 34. Site 46, "P" Ranch.

last site at which painted designs occur in this part of southeastern Oregon. All designs further south are petroglyphs.

SITE 46. "P" RANCH (HARNEY COUNTY), PETROGLYPH (FIG. 34)

I did not visit this site. I am indebted to Mrs. J. O. Darr of Diamond and Blitzen for the photographs. Many of the designs appear from the photographs to be on loose boulders which have fallen down from the rim, while others appear to be on a projecting rim. The design elements are wavy or zigzag lines, human figures, snake, circles in series, floral design, and circle.

SITE 47. "P" RANCH, PETROGLYPH (FIG. 35)

Mrs. Darr also kindly provided the photographs of these petroglyphs, which occur in another place on the vast "P" Ranch. The design elements are human figure, lizard, and a series of short lines.

FIG. 48. CATLOW CAVE, PETROGLYPH (PLATE V)

There is one petroglyph on a small boulder in this cave, in the southern part of Catlow Valley in the western escarpment of Steens Mountain. There are no other designs on the rock, although the cave has every evidence of having been occupied for a long time. The design element is a circle.

SITE 49. KRUMBO RIVER, PETROGLYPH AND PICTOGRAPH

A rancher reports that there are designs on the Krumbo River on the western slope of Steens. This site was not visited. The designs included, according to him, both pictographs and petroglyphs. He did not, however, know the nature of the designs. He told me of the painting and cutting technique only after being questioned. The site is somewhat north of Bull Rock and across the valley to the east.

SITE 50. VENATOR, PICTOGRAPH (FIG. 36)

These pictographs occur on a protected section of the rim which forms the north bank of the south fork of Malheur River, at a point about 45 miles east of Burns. The design elements are wavy or zigzag lines, human figures, dot series, connected circles, sheep horns, lizards, horned toad, mountain sheep, saws, and bowmen. The designs on the whole are very well preserved, no doubt in part because of the protected situation.

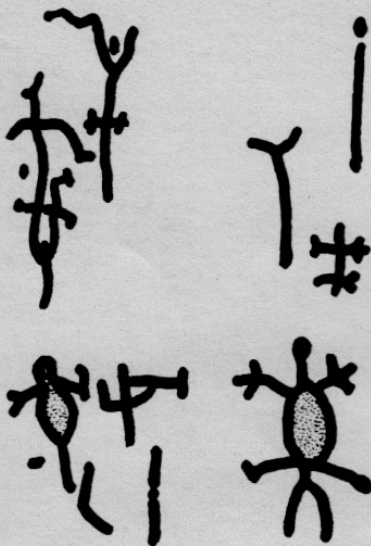


FIG. 35. Site 47, "P" Ranch.



FIG. 36. Site 50, Venator.



FIG. 37. Site 52, Hole-in-the-ground Ranch.

SITE 51. BROGAN (BAKER COUNTY), PICTOGRAPH

This site was not visited, nor was it possible to secure a report of the design elements. The only information I could secure was that the paintings were in red.

SITE 52. HOLE-IN-THE-GROUND RANCH (MALHEUR COUNTY), PETROGLYPH (FIG. 37)

These petroglyphs were photographed by Mrs. Walter Perry of Watson. They occur in an isolated spot about 12 miles south of Watson in the tortuous Owyhee Canyon. The profusion of designs here and at Site 53 reminds one of the richness of the sites at Stone Bridge (Site 31) and in the Long Lake country (Sites 36 and 37).⁷ The design elements here are concentric circles, human figures, human with headdress, sun disk, spiral, dot series, connected circles, circles in series, bisected circle, rectangular gridiron, bird track, rain symbol, ladder, rake, horned human, double loop, saw, circles, and some complex curvilinear designs.

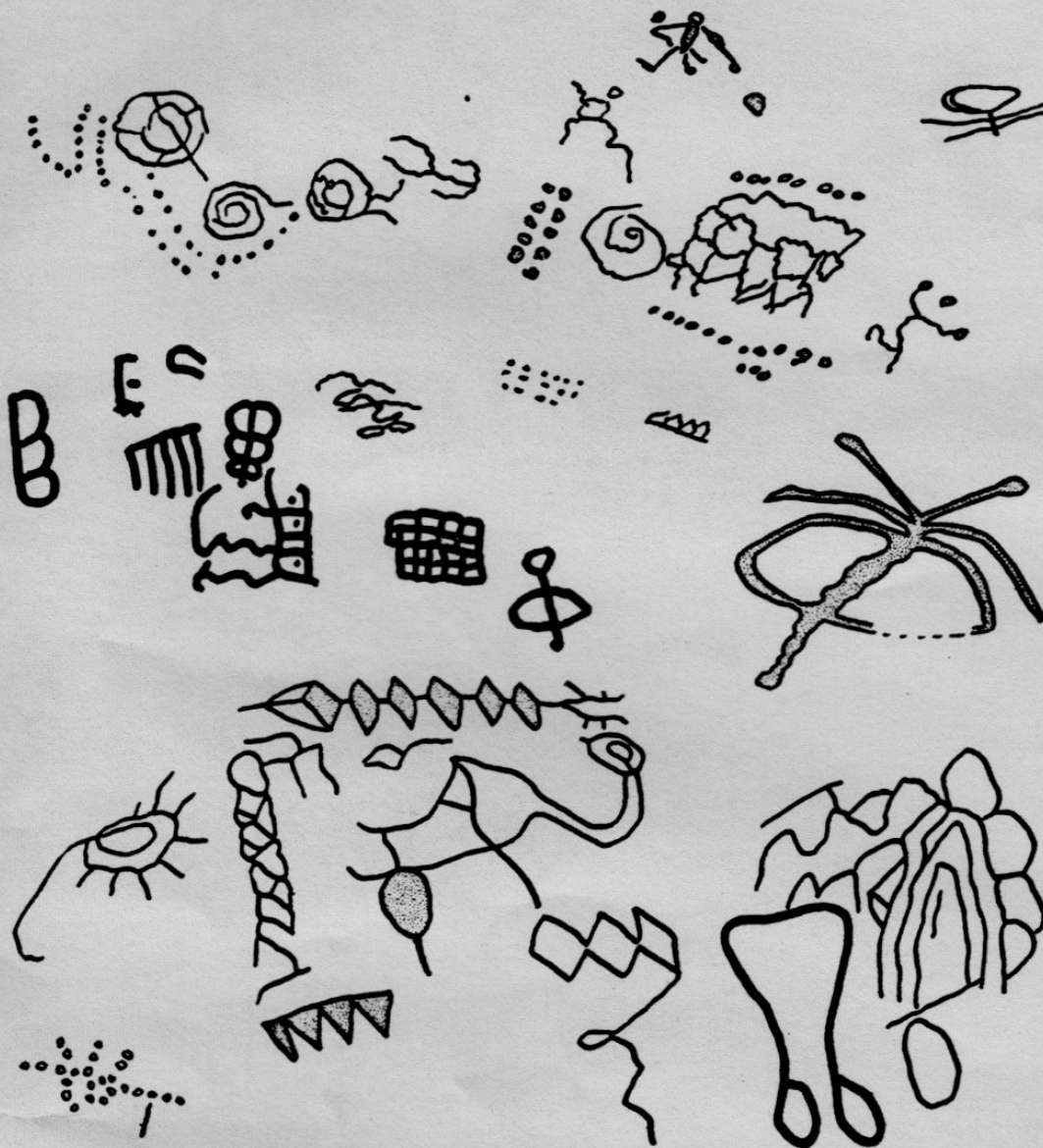


FIG. 38. Site 53, Watson.

⁷ Site 31, 14 design elements; Site 36, 19 elements; Site 37, 20 elements; Site 52, 23 elements; Site 53, 15 elements.

SITE 53. WATSON (MALHEUR COUNTY), PETROGLYPH (FIG. 38)

Photographs of this site were secured by Mrs. Perry. Most of the design elements are similar to those at Site 52, but there are two which are different—diamond series and a series of short lines. There are no humans with headdress, circles in series, bisected circle, bird tracks, rain symbols, and horned humans at this site. Other designs are the same as at Site 52. Sites 52 and 53 should probably be considered a fairly continuous series, as were Sites 36 and 37.

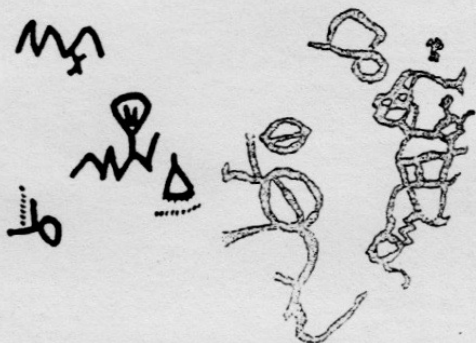


FIG. 39. Site 54, Jordan River near Arock.

SITE 54. JORDAN RIVER NEAR AROCK, PETROGLYPH (FIG. 39)

There is a series of petroglyphs in the canyon of the Jordan River at this point, extending probably over a distance of a mile. They have been broken up here into separate sites (Sites 54-58) according to the concentration of the petroglyphs. The design elements at Site 54 are wavy or zigzag lines, star, and complex designs.

SITE 55. ABOUT 3 MILES WEST OF JORDAN RIVER, PETROGLYPH

Upon some boulders beneath a rim at a point where in good years there is a spring (at the time it was visited in 1932 the spring was dry), there is a series of petroglyphs, many of which are quite illegible. Since they are on the upper top surface of the flat boulders, they are exposed to the sun and action of the wind. The design elements that are sufficiently clear to be outlined for photographing are wavy or zigzag lines, rake, and complex design.

SITE 56. MURPHY RANCH, PETROGLYPH (FIG. 40)

These petroglyphs are about a half mile south of Site 54 in the Jordan River Canyon, and extend over an area of more than half a mile. They appear on large boulders which have fallen down from the rim. The designs are for the most part very legible; they seem to have been made with considerable precision, and to have been cut to some depth. Either they have stood weathering very well or are rather recent. The design elements are concentric circles, human figures, snake, dot series, rain symbol, rake, double loop, circle, cogwheel, and complex curvilinear design.

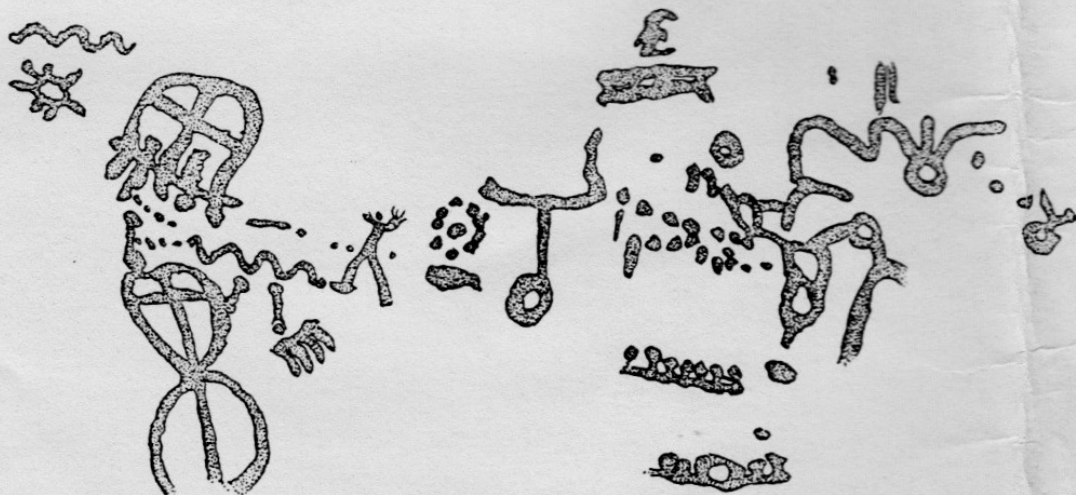


FIG. 40. Site 56, Murphy Ranch.

SITE 57. NORTH OF AROCK. PETROGLYPH
(FIG. 41)

These petroglyphs are on detached boulders five miles north of Arock on the west side of the Jordan River. They contain the following design elements: concentric circles, human figures, cogwheel.



FIG. 41. Site 57, North of Arock.

SITE 58. YTURRIONOBEITIA RANCH, PETROGLYPH
(FIG. 42 AND PLATE VI)

This series of petroglyphs is on detached boulders on the east side of the Jordan River. The design elements are concentric circles, wavy or zigzag lines, human figures, dot series, sheep horns, rain symbols, horned human, double loops, circle, star, complex design. A particularly interesting effort at composition at this site is a dance design. It is done with considerable realism. But the artist recognized also the problem of fitting his design to the decorative field; for he has modified the arrangement to the figures which would have been required by complete realism to make them conform to the general convex shape of the lower surface of the rock.

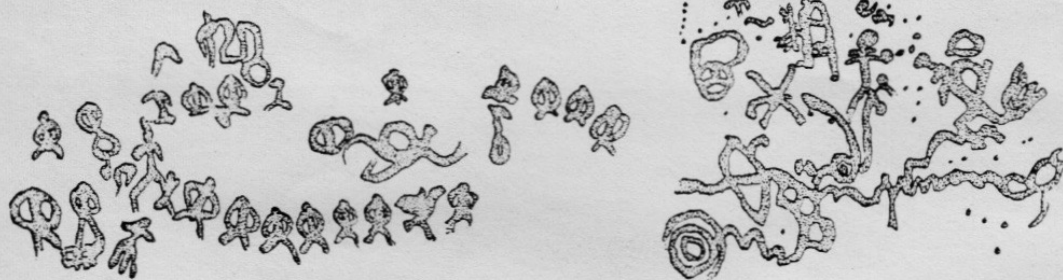


FIG. 42. Site 58, Yturriobeitia Ranch

SITE 59. WILLOW CREEK WEST OF BURNS, PICTOGRAPH (FIG. 43)

I am indebted to Mr. Alec A. Eggleston of Burns, Oregon for drawing all the pictographs at this site and at Site 60. The design elements here are the human figure, sun disk, and antelope or perhaps deer. There are different pigments used in this series of designs. The deer is in red, the sun in yellow, and the human figures in black. My information does not indicate whether these elements appear to be a part of the same design or whether they are somewhat scattered, although in the same general vicinity.

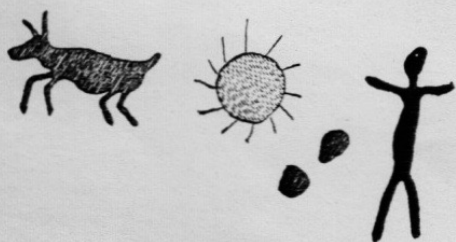


FIG. 43. Site 59, Willow Creek.

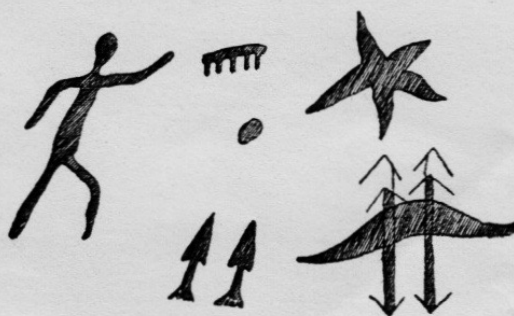


FIG. 44. Site 60, Riddle Ranch.

SITE 60. RIDDLE RANCH (HARNEY COUNTY), PICTOGRAPH (FIG. 44)

The design elements, which are all in red, are human figure, rake, star, and certain complex designs, one of which resembles a bow with two arrows (?) lying across it. The transverse lines are pointed at both ends. Another design which we have not identified consists of two parallel figures, similar to our conventional drawing of an arrow point, with a very short shaft, shorter as a matter of fact than the point; the shaft then spreads until at the end it is about the width of the head. These may be arrows, with the shaft shortened in an economy of effort.

PART II. DISTRIBUTION OF SITES^s

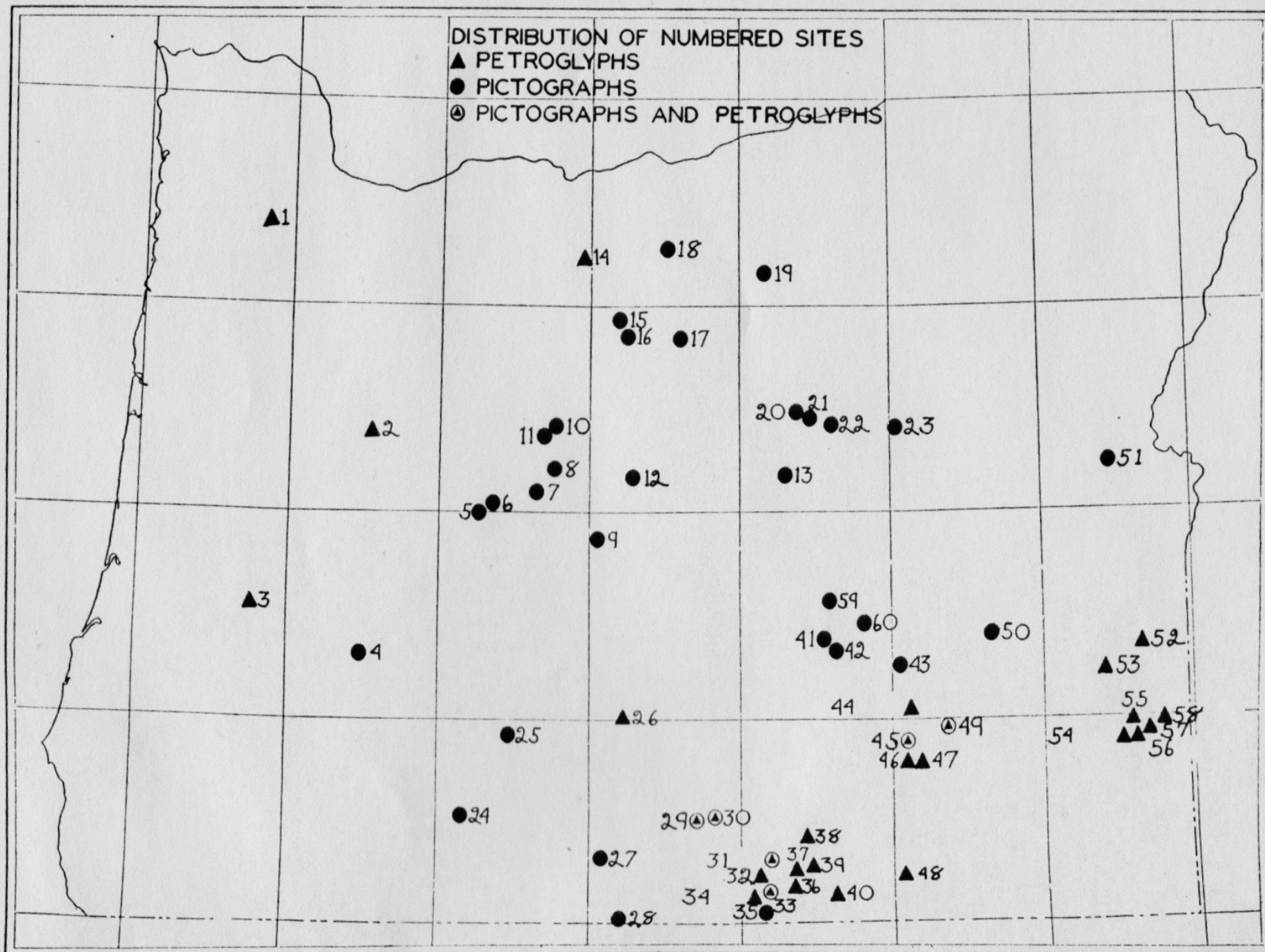
Oregon may be roughly divided into the following physiographic areas: (1) the lower Columbia River area from The Dalles to the sea and up the Willamette to the falls at Oregon City; (2) the Willamette Valley; (3) the coastal plain; (4) the southwestern area which includes the area south of the Umpqua Divide to California, and from well up the drainage of these streams to the sea (except the Coos Bay area and coastal plain some short distance south of Coos Bay); (5) the Cascade Mountains; (6) the north central area of eastern Oregon, from the Harney-Malheur Basin in the east and the upper Deschutes in the west to the Columbia in the north; (7) the Willowa area in the northeast; (8) the Klamath Basin area; and finally (9) the southeastern part of the state, which is the northern limit of the Great Basin-Range Area.

The Willamette Valley extends something over 150 miles south from the Columbia. Its average width is roughly 35 to 40 miles. The valley is bounded by the Cascades on the east, the high hills of the northern Umpqua Divide on the south, and the Coast Range on the west. At one time an arm of the sea, the valley is a great level plain drained by the Willamette River. The lower part of the valley, north from the falls of the Willamette where Oregon City is now located, is practically an extension of the Columbia River area. This area was occupied by Chinook-speaking stock.

The eastern, western, and southern edges of the valley are well wooded, mainly with fir and oak. The heavy tangle of river-bottom growth and the scrub-oak thickets which were in the valley in aboriginal times have long since been cleared out. There are few cliffs or boulders suitable for applying paint or carving except in the Cascade foothills; in this the valley area stands in striking contrast to the eastern part of the state. The marked winter rainfall west of the Cascades causes a heavy forest undergrowth and an extensive growth of lichen. These circumstances may have combined to discourage an art which, in view of the carvings on stone mortars in the lower valley and the lithic industry of the Columbia area, we would expect to have flourished. However, it must be admitted that the dense vegetation of the area would probably conceal "rock writings" from any but accidental discovery. Only three sites have been found in the Willamette Valley; all designs are petroglyphs.

The Cascades, for the most part, did not permit habitation during the winter except on the lower western slopes. This rugged mountain range may be crossed at a number of passes during the summer and by two or three in the winter. Probably the chief use of this area by the aborigines was for hunting, fishing, and berrying in season. On the east slopes, which run gently down to the high plateau of central Oregon, there is much available rock, the rainfall is much less than on the west side, and the forest undergrowth is much less dense.

^s Map 1 shows the general distribution of sites and types. Map 2 shows the location of sites (unnumbered) on a physiographic diagram of the state. This map is not intended to show topographic details, but only to give a rough physiographic frame of reference for an understanding of the distribution of petroglyphs and pictographs. Other maps show the distribution of design elements. By comparing these maps with those in Steward's "Petroglyphs of California and Adjoining States," the reader may see at a glance the distributional relationship between Oregon and the regions to the south.



MAP 1. Distribution of Sites (With Numbers).

The forest cover is mostly yellow pine and jack pine. The Cascade area is well covered by surveys, since it is almost entirely in the National Forest. Yet, there is a striking lack of pictographs or petroglyphs reported. Only one pictograph is recorded from the west side, Site 4 at Indian Cave near the head waters of the north fork of the Umpqua. This is near camas meadows and berry fields; the site is easily reached by a trail from the east side, but approach is difficult from the west. On the east side Sites 5 and 6 are recorded. A pictograph is reported on the west side near Oakridge on a trail across the mountains coming down Salt Creek to the headwaters of the north fork of the Willamette, but I have not verified this. Another, on the east side, is reported by Henry L. Abbot⁹ on the north side of the Metolius River on the south boundary of the Warm Springs Indian Reservation a few miles downstream from the Riggs Ranch. This has not been verified.¹⁰ The forested areas seem to have discouraged the development of this phase of native culture. Perhaps the temporary camping places in the forest were not so conducive to it for some reason as were the more permanent sites in the canyons and gorges.

Most of eastern Oregon except the Willowa country is underlain by a great bed of lava. This is exposed in cliffs and scarps in many places by the action of rivers and faulting. Nothing is more characteristic of this country than the "rims" or exposed lava above the talus slopes. Much of this is columnar basalt, especially in the northern half of the area, and is typical of the Columbia River lava flows. Erosion works upon these columns by causing great blocks to fall out—leaving exposed, smooth, vertical surfaces. Many of these blocks have rolled down the talus slopes to boulder piles at the base. The basalt which has been long exposed to weathering usually has a black polished surface. When one cuts through this 2 or 3 millimeters, a light gray surface is exposed which will give a clear-cut petroglyph in gray. The more recently exposed surfaces are a dark gray; when cut through these also provide a good petroglyph medium. These smooth surfaces also provide an excellent field on which to apply pigment. The slightly rough surface of the basalt tends to hold the paint when it is daubed onto it, especially if the paint is mixed with some pitchy or resinous substance.

With the exception of the Harney-Malheur Basin, the north central part of this area is entirely in the Columbia drainage. The rivers which drain it are the John Day, the Crooked River (which flows northwest into the Deschutes), and the Deschutes. The Harney-Malheur Basin is readily reached by trails from the John Day and from the upper Crooked River by way of Silvies River. All three of these rivers have cut deep gorges into the basalt. In the high tablelands between the rivers there is little vegetation and water is generally scarce. The aboriginal homes were in the canyons of these rivers and their feeders.

In this north central section the orientation of life was toward the Columbia. In private collections made from burials, probably cremation sites, some 50 miles from the Columbia in the high plateau between the Deschutes and John Day rivers, I

⁹ Abbot, Henry L., *Explorations for a Railroad Route, from the Sacramento Valley to the Columbia River*. Vol. VI of *Explorations and Surveys for a Railroad Route from the Mississippi River to the Pacific Ocean, Made Under the Direction of the Secretary of War, in 1854-5*. ("General Report") (1857), p. 94.

¹⁰ Abbot's report uses the word "scratched," which would seem to indicate a petroglyph. But this identification seems doubtful for two reasons. In the first place, there is a general disregard by amateurs, both in early and later reports, of the accurate distinction between painted and cut designs. Secondly, the area is characterized by pictographs; a cut design would be erratic.

have seen highly polished "slave killers" of the Columbia River and coastal variety. There are also numerous carvings in bone similar to those Strong¹¹ and his colleagues recovered from the Dalles-Deschutes region. This whole area is with two exceptions an area of pictographs. There is a petroglyph site on the lower Deschutes at Shearer's Bridge (Site 14). This is undoubtedly Columbia River in origin, and is fairly recent, as the rifleman indicates. At Site 11, in the Crooked River Gorge, there appear to be seven short parallel lines cut into the rock. This may not be a petroglyph, especially since the lines are with pictographs and petroglyphs are erratic in the area. On the other hand, they are difficult if not impossible to explain otherwise. The whole area must be considered a pictograph area. It is the area occupied by the Sahaptin-speaking tribes.

The Klamath Basin centering upon Klamath Lake and Klamath Marsh, which was once probably filled with water, is a strikingly self-sufficient area. In addition to the great lake with its abundant supply of plant and animal life, there is forest to the west and to the east, which supplied game and timber.

The semi-desert areas to the east and north provided little support for a large population; to the east there were small numbers of Paiute who made occasional raids on the Klamath. The mountains to the west around the headwaters of the Rogue were occupied by the Upland Takelma, against whom the Klamath made raids and by whom they were raided from time to time. To the south the Modoc, who were closely allied with the Klamath culturally, were a barrier between the Klamath and the Pit River Indians further south. In this basin, the first of seven faults, the Klamath culture was developed to a rare degree of adequacy and balance in its environmental relationships. The next of these faults is Summer Lake. With the exception of the upper part where Anna Spring provides water, Summer Lake is dry or holds a small amount of alkaline water which is unfit to drink. Other faults, with the exception of part of Warner, either are arid or contain a small amount of undrinkable water. Paiute territory began at Summer Lake, but this is 50 miles at least in a direct line over very difficult country from the centers of Klamath occupation.

In the Klamath area, as in the Modoc in northeastern California, there are both petroglyphs and pictographs. Spier has recorded two pictographs in his "Klamath Ethnography."¹² Only those which are not recorded by him are presented here. A pictograph is reported near Bly (Site 27). There is another on the Williamson River about 6 miles south of the town of Chiloquin (Site 24), and a third about 30 miles north on the east side of Klamath Marsh (Site 25). The pictographs at Site 25 are in different colors, a type of design more characteristic of northeastern California than of Oregon. Other designs were reported to the east in isolated areas, but it was impossible to secure photographs. Both pictographs and petroglyphs occur rather abundantly in this area; here the forest seems not to have discouraged "rock writing."

As we go east from the northern part of the Klamath country, we pass through what is for the most part a semi-desert, and through a region which is known as the

¹¹ Strong, W. D., Schenck, W. E., and Steward, J. H., "Archaeology of the Dalles-Deschutes Region." *University of California Publications in American Archaeology and Ethnology*, vol. XXIX, no. 1 (1930).

¹² Spier, Leslie, "Klamath Ethnography," *University of California Publications in American Archaeology and Ethnology*, vol. XXX (1930), p. 142.

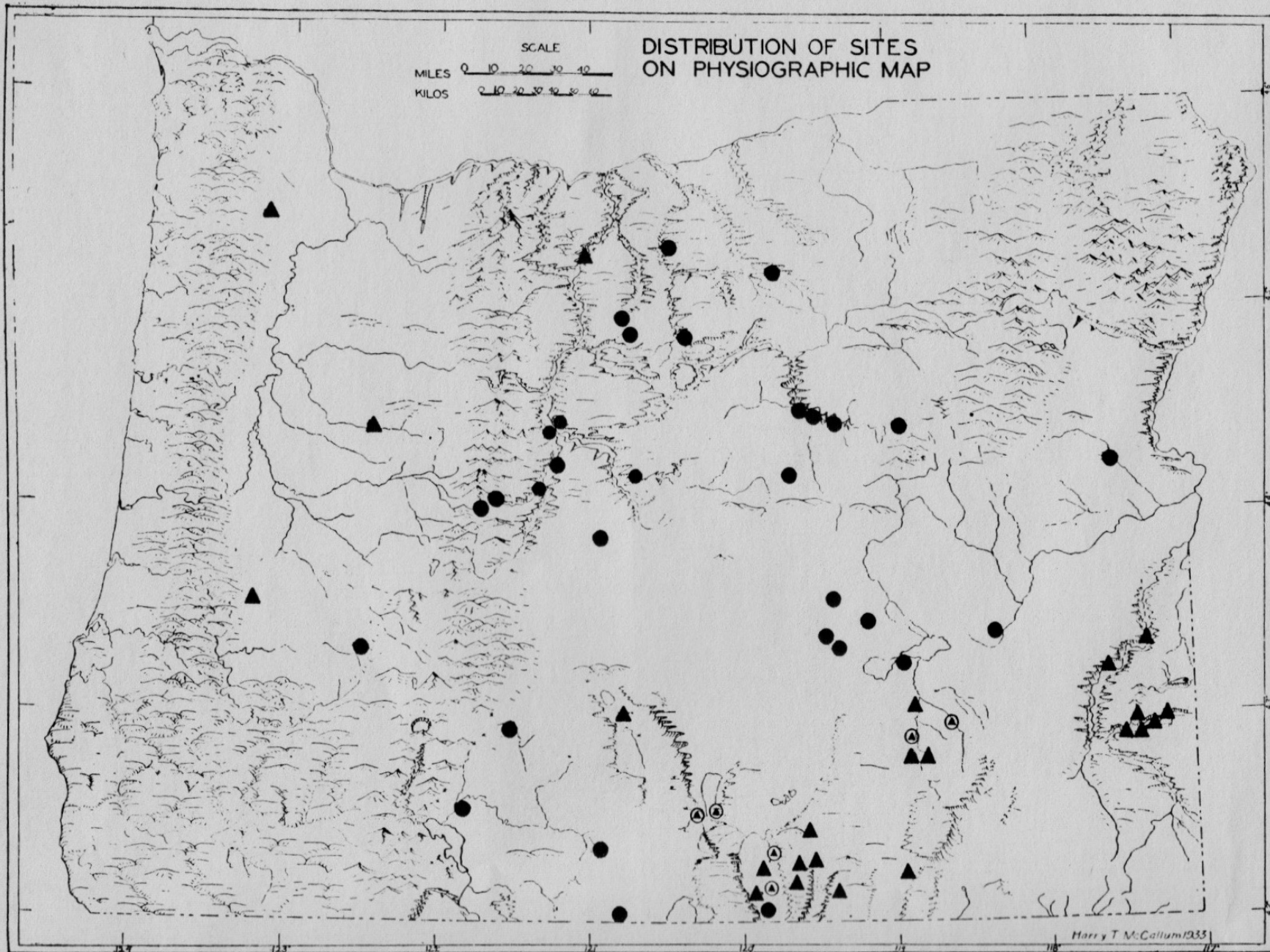
"Sandy Desert." North and east of Silver Lake in the area of the dry lakes there is a vast region of shifting sand dunes. This marks a kind of boundary, at least in historic times, between the northern and southern areas. This dune country stretches east in the direction of and nearly to Wagontire Mountain, about 75 miles north and east of Summer Lake. No specimens of either type of design are reported from this area. There are petroglyphs at the pass between the Silver Lake and Summer Lake valleys, and then a gap of about 50 miles to the next site, Willow Creek near Abert Lake (Site 29). East from this site petroglyphs occur in great numbers. One design, probably a pictograph (Site 28), was reported to the south in an isolated mountain section, but the site was not visited. Correspondence failed to elicit further information concerning it.

In Warner Valley, Paiute territory, petroglyphs occur in great numbers, especially at the foot of Hart Mountain. This area, which has plenty of water and abundant rock surface for decorating, is interesting because it contains a few pictographs. They are in a distinctly petroglyph area, and in each case an accommodation in technique is made to the petroglyph style.

The rugged tableland between Warner and Guano valleys is marked by successive parallel rims running about N 65° W to N 75° W. This is cut by Guano Creek (usually dry after the spring freshet), which rises on Hart Mountain, and runs southeast to Guano Lake (also dry). There are a few scattered petroglyphs north of Guano Creek. On the rims to the south, starting with Jack Lake, they are found in great numbers as far as Long Lake. With one exception there are no pictographs. This one pictograph, at Long Lake, is really a combined design. It is too illegible to describe. Long Lake, with a rim about one and a half to two miles long, has an enormous number of petroglyphs. Though more numerous in some places than in others, they occur along almost the entire rim.

East of Guano Valley petroglyphs are found just to the east of the eastern escarpment at the Pot Holes. No others are to be found in the south until Catlow Cave is reached, where there is one petroglyph (Site 48). North of Guano Valley, there are petroglyphs at the "P" Ranch in the Blitzen Valley (Sites 46 and 47); and a combined design is found at Bull Rock (Site 45). On the Krumbo (Site 49) just to the north and east of Bull Rock both petroglyphs and pictographs are reported, but they are probably combined designs. Going north beyond the "P" Ranch, we find the last petroglyphs at the Buena Vista Ranch (Site 44). Riddle Creek (Site 60), 15 or 20 miles east and slightly north of the Buena Vista Ranch, is the southern limit of the pictographs.

East of Steens Mountain nothing is reported west of Jordan River, where numerous petroglyphs occur. North of Jordan River, petroglyphs are found in abundance in the deep Owyhee Gorge at Hole-in-the-Ground Ranch and Watson. Jordan River has cut a fairly deep canyon in the lava; and, as in the Owyhee Gorge and in the country west of Guano Lake, the canyon walls offer the most favorable opportunities for rock inscriptions. The opportunity is equally favorable in much of the territory to the west as far as Guano Valley, but inscriptions do not seem to occur there. In the Blitzen Valley there was water and probably as good hunting as the northwest offered; consequently there must have been many permanent camp sites in the region.



MAP 2. Distribution of Sites on Physiographic Map.

Map 2 shows the general distribution of pictographs, petroglyphs, and combined designs with reference to the general physiography of the state. It will be seen that there are four main distributional areas, according to technique and style; two of these are characterized by petroglyphs and the third by pictographs. The areas are: (1) the Willamette Valley, with petroglyphs; (2) the area east and south of a line running from Warner Valley north and east in a convex curve to the Buena Vista Ranch on the Blitzen River, and then almost due northeast to the Oregon-Idaho line; (3) the north central portion of the state, a pictograph area; (4) the Klamath area, a predominantly pictographic region with a characteristic style.

We have classified the Klamath area, because of the use of one pigment to outline another and the occurrence of both pictographs and petroglyphs, as a separate area rather than as a subdivision of the great pictograph area in the north. It has many features which identify it with the northern area, but still others which seem to indicate that it is more accurately assigned to the northeastern California region. The petroglyphs of the southeastern section are closely allied to those of the Shoshonean tribes of the Great Basin-Southwest area. It is possible that archaeological evidence may indicate an origin for the Klamath-Modoc peoples in the southeastern area of the state. If this should prove correct, then the pictograph art of the Klamath area would seem to have been learned by the Klamath-Modoc either from other California tribes or from their northern Sahaptin neighbors after they settled in their present habitat. The petroglyph art could have been brought with them from their early home or learned from their California tribes or independently invented. The stylistic difference between this area and the petroglyph area to the east argues in favor of the development of the petroglyphs in the Klamath Basin.

Even a cursory examination of Map 2 will show the influence of physiographic factors in the distribution of pictographs and petroglyphs. Rivers and lakes seemed to have largely determined where the designs were to be put. There are exceptions, but only a few. In the Willamette Valley, Site 1, while not by a river, is along a trail which crosses the Coast Range after following up the Tillamook River. Site 3 in the Willamette Valley is not on any river or stream but in a grove of oak trees on top of a hill where a large sandstone boulder is found. This is one of the few exposed rock surfaces in the vicinity. Site 2 is on the Santiam River.

In the Cascades water in the form of a creek, river, or lake is associated with the designs. Site 4 is on the headwaters of the north fork of the Umpqua, while Site 6 is on Tumalo Creek just below Tumalo Lake. Site 5 is at Devil's Lake. Site 9 is in a short but deep gorge known as Dry River Gorge, which is not indicated on the map. Sites 7 and 8 are on the Deschutes. Site 13 is on a small stream which is a feeder of the Crooked River and Site 12 is on McKay Creek a few miles north of its junction with the Crooked River. Sites 10 and 11 are in the gorge of the Crooked River; for some distance down the river there are scattered pictographs, which are not indicated in this study because their location is insufficiently known. Site 14 is on the Deschutes. Site 15 is on the rim above a spring, and Site 16 is along a creek. Sites 17 and 18 are along the John Day River. Site 19 is in a cave on Rock Creek. Sites 20 to 23 are on the John Day River. Site 24 is by the Williamson River below Chiloquin. Site 25 is close to a village site and cremation pit on the east side of

Klamath Marsh. Site 26 is on the pass between Silver and Summer lakes. Site 27 is on the Sprague River. Definite information concerning Site 28 could not be secured. Site 29 is along Willow Creek. Site 30 is on an old beach line above Abert Lake. Sites 31 to 35 are either on lakes in Warner Valley or on their feeder streams. Site 38 is on Rock Creek. Sites 36, 37, and 39 are all along the shores of lakes now dry. Site 40 is in a shallow canyon where there is generally water. Sites 41 and 42 are along the shores of lakes long since dry. Site 43 is a short distance from the south shore line of Malheur Lake. Sites 44 to 47 are all close to the Blitzen River. Site 48 is in Catlow Cave, which was in all likelihood occupied when there was water in Catlow Lake. Site 50 is on the rim of the dry south fork of the Malheur River. I lack information concerning Site 51. The informant with whom arrangements had been made to secure photographs and a description failed to provide them. Site 52 and 53 are in the Owyhee Gorge. Site 55 is close to a spring at the edge of a lava flow. Sites 54, 56, 57, and 58 are in the canyon of Jordan River. Site 59 is on Willow Creek and Site 60 is on the rim above Riddle Creek. It can then be said that the pictographs and petroglyphs are associated with water in the form of rivers, lakes, or springs, and for the most part with rivers and lakes.

With few exceptions the pictographs are applied with a red pigment, hematite. There is a white pictograph at Site 10 on the Crooked River. A yellow center in a red circle occurs at Site 9 in the Dry River Gorge. There is a pictograph at Site 59 showing a deer or antelope in red, a sun in yellow, and a human figure in black. Not having seen this site personally I am inclined to be somewhat skeptical concerning the Indian origin of the different colors, since it is so exceptional in this area. Sometimes persons anxious to photograph these designs color them; and it requires careful examination to separate the original from the photographer's efforts. Site 43 showed evidence of having been outlined in black, but a careful scrutiny showed that the black was made by a greasy or oily material, in all likelihood a cheap crayon. The coloring material was certainly quite different from the red used originally. Site 25 shows the most skillful use of different pigments. Here a blue-green copper color is used to throw the red into relief. The origin of two-color combinations in the Klamath area should be attributed in all likelihood to California, in view of the more elaborate development in that region.

PART III. DISTRIBUTION OF DESIGNS

The distribution of certain common designs is shown by maps; those which occur perhaps only in two or three places are discussed without the use of maps. The designs are considered in the order of the frequency with which they occur.

HUMAN FIGURES

Human figures are distinguished from horned humans and from humans with headdress. Map 3 shows the distribution of human figures, while Fig. 45 illustrates the different forms under which the human figure is represented. The human figure is found in every area of the state.

It appears in a variety of forms, some of which are distinctly naturalistic while others are extremely conventionalized. The design appears as an isolated figure, in combat and hunting scenes, and in representations of dancing groups. It may be questioned whether Fig. 45 T is a human figure. It seems to me to be probably a human figure. It might, however, be intended to represent a human impersonating some animal, or it might be a mythical anthropomorphic figure.

The figures are not clearly drawn to represent hands and feet, but usually terminate with no indication of the extremities. There are exceptions, however, in which the hands and feet are indicated by a conventionalized design with three or four branching appendages. Fig. 45 F is an example of this. Fig. 45 A, D, H, P, Q, S illustrate other techniques for indicating the feet. There are examples of an enlargement of the end of the line representing the leg and of a short extension of the line at a ninety-degree angle. The only effort to portray the face is illustrated in the grotesque form in Fig. 45 T. In Fig. 10 the design below the rifleman suggests an effort to delineate the facial features. This is a characteristic design element which appears on much of the carved stone ware of the lower Columbia, and stands out in sharp contrast with the curvilinear style from the south-eastern part of the state.

In a number of cases, the artists have been distinctly successful in depicting action. The outstanding instances are shown in Fig. 45 D, E, and K. D and E show the figure in the act of drawing a bow. Other action pictures, such as C and G in the same figure, fail to come off. H (Site 14 on the lower Deschutes River) is probably intended to represent a rifleman in the act of aiming his rifle. This is a petroglyph and belongs to the Columbia River area.

The designs P-S, which occur in the Owyhee Gorge at adjacent sites, are interesting because of the manner in which the characteristic circle motive has been used to construct the human figure. The geometric style is so characteristic of this area that this accommodation of its devices to produce a representative rather than a geometric design is a matter of some interest. T (at Picture Pass, not close to P-S) is made by the same method. The torsos in S and T may be sun symbols. These figures strongly suggest that we may have here myth or guardian-spirit animals which appear as persons with some distinguishing trait attached to identify the object. This is also a possible explanation of other figures which suggest naturalistic beings, especially those to which some trait is added which changes the design from a direct representation of some real object.

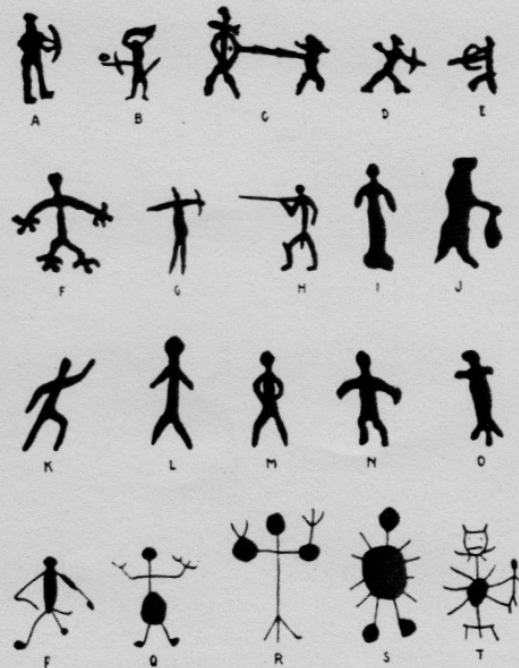
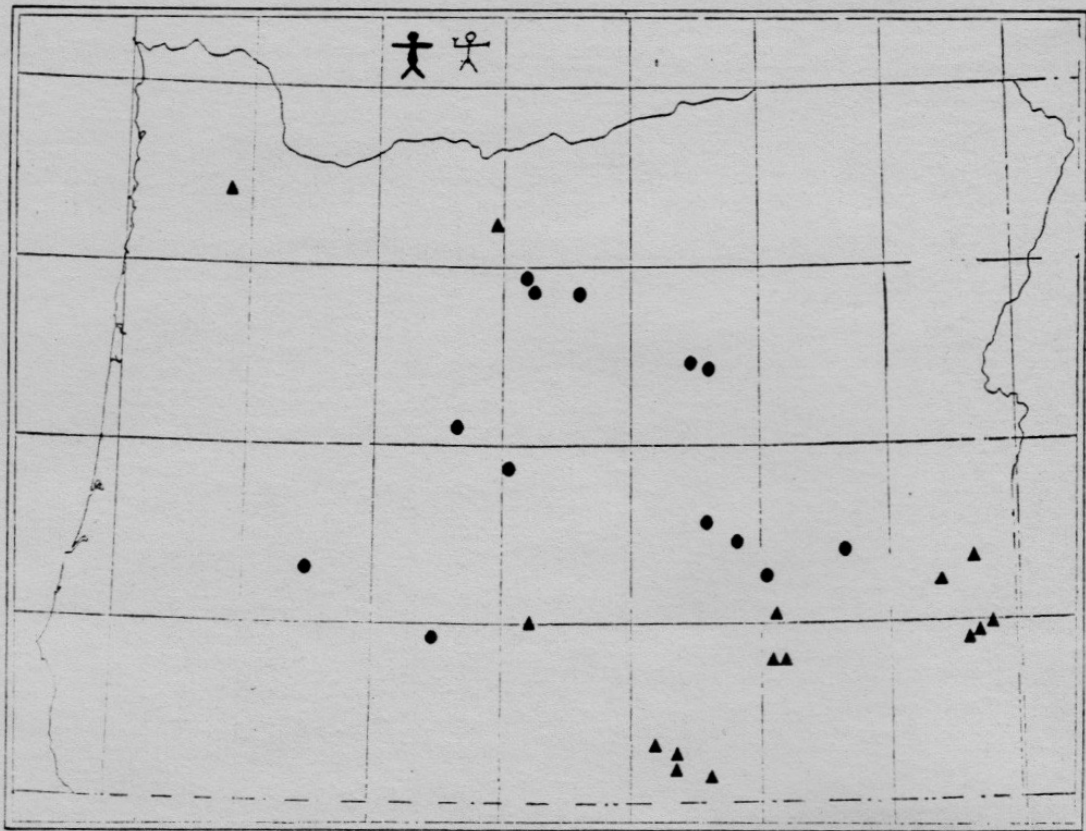
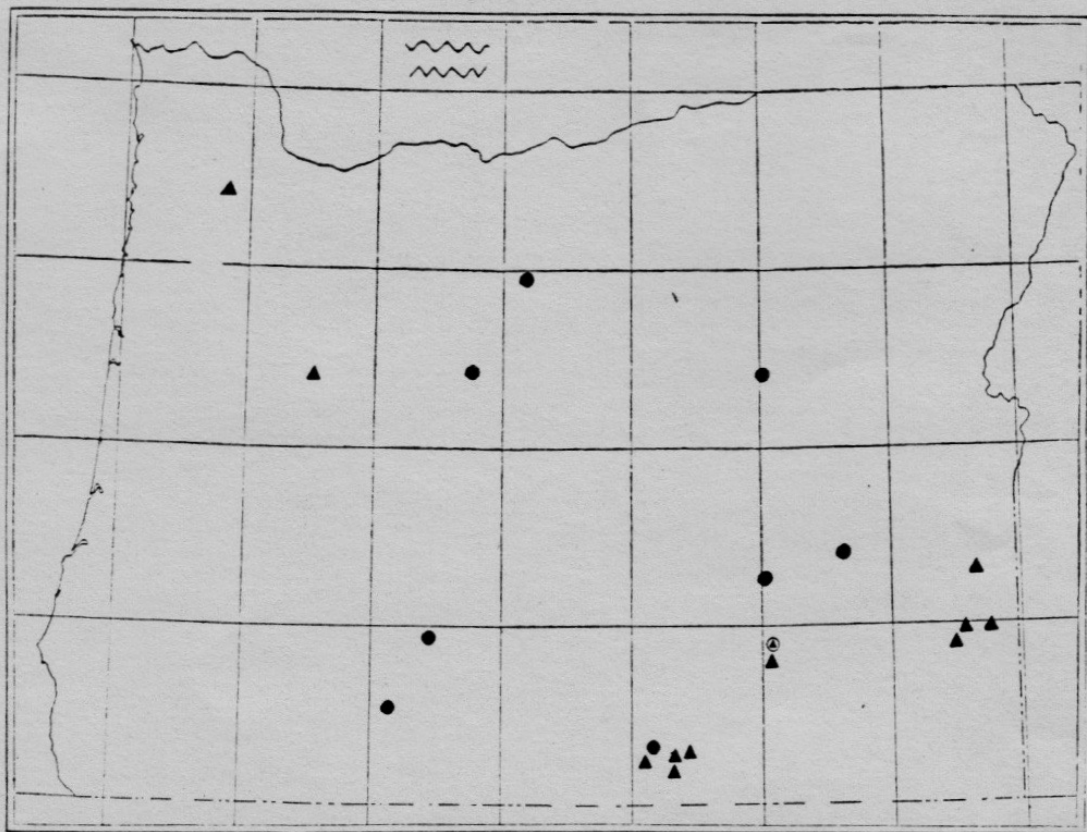


FIG. 45. Humans.

A, Site 37	F, Site 57	K, Site 60	P, Site 53
B, Site 31	G, Site 40	L, Site 16	Q, Site 52
C, Site 43	H, Site 14	M, Site 16	R, Site 52
D, Site 31	I, Site 22	N, Site 26	S, Site 52
E, Site 50	J, Site 22	O, Site 21	T, Site 26



MAP 3. Human Figures



MAP 4. Wavy or Zigzag Lines.

Some of the figures may be intended as phallic designs, but the contrary is just as likely to be true. Here too the guardian-spirit hypothesis may be offered, as well as of the phallic-design theory, as a possible explanation. Fig. 45 B and P may be phallic; but it seems a more likely explanation that the lack of technical skill in controlling the direction and extent of lines and their relation to other lines in the design is the real reason for the phallic suggestions of these figures. H and R appear to be other examples of a similar lack of skill.

WAVY OR ZIGZAG LINES

Wavy or zigzag lines, while less numerous than human figures, occur with marked frequency and appear in all areas. They are perhaps more numerous in the petroglyph designs than in the pictographs. As Steward¹³ points out, they are among the simplest of possible designs and are to be expected almost universally. Map 4 shows the distribution.

SINGLE CIRCLES

Circles appear in a number of forms: singly, concentric, in series, connected, and bisected. Steward¹⁴ has shown how in the Great Basin the circle gives the curvilinear character to the designs of that area. Single circles are found not only in southeastern Oregon where the Great Basin style occurs but throughout the pictograph area as well. By single circles we mean a single line forming a circle with no other element included. In some cases it is possible that the single circles are really part of a larger design; but, in the instances where the single circle has been listed, it appears to stand alone without reference to anything else. It would seem to be a simple geometric design like the wavy or zigzag line; its wide distribution was to be expected. Its distribution is shown on Map 5.

LIZARDS

Fig. 46 A, B, D, F-N illustrate the types of lizards found in the designs of the Oregon area. Map 6 shows their distribution. They are limited to the area east of the Cascade Mountains, and occur as pictographs, as petroglyphs, and as a combined type. They are found among the Great Basin design types just north of the Nevada line, although Steward¹⁵ does not report them for the adjacent Great Basin area. Since they are found to the south and in western Nevada as well as in northeastern California, one may conclude that they exist in the intervening Great Basin area but have not been reported from this isolated country.

The different figures are evidently intended as realistic representations but with variations applied by the individual artist. These variations are seen in A, I, and M. Some degree of conventionalization occurs. Conventionalization is most marked in the indication of the feet by a series of 3 or 4 but usually 3 toes. This is the same technique used in representing the human hand or foot when either is indicated as a part of the whole figure¹⁶ (when the hand is drawn alone it is produced with anatomical accuracy.) In Fig. 46 B, 5 and 3 toes are shown; in D there

are 4 on each foot. In N the process of conventionalization is still further advanced; here the 3 toes are indicated by a transverse line cutting the horizontal line representing the legs at right

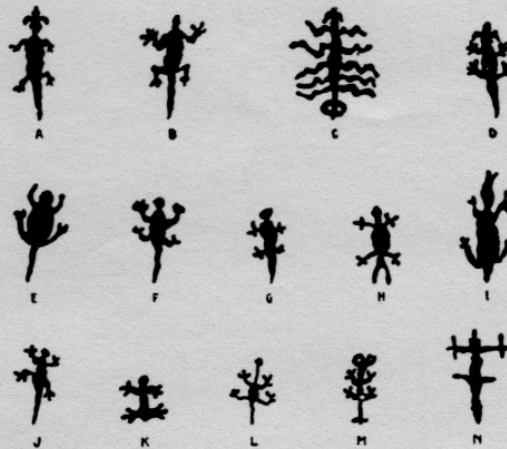


FIG. 46. Lizards.

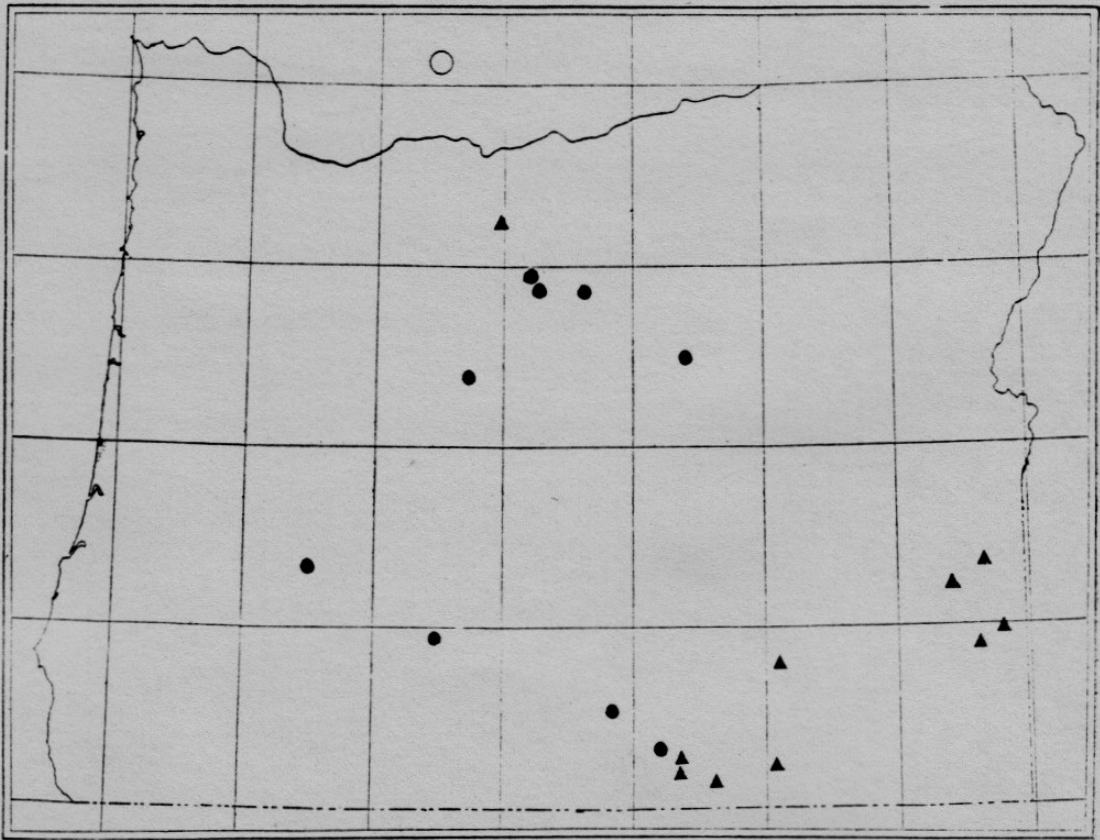
A, Site 50	F, Site 43	K, Site 20
B, Site 50	G, Site 25	L, Site 36
C, Site 33	H, Site 47	M, Site 20
D, Site 50	I, Site 37	N, Site 50
E, Site 44	J, Site 33	

¹³ "Petroglyphs of California and Adjoining States," p. 179.

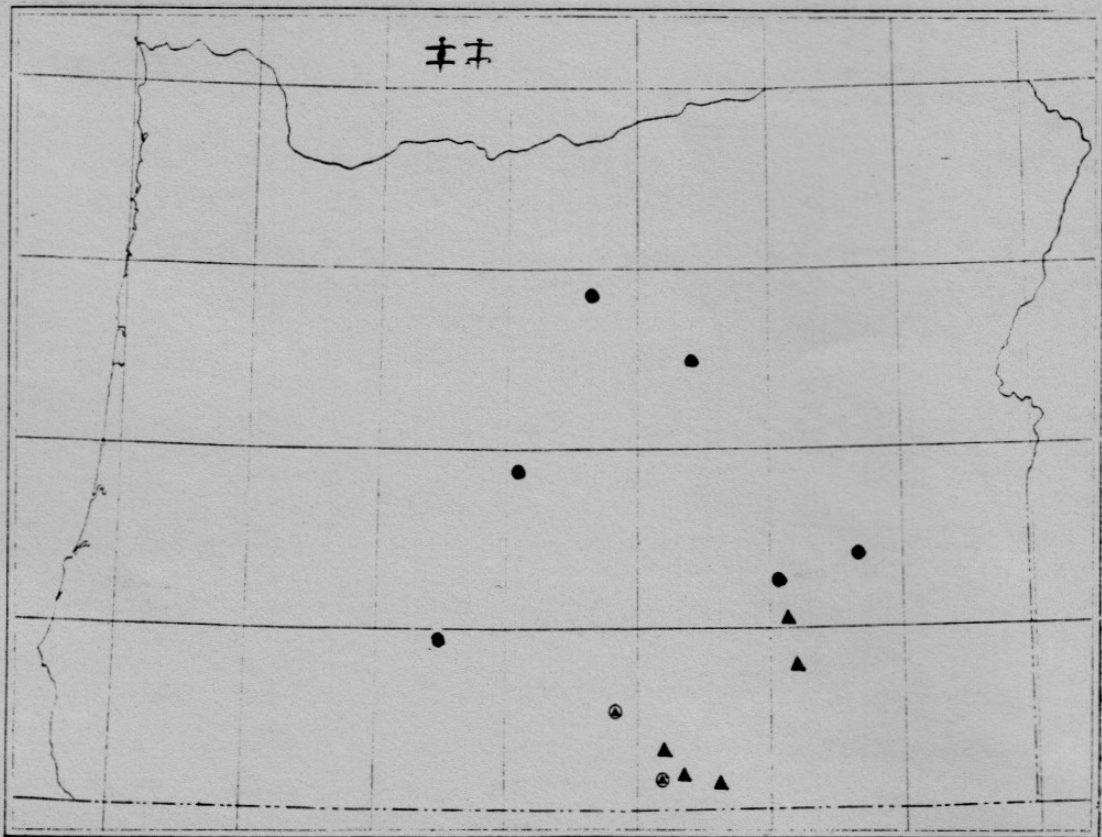
¹⁴ *Ibid.*, p. 193.

¹⁵ *Ibid.*, map 27, p. 204.

¹⁶ Page 22.



MAP 5. Circles.



MAP 6. Lizards.

angles just in from the end, so that 3 toes are produced. The body and head are intended to be a straight line; the hind legs have been indicated (without toes) by a straight line drawn through the body parallel to the front legs. The head in M, composed of two adjacent circles, is an interesting variation. Whether these are further developments of the outward curves which appear in A and D or represent eyes is not clear. It might be simply the artist's fancy. A, B, D, and N are all from Site 50 near Venator. A and D show the curious outward-curving parts of the head, a device limited to this site. A has the legs extended backward, while in D the legs are extended forward. Otherwise the designs are the same. B is an average type. The marked conventionalization of N is described above. To prove that these designs represent the sequences of conventionalization, one would have to prove their chronological sequence as well. The question naturally comes to mind: Are these different drawings from the same site the work of one artist experimenting with different designs; if not, why are there the marked divergences in the forms shown?

The lizard is a particularly ubiquitous little reptile in the high plateau country. It is especially in evidence around the rims and fallen boulders. It must have been an object of interest to the Indians, with its quick, darting movements when startled, and its immobility when stalking prey or watching an object, particularly a human, that has aroused its amazing curiosity. The writer has been more than startled many times when in rattlesnake country to have one of these little animals dart out from close to his hand. Their hunting and observing antics in Catlow Cave in the summer of 1935 were particularly interesting to observe. One day a small lizard kept approaching our working party in the trench by a series of darting runs followed by frozen immobility. Finally he reached the shelter of a rock. Here he evidently felt secure, for there he remained watching for a long time. Finally a fairly large grasshopper came close to him; like lightning the lizard pounced on it. The struggle stirred the dust by the rock for a few seconds; then the lizard enjoyed a well-earned meal. These experiences must have been the common lot of the aboriginal inhabitants throughout the whole high plateau and Great Basin area; and in the common experience is perhaps to be found the reason for the universal distribution of this element. In the wooded, wet country west of the Cascades the lizard design is not found—nor is the lizard much in evidence.

RECTANGULAR GRIDS

This form, a rectangle cut by parallel cross lines, appears in each of the areas in Oregon. The design sometimes stands alone and is sometimes a part of a more complex design. The latter type appears at Sites 3 and 36. In some cases the rectangle is not clearly defined but is rounded off into an oval or roughly oval shape. Occasionally this is caused by the effort to fit the design to a particular field on the rock surface which is defined by a crack or break in the stone. In other cases lack of technical skill is evidently the cause, while in others definite intention to vary the form accounts for the results. Map 7 shows the distribution and indicates a continuous series with Steward's Area A.¹⁷

SERIES OF SHORT PARALLEL LINES

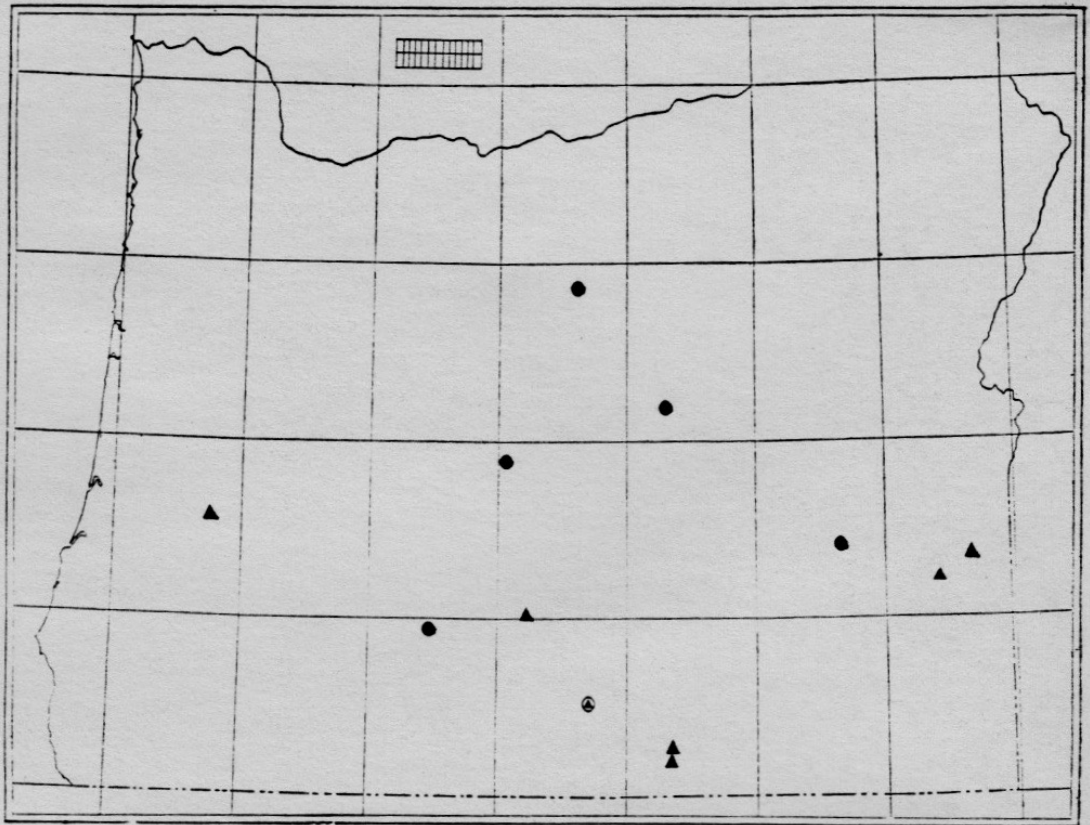
This type of design occurs in widely separated sites throughout the whole region. It is quite possible that the type is genetically related to the grid design, though this cannot be proved from our present evidence. Connecting lines across the terminations of the parallel lines would produce the rectangular grid. The two types have the same frequency (12 sites each), and in 6 sites they occur together.

CONCENTRIC CIRCLES

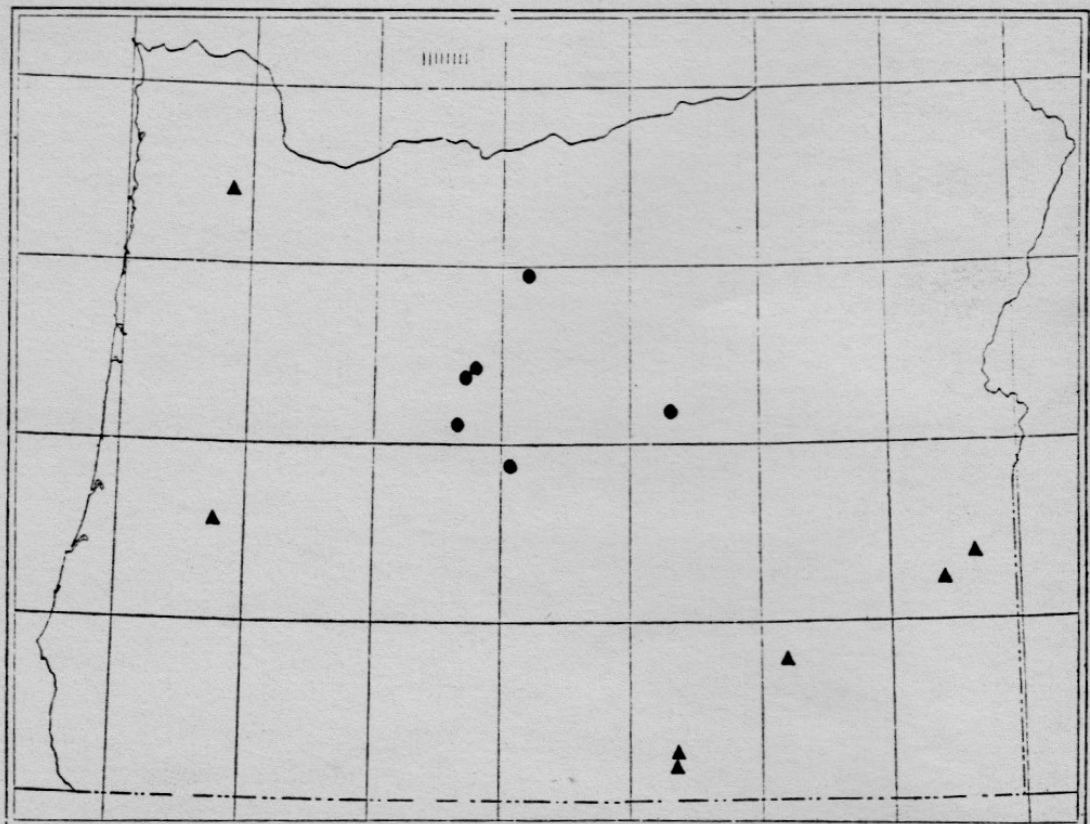
This name is given to a design consisting of two or more circles having the same center but without the center indicated. When the center is shown we call the design a "target." Map 9, giving the distribution, shows that this design is general throughout the southeastern and south central part of the state but is not found on the lower reaches of the rivers draining into the Columbia. In view of the general distribution in the area studied by Steward,¹⁸ it would

¹⁷ Steward, "Petroglyphs of California and Adjoining States," map D, p. 220.

¹⁸ *Ibid.*, map 1, p. 178.



MAP 7. Rectangular Grids.



MAP 8. Series of Short Parallel Lines.

appear to be a Southwestern-Great Basin type which was limited in its northern distribution to the upper reaches of the Columbia River drainage.

Dots

Dots are used as a design element mostly in the petroglyph sites in the Southeast. They occur in only two pictograph sites. They are found, however, in the petroglyph at Shearer's Bridge on the lower Deschutes (Site 14). The dots may form a design in themselves or be a part of some other design. Usually it is impossible to separate them from other designs with any certainty. At Site 22 (Fig. 17) there are 13 dots which appear to be definitely connected with the human figure represented as carrying some object. At Sites 52, 53, and 56 dots appear in such profusion and with such complete lack of order that they suggest purely random markings.

The explanation for the greater number of these dot designs in petroglyphs than in pictographs may be found in the technique by which the two designs were applied. Paint requires the expenditure of energy and often risk of danger as the price to secure it. Its very scarcity implies economy in its use. Petroglyphs are made by cutting the surface of one rock with the edge or point of another. Any random stroke thus makes the beginning of a petroglyph. There is no need of economy either of effort or of material. We may imagine a bored Indian making these organized and random dot designs as some white men indulge in "whittlin'" to pass the time.

Our distribution is continuous with that shown by Steward.¹⁹ Map 10 shows the dot-series distribution.

RAIN SYMBOLS

Map 11 shows the distribution of what we have called rain symbols. Fig. 47 shows the design types. A and C are probably the only designs which will be accepted as clearly rain symbols. On the map we have plotted all except those in the southeastern section of the state as questionable. Designs which we classify as rain symbols are found in this region at Sites 2, 3, 9, and 10. They are represented by B, D, and G in Fig. 47. E and I may be simply a series of wavy lines, but in I these seem to be intended to drop from a top line. This area is continuous with the Great Basin-Southern California area.

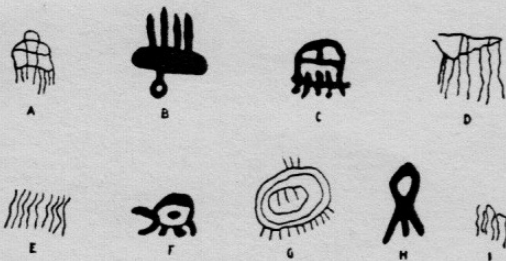


FIG. 47. Rain Symbols.

- | | | |
|------------|------------|------------|
| A, Site 37 | D, Site 2 | G, Site 10 |
| B, Site 9 | E, Site 36 | H, Site 9 |
| C, Site 56 | F, Site 31 | I, Site 36 |



FIG. 48. Rakes.

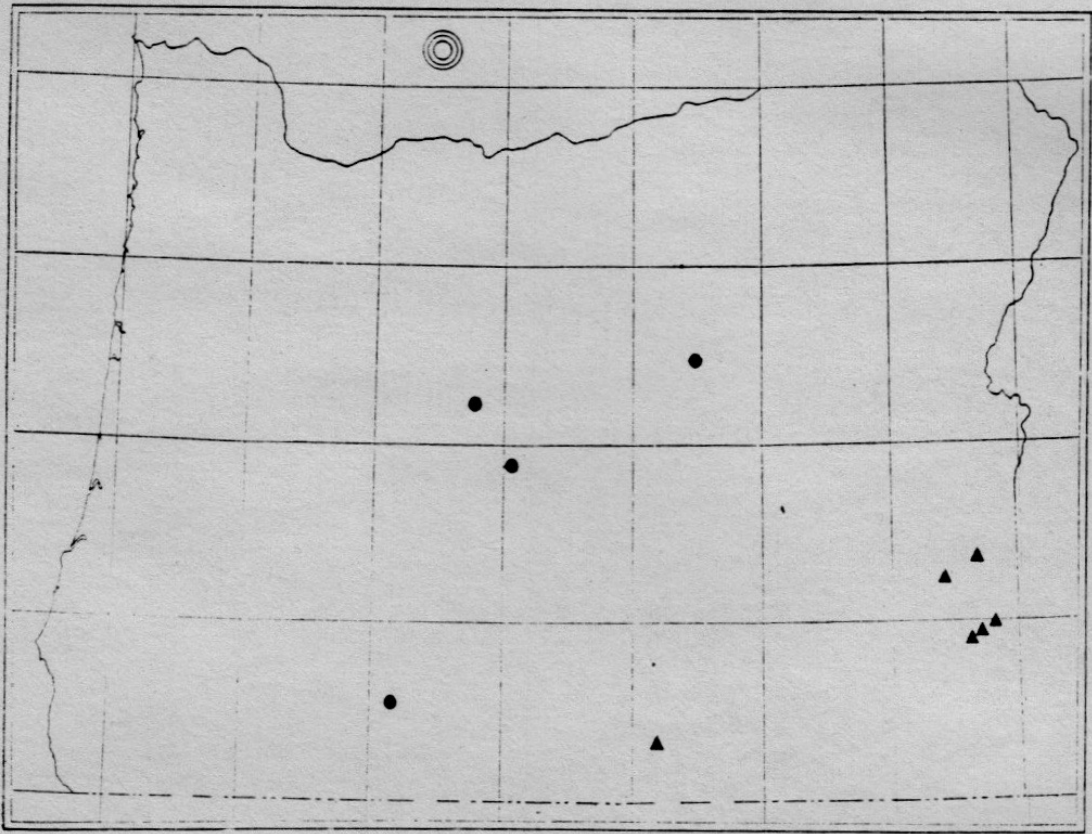
- | | | |
|------------|------------|------------|
| A, Site 13 | E, Site 7 | I, Site 52 |
| B, Site 17 | F, Site 7 | J, Site 53 |
| C, Site 17 | G, Site 56 | K, Site 50 |
| D, Site 37 | H, Site 56 | |

If Fig. 47 D (Site 2), and the design at Site 3, both of which are petroglyphs, are early rain symbols, this fact raises rather pointed questions about the relations of the petroglyphs of the Willamette Valley to those of the Great Basin-Southern California area.

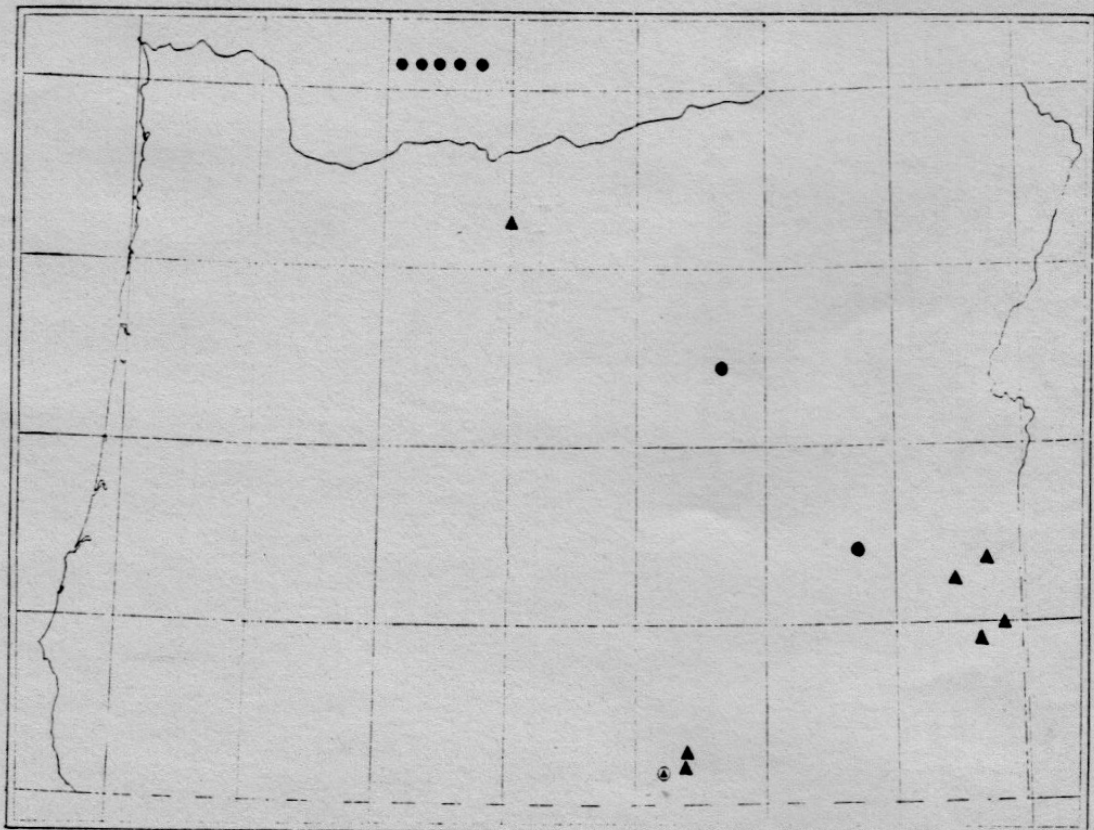
RAKES

The rake design runs northwest from the southeast well across the state. However, it stops short of the Columbia River and does not appear in the Willamette Valley. Map 12 shows the distribution, and Fig. 48 the types. The design is usually oriented with the "prongs" pointing

¹⁹ *Ibid.*, map 12, p. 192.



MAP 9. Concentric Circles.



MAP 10. Dot Series.

downward; but in Fig. 48 K (Site 50) the original design had the prongs pointing upward (see Fig. 36). In K the detail has been lifted from the general background and drawn in the customary manner. As Steward points out,²⁰ this design may be related to the rectangular grid; and, as we have suggested, it may be developmentally related to the "series of short parallel lines," *i.e.*, it may be approximately the next step in developing complexity.

DOUBLE LOOPS

Map 13 shows the distribution of what we have called the double-loop design. It is limited to the petroglyph area, with the exception of two sites not very far apart on the John Day River (Sites 17 and 20). The design consists of a straight line which divides and curves back on itself on each side, forming two loops. This is a characteristic form of the curvilinear style of the northern Great Basin, which had begun the process of diffusion over into the Columbia River drainage. It is possible that we have a development of the bisected-circle motif, although the distribution of the two designs is rather different. But the limited distribution of the double loop in the bisected-circle area would suggest that it was a later specialization than the bisected circle.

HUMANS WITH HEADDRESS

Map 14 gives the distribution of this design, in which the human figure is shown wearing some kind of headdress. This is differentiated on the maps from the human with two points projecting upward from the head (which we call horns). Both types are shown on Fig. 49. B, C, D, F, L, and M show the various types of human-with-headdress design. M (Site 12, McKay Creek) appears to be an attempt at composition. The artist was evidently trying to depict some scene in which the participants appeared in ceremonial dress. The two figures are joined ventrally. This might be a device to indicate that the two are joined in the one design, or it might have been a purely accidental result of carelessly applied paint. The distribution of this design type runs across the entire state east of the mountains, but does not touch the Klamath Basin area. The headdress in Fig. 49 L (Site 7) is strikingly like that pictured by Steward from Tucson.²¹ The figure is executed in solid red.

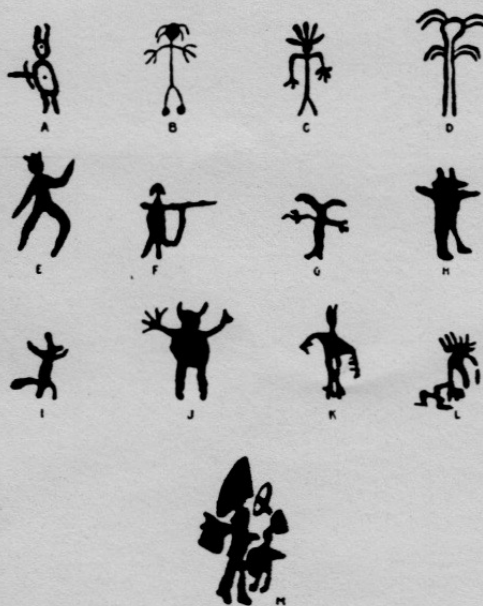


FIG. 49. Humans with Headdress and Horned Humans

A, Site 31	E, Site 9	J, Site 26
B, Site 52	F, Site 21	K, Site 37
C, Site 14	G, Site 31	L, Site 7
D, Site 31	H, Site 12	M, Site 12
	I, Site 15	

HORNED HUMANS

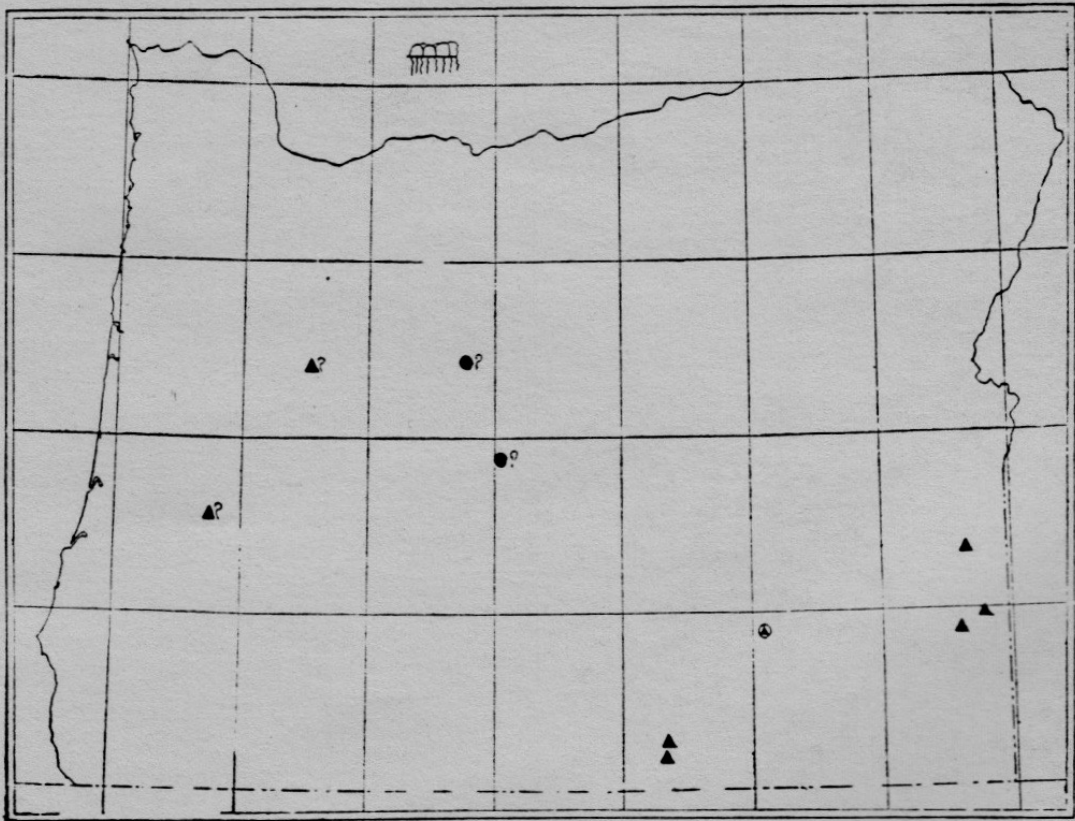
The distribution of horned humans is given by Map 15. The types are shown in Fig. 49 A, G, H, I, J, K. These figures occur east of the mountains and do not reach beyond the upper Columbia River drainage area. In view of the distribution for the area studied by Steward,²² we evidently have the northern periphery of this design type established in east central Oregon.

In some instances these figures are associated with animals and hunting scenes. This leads one to consider the possibility that they represent masked hunters who were either acting as decoys or were trying to conceal themselves from the game as they approached, a custom widely followed in historic times. On the other hand, here if anywhere the possibility of the guardian spirit as the object represented must not be overlooked.

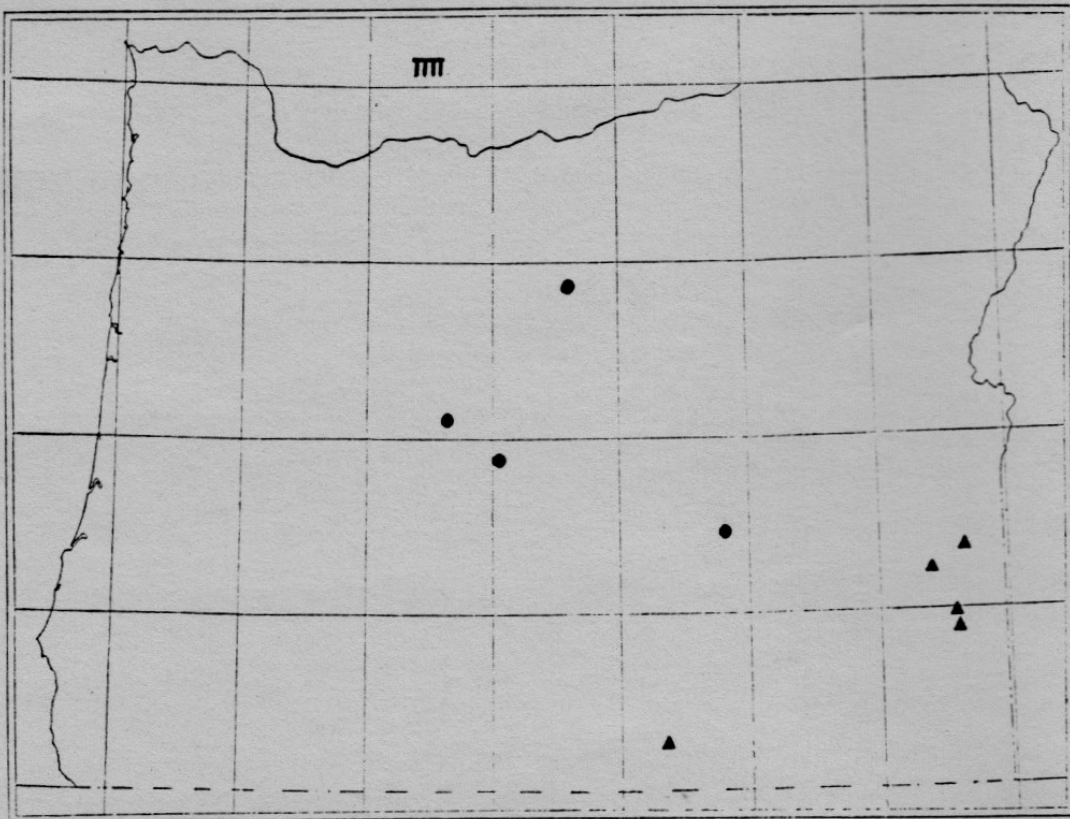
²⁰ *Ibid.*, p. 207.

²¹ *Ibid.*, fig. 84 F, p. 181.

²² *Ibid.*, map 42, p. 214.



MAP 11. Rain Symbols.



MAP 12. Rakes.

CONNECTED CIRCLES

Two or more circles with a straight line connecting the circumferences appear with some frequency in the southeastern part of the state. Map 16 gives the distribution. The connected-circle design is probably related to the bisected circle. We are not certain of our identification at Dry River Gorge (Site 9). The southeastern limits of the distribution show its relation to the Great Basin area. The two pictograph sites are both in the Harney-Malheur Basin, in close contact with the petroglyphs of the Great Basin area immediately to the south. This design type includes not only circles connected by straight lines, but also circles with circumferences joined immediately without connecting lines to form a netting-like design such as occurs at Site 53 (Fig. 38).

CIRCLES IN SERIES

This arrangement of circles in series without connecting lines suggests the dot design. Its distribution, as shown by Map 17, is limited to the southeastern area. It is doubtful if Site 5 really belongs to this group. We have here a phase of the curvilinear style of the Great Basin.

LADDERS

This design consists of a vertical line crossed at right angles at regular intervals by short lines. The distribution is shown on Map 18. The design occurs in the petroglyph area in the Southeast and at four closely related pictograph sites on or near the John Day River.

Its appearance at widely separated sites would indicate that the design has developed independently. At the pictograph sites there is a tendency to elaborate the design into more complicated figures. This appears particularly at Fisher's Ranch (Site 15). In view of the elaborate character of the designs at this center, we may be dealing with an entirely different pattern from that to the south. The development of symmetrical designs by the application of cross lines at right angles to a long one would not be a complex problem; yet we are faced with a very limited distribution.

FLORAL DESIGNS

We have characterized a rather elaborate design element with branching "leaves" and what appears to be a flower representation as a floral design. This may not be what the artist intended his painting to represent, but the form suggests it to us. It is quite possible that the petroglyph at Site 46, "P" Ranch, does not belong in this class. Map 19 shows that we are dealing with a localized design element.

SUN DISKS

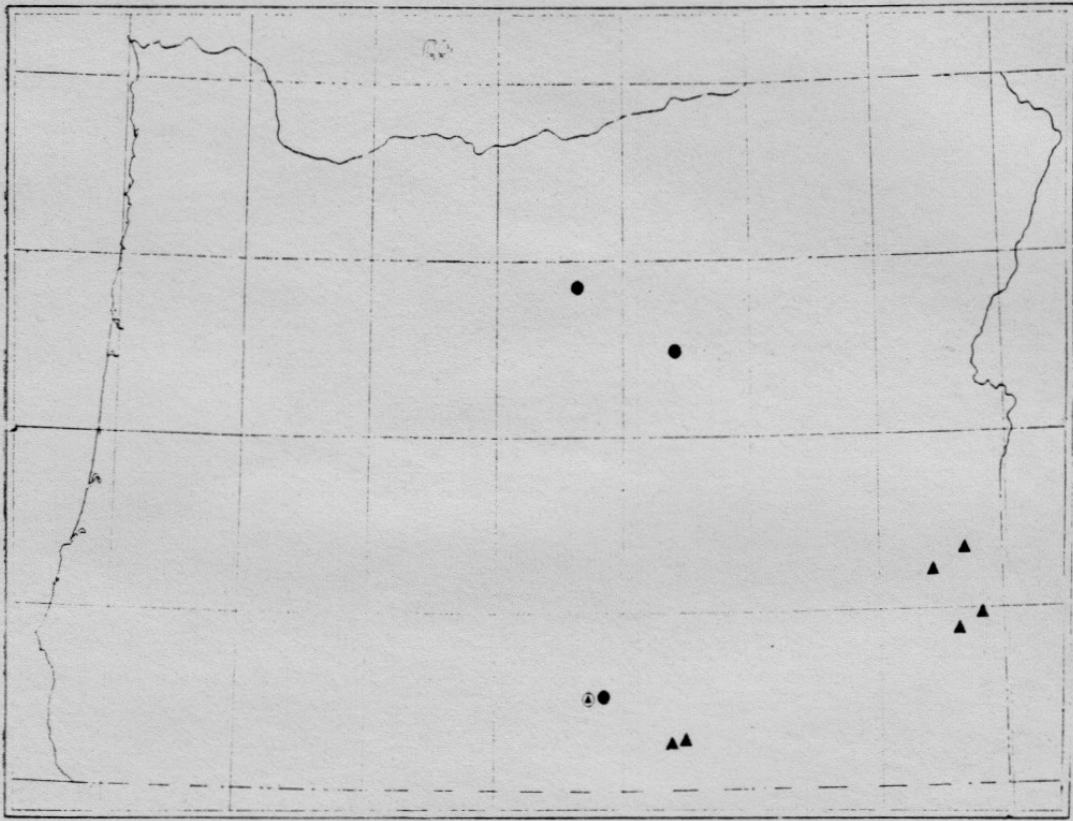
We have applied the name sun disk to the design consisting of a circle with projecting lines. It may or may not have been intended by the artist to represent the sun. Map 20 shows that it is characteristic of the southeastern part of the state. It is found in both petroglyphs and pictographs. The pictographs are on the upper John Day River (Site 22), on Beaver Creek (Site 13) which drains into Crooked River, and just west of Burns not many miles from the other two sites. This last site (Site 59, Willow Creek) is not far from the sites to the south in the Harney-Malheur Basin. These designs are thus connected with the northern Great Basin area. Steward²³ found this design one of the most widely distributed types.

COGWHEELS

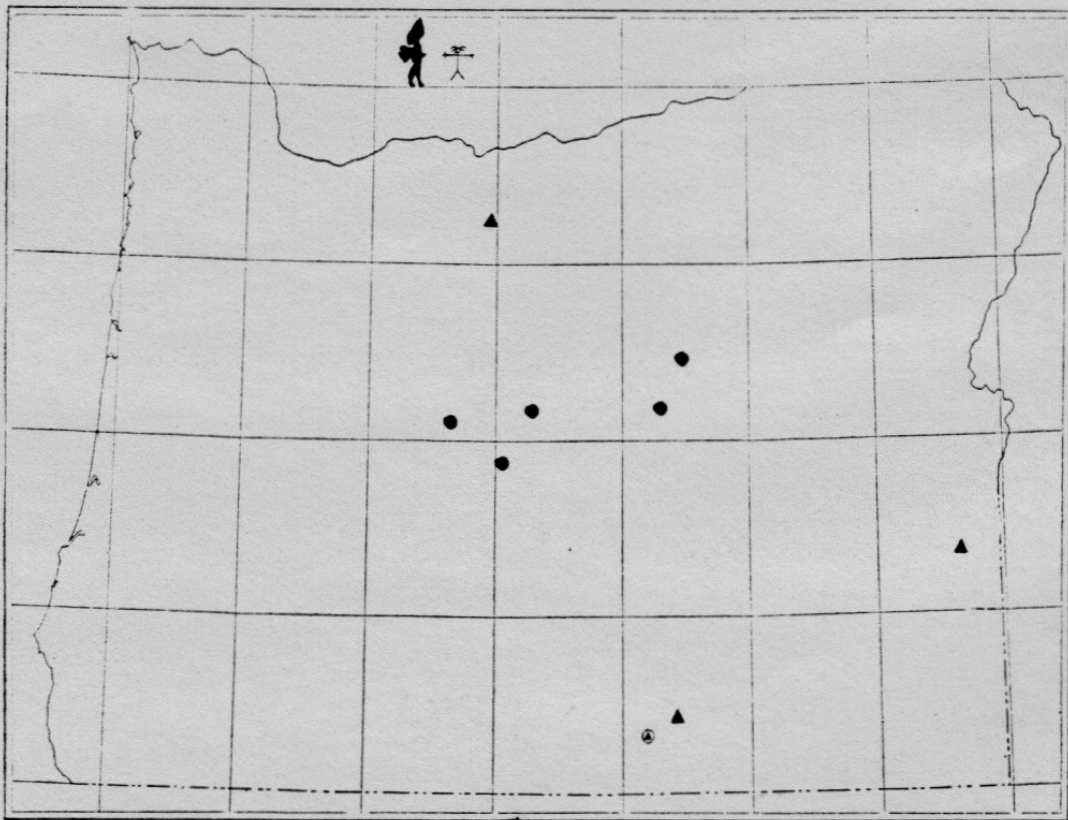
This is a circle surrounded by "cogs" or "saw teeth." The design appears both in pictographs and in petroglyphs. Steward reports one petroglyph cogwheel from western Nevada.²⁴ We have found the design type at three petroglyph, one combined, and three pictograph sites. Two of the pictograph sites are very close to each other, while the third is in the Klamath Basin area (Site 24, Chiloquin). Map 21 shows the distribution. This may be a specialized development of the circle motif of the curvilinear style of the Great Basin, but its limited distribution bespeaks a late development.

²³ *Ibid.*, p. 184.

²⁴ *Ibid.*, p. 207.



MAP 13. Double Loops.



MAP 14. Humans with Headdress.

MOUNTAIN SHEEP

Mountain sheep, characterized by the long recurving horns, occur at seven sites, five petroglyph and two pictograph sites. Map 22 shows the distribution. Fig. 50 E-O shows the various types which occur. The petroglyph forms are superior to those from the pictograph area (Sites 9 and 50). These pictograph sites (at Dry River Gorge and Venator) mark the northern limit of the design. The mountain-sheep designs of the Columbia River area must be accounted for in some other way than as a continuous distribution, unless the path of continuity is through the region to the east of the one we are studying. Certainly the distribution is completely broken between the Southwest-Great Basin area and the Columbia by way of the plateau region.

BEAR OR HUMAN TRACKS

It is frequently if not usually impossible to distinguish between bear and human tracks. However, the design at Cascadia (Site 2), with short broad pads and long curving claws, appears to be clearly a bear track. The design is not found on the lower reaches of the Deschutes or John Day rivers.

SNAKES

While many of the wavy or coiled figures may have been intended to represent snakes, we have limited our classification to those designs in which there is an enlargement to indicate the head. These are mostly in the southeastern part of the state. The best design is that from Site 30 at the base of the talus slope under the Abert Lake rim (Fig. 22). Here a rattlesnake with eight rattles is clearly shown. It must be emphasized that, since the snake designs are practically all from the area of the curvilinear style, it is quite possible that, in many cases, the design is not a snake but simply a curving or wavy line. Since the snake most frequently seen in that area is the rattler, we might expect the snake to be indicated by the rattles rather than simply by the head common to all snakes. Certainly, for one who has heard this snake's sudden warning, the rattles are its most striking characteristic.

SAWS

We have applied the name "saw" to the design composed of a series of triangles projecting from the same side of a straight line and attached by their bases to the line. There are two sites (Sites 52 and 53), both petroglyph sites, which clearly have this design. It may occur at Yoncalla (Site 3, Plate III); but the whole pattern at this site is so complex, and depends so much on the use of short straight lines placed with reference to longer ones across one end of them, that one cannot be certain of the identity. The appearance of these rectilinear designs in an area characterized by the curvilinear style is unusual. The saw might readily come from a series of zigzags; it would be formed simply by connecting either the top or bottom points of the triangular segments. The limited distribution would be in keeping with this theory.

HORSES AND MOUNTED HUMANS

The horse is found at five sites. One (Site 4, Plate II) is west of the summit of the Cascades, and is noteworthy for the realistic delineations of the horse in motion. This is the only pictograph west of the summit of the range. A horse without a rider is found at Dry River Gorge (Site 9) and at Desert Lake (Site 39). Both types occur on the rims north of Long Lake (Site 37). A chief interest in this design is its value for establishing chronology. In

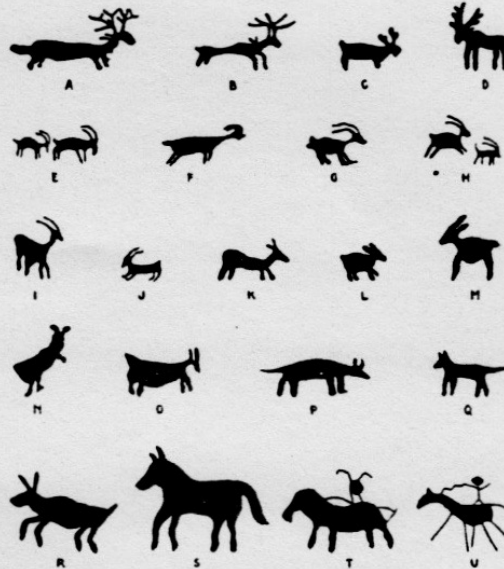
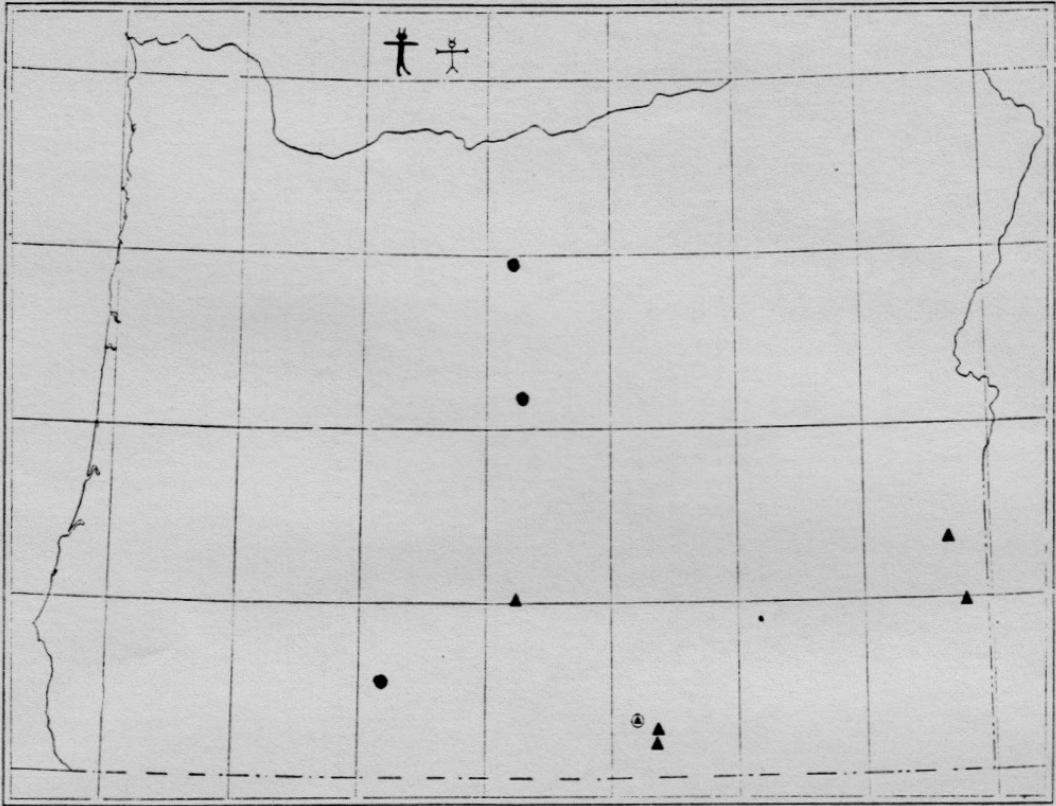
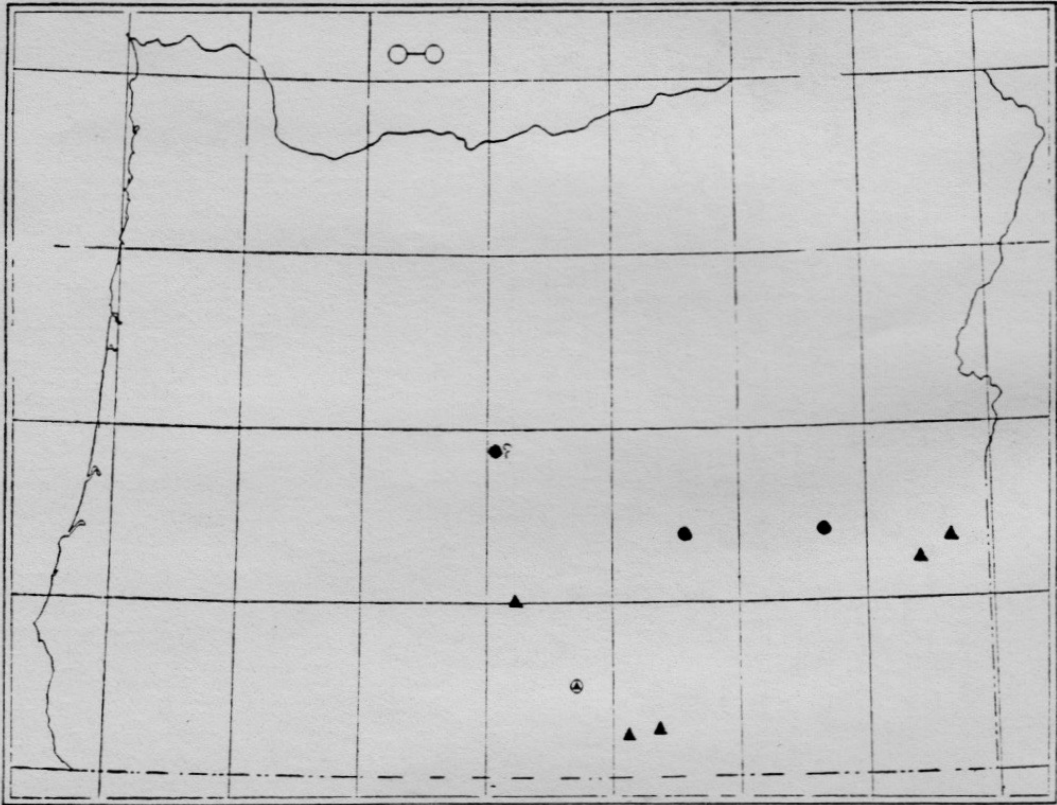


FIG. 50. Quadrupeds.

A. Site 31	F. Site 31	L. Site 50	R. Site 59
B. Site 31	G. Site 31	M. Site 9	S. Site 37
C. Site 31	H. Site 37	N. Site 50	T. Site 26
D. Site 12	I. Site 37	O. Site 31	U. Site 26
E. Site 37	J. Site 40	P. Site 26	
	K. Site 26	Q. Site 12	



MAP 15. Horned Humans.



MAP 16. Connected Circles.

the petroglyph area the horse designs are the least weathered of any. There has been no conventionalization of the design, as occurred in the Plains art with its elongated figures of the horse. Type designs are shown in Fig. 50 S, T, U.

STARS

A number of lines laid across one another at the center forms this design. It occurs four times, in two pictographs at sites situated close together (Sites 16 and 17), at one petroglyph site (Site 58), and in a pictograph at Site 60 on Riddle Creek. The distribution would not indicate any connection except perhaps at Sites 16 and 17.

BISECTED CIRCLES

This design is a circle cut by a line, which generally projects beyond the circumference on each side. It occurs in four places (Sites 9, 12, 37, 52); two are pictographs and two petroglyphs. The similarity of designs in this case can hardly indicate any connection between these widely scattered sites.

BIRD TRACKS

We have designated as bird tracks a design having a short straight line terminating in a branching end of three parts (Sites 11, 25, 41, 52). We cannot be at all certain of the accuracy of this classification; for in many instances the design is hardly distinguishable from other elements.

COYOTES

This animal may be either a coyote or a dog. We are inclined to feel that the coyote is intended, because of the bushy tail and the alert inquisitive ears, both of which are strikingly characteristic of the animal when observed in the wild state. The three sites (Sites 4, 12, 26) at which the figure occurs are scattered and obviously unrelated. The most realistic design is that at McKay Creek (Site 12), Fig. 8. Here are three coyotes, two with elk and one standing separate. This may be an effort at composition to show coyotes chasing elk. But again the animals may be dogs and the whole design a representation of a hunting scene. If the prevalence of objects in the natural environment or even in the folklore is counted as a cause for artistic reproduction, one must certainly raise the question why the coyote, so ubiquitous in appearance and sound, is so seldom portrayed on the northern plateau of our area.

BOWMEN

Human figures using the bow appear four times; three are petroglyphs in the same area (Sites 31, 37, and 40), and the fourth is a pictograph some distance to the north at Venator (Site 50). Fig. 45 A, B, D, E, and G show the different designs. E is especially forceful, with the bowman in position to release the arrow; A shows a bowman fitting the arrow to the string with none of the muscular tension shown in E.

HANDS

Hands occur at three sites, two pictograph and one petroglyph site. The pictograph sites are on the John Day River at Clarno (Site 17) and at Mikkalo (Site 18). The petroglyph hands at Long Lake (Site 36) are well executed with the whole figure pecked out. Fig. 51 shows this design type.

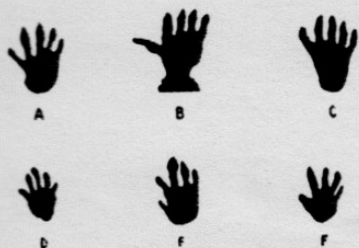


FIG. 51. Hands.

A, Site 36
B, Site 18
C, Site 36
D, Site 17
E, Site 17
F, Site 17

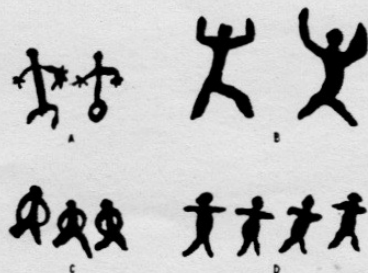
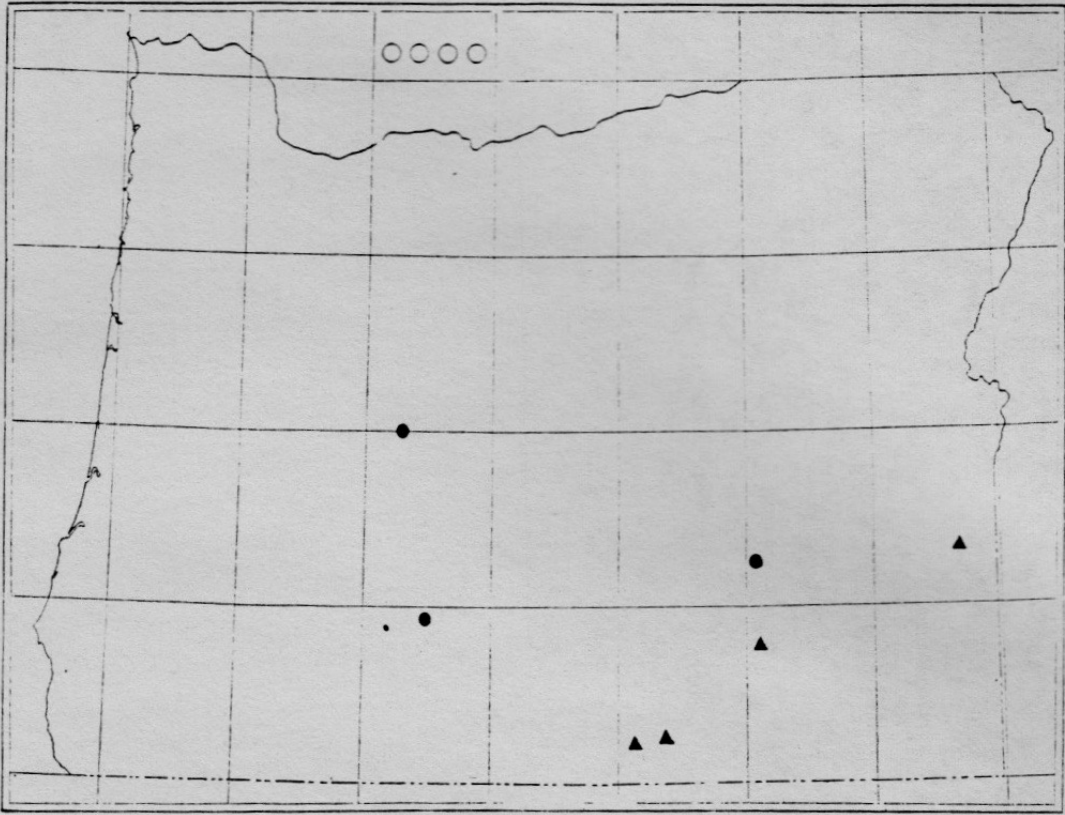
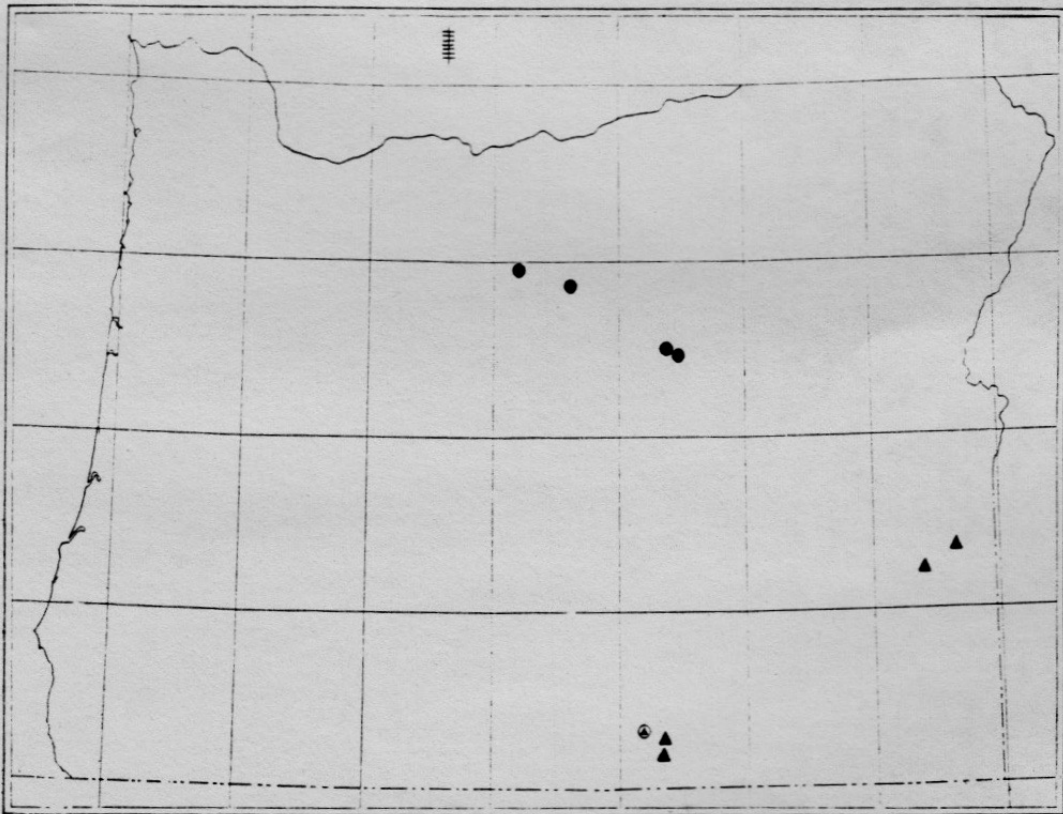


FIG. 52. Dancing Figures.

A, Site 57
B, Site 17
C, Site 58
D, Site 25



MAP 17. Circles in Series.



MAP 18. Ladders.

SHEEP HORNS

Following Steward, we have called the out-and-downward curving figure approximating an "M" sheep horns. These occur on the lower Deschutes (Site 14), at Sucker Creek (Site 33), and on Jordan River (Site 58).

DIAMOND SERIES

Designs consisting of a series of diamonds are found at Long Lake (Site 36) and at Watson (Site 53). At Long Lake they are placed with the long axes in contact; at Watson the short axes are in contact. This seems to be a design localized in this area.

HORNED TOADS

This figure occurs three times (Sites 30, 44, 50). There are two petroglyphs and a pictograph. The design is of a short figure, very broad in proportion to its length and with its legs turned forward as though poised to jump. Fig. 46 E shows the type.

CRESCENTS

A line or a number of parallel lines drawn in the shape of a crescent occurs three times, in pictographs at Sites 20 and 22 on the John Day River (only a few miles apart), and in a petroglyph at Long Lake (Site 36). At the first two sites the crescents are associated with complex designs and are very likely a part of the more elaborate figure; this seems to be the case also at Long Lake, although here they may be a single unit related to the curvilinear style of the area.

SPIRALS

The spiral occurs twice in associated areas, at Hole-in-the-Ground Ranch and Watson (Sites 52 and 53). These sites are along the Owyhee River.

TARGETS

The target, or a series of concentric circles with a dot marking the center, occurs only twice, in widely separated areas, at Powell Ranch (Site 13) and at Stone Bridge (Site 31). The former is a pictograph and the latter a petroglyph. It would perhaps be a more accurate classification to include this design with the concentric-circle type.

PELTS

The pelt design occurs twice. Both are pictographs in closely adjacent sites and are undoubtedly related. The sites are Indian Cave (Site 4) and Tumalo (Site 6). Again we have a localized design element.

ELK

An elk design, identified by the branching tined antlers, occurs twice. One is a pictograph at McKay Creek (Site 12), and the other is a petroglyph at Stone Bridge (Site 31).

SPOKED WHEEL

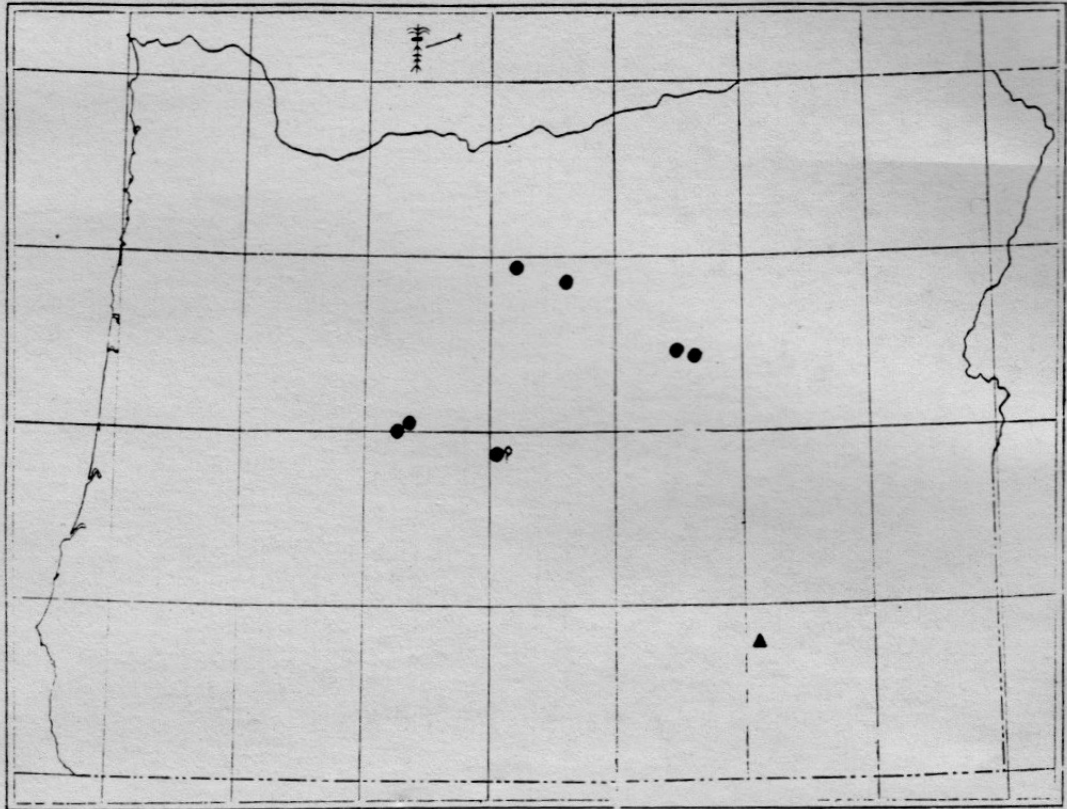
This design, a circle with a series of lines radiating from the center, is found once, at Site 14 on the lower Deschutes.

RIFLEMAN

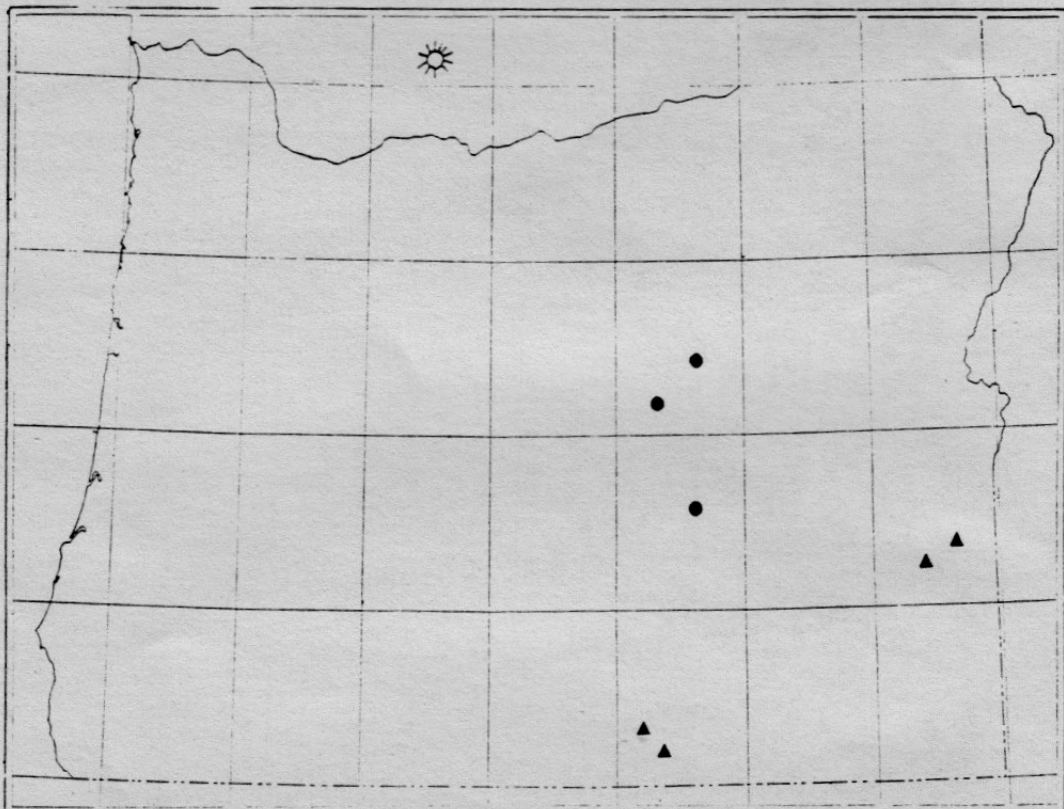
A rifleman appears once, at Shearer's Bridge (Site 14) on the lower Deschutes.

ANTELOPE (DEER)

This design occurs only once, at Willow Creek, Site 59, (Figs. 43 and 50 R). It is characterized by forward-projecting horns, and may be intended to represent either an antelope or



MAP 19. Floral Designs.



MAP 20. Sun Disks.

deer. Both types of animals are numerous in the region. However, from personal experience in the field in this area during which I have observed thousands of antelope, I would identify the design as representing that animal.

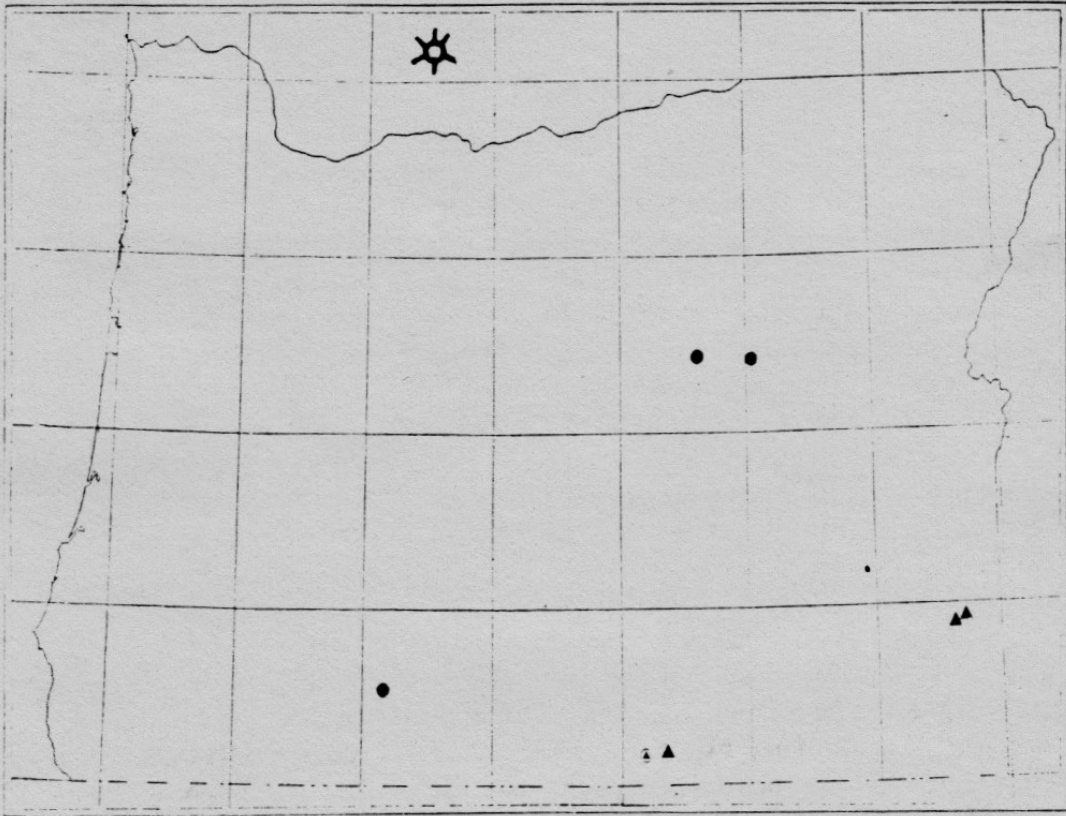
ARROWS

This design, which occurs three times, on the Crooked River (Site 10), at Clarno (Site 17), and at Riddle Ranch (Site 60), shows some variation between the two patterns. At Site 10 the shaft is a single straight line; at Site 17 the arrow is a shortened form of the conventional design; at Site 60 the base of the "shaft" broadens out to about the width of the "head" (Fig. 44).

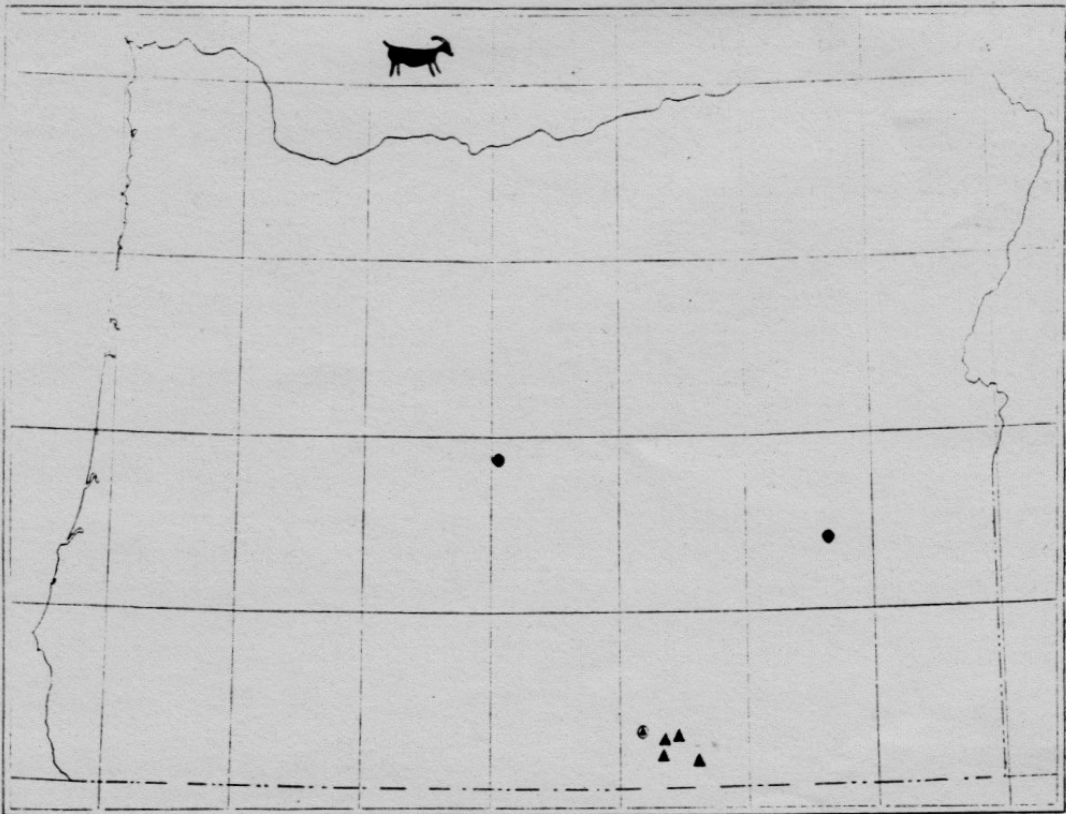
COMPLEX DESIGN

We have used this name to designate those involved designs in which it is impossible to follow the artist's work completely or to separate out the different design elements. The chart shows, as would be expected, that the greatest number of these designs is in the Great Basin area with its curvilinear style and in the adjacent pictograph region to the north.

At Big Wocas (Site 25) in the Klamath Basin there is an unusual design in the shape of a shield, which has been mentioned under RECTANGULAR GRID; it should perhaps be classified here (Fig. 19 A). The whole is composed of three shields of different sizes which build up the design, each one outlining the next smaller one. The smaller inside shield is blue-green, the next red, and the outside band is done again in blue-green.



MAP 21. Cog Wheels.



MAP 22. Mountain Sheep.

PART IV. GENERAL CONSIDERATIONS

One is immediately struck, upon examination of the map of general distribution of pictograph and petroglyph sites, by the fact that the areas of the two types of designs are clearly separated. Moreover the areas do not differ merely in technique. If we set aside the three or four elements of a practically universal distribution we find evidence of different stylistic developments in the petroglyph and pictograph areas. The pictograph area outside of the Klamath Basin is characterized primarily by naturalistic designs. This is illustrated by the preponderance of floral designs, stars, and quadrupeds (other than mountain sheep). While such designs occur also at petroglyph sites, yet, taken together, they occur among the pictographs at a larger proportion of the total number of sites than among the petroglyphs. Unless the pictographs are later as a type than the petroglyphs, we should expect the diffusion of stylistic traits and design element back and forth from one area to the other. That the diffusion has been mainly northward from petroglyph to pictograph areas is indicated by the fact that many of the characteristic Great Basin designs are found on the upper Deschutes and John Day rivers but not on the lower Crooked River or on the lower reaches of the Deschutes and John Day. This suggests that the pictographs are an intrusive element. They might very well have been introduced by the Sahaptin-speaking tribes. It may be conjectured that the influence came in from the east, probably from Nez Percé territory or from the Snake River country even further south, but north of the petroglyph area so strikingly represented on the Owyhee at Hole-in-the-Ground Ranch and Watson. It is hardly likely that the influences could have come from the Columbia Gorge area, if we consider the stylistic differences²⁵ and the fact that the designs in question are concentrated on the upper reaches of the rivers draining into the Columbia and tend to disappear toward the lower reaches of the rivers.

The Columbia River seems to present three different types: (1) an early petroglyph type evidently related to the elaborate stone carvings of the lower Columbia and Willamette rivers; (2) a pictograph style; and (3) a petroglyph series which shows rather striking resemblances to the Great Basin style. If the similarity to the Great Basin style is more than fortuitous, our study shows that we are faced with the problem of its diffusion to this area, in view of the gap both in technique and designs existing in the whole north central part of the state.

The suggestion is offered that a careful study of the Columbia River petroglyphs and pictographs will show that there is a style characteristic of that area, as has been found to exist elsewhere. The writer has examined both types of designs along the Columbia River north of Vantage and in the vicinity of Wenatchee. Both pictographs and petroglyphs are found in profusion and at the same sites. The style seems to differ little from the style in the Columbia Gorge in the vicinity of The Dalles, and the designs are executed with vigor and skill. The relation of this group of petroglyphs to those from other areas awaits a careful study of the art of the Columbia River as a whole.

²⁵ Strong, W. D., and Schenck, W. E., "Petroglyphs Near the Dalles of the Columbia River," *American Anthropologist*, n.s., vol. XXVII (1925), pp. 76-90.

The pictographs at Indian Cave (Site 4) west of the summit of the Cascades are to be classed with those of the main pictograph area. Geographical contiguity, style, and content all indicate this as the proper relation. According to Spier,²⁶ the southern Molalla occupied the territory in which these occur. But access to this area from the east was comparatively easy by means of a number of passes, and it is quite possible that we have here a summer campground where this record of Sahaptin influence was left by bands visiting the camas and berry fields in the area.

The Klamath area with both pictographs and petroglyphs gives every appearance of being a part of the northeastern California area rather than of the Sahaptin area to the north. The convincing argument here is the use of one color to outline another.²⁷ As Steward points out,²⁸ this northeastern California type (and we must add the Klamath Basin style) is strikingly similar to the style of the Santa Barbara region. In terms of the local stylistic character, the Klamath Basin is set off as a special area and is found to be oriented toward northeastern California.

The Willamette Valley provides a difficult problem. One might consider the petroglyphs of the valley as a phase of the characteristic stone carving reaching up from the lower Columbia, except for the fact that the styles are quite different. At Gaston there are human figures and at Cascadia bear or human tracks; but all the rest are geometric designs—wavy, zigzag, or short straight lines and combinations of these. It is quite probable that the saws and rectangular grids at Yoncalla were not intended as such by the artist; but in our classification certain combinations of lines suggested the designs rather convincingly, perhaps too much so. This stylistic type seems to have disappeared without elaborate development and to have been a localized style. The style is, however, very similar to that of the petroglyphs high up on the tuff beds at Tule Lake in northeastern California. Those in California, in view of their height above the lake bed, may be of a marked antiquity; and there may be a relationship between them and the Willamette Valley types. It is odd that, if the Willamette Valley petroglyphs are contemporaneous with the stone-carving art of the area, they are so completely different from it.

The designs of the southeastern part of the state are an extension of the Great Basin type of design, which is characterized above all by a curvilinear style, in which the circle is used singly and in a variety of combinations to produce elaborate and complex designs. There are naturalistic and rectilinear forms such as the ladder, rectangular grid, diamond series, etc., but the whole area is dominated by the elaborate and intensive use of the circle motif in some form. There are three minor areas of concentration in this larger region: (1) Stone Bridge (a marginal site); (2) Long Lake and the adjacent tableland to the north and east, which shows more

²⁶ Spier, Leslie, "Tribal Distribution in Southwestern Oregon," *Oregon Historical Quarterly*, vol. XXVIII (1927), pp. 358-365.

²⁷ Mallery refers to reported sites in the Klamath area, but discusses only one, which we could not locate; nor did any of our informants know about it. "There are in that neighborhood many rocks bearing painted figures; but Dr. Rau's . . . description refers only to a single rock, called Ktá-i Tupákshi (standing rock), situated about 50 yards north of Sprague river and 150 yards from the junction of Sprague and Williamson rivers. It is about 10 feet high, 14 feet long, and 12 or 14 feet deep." Mallery, Garrick, "Picture-Writing of the American Indians," *Tenth Annual Report of the Bureau of Ethnology* (1893), pp. 105-106. He then goes on to discuss the different designs reported to him and the method of their application. The designs were pictographs and they had been applied in two colors, red and white. The alternation of red and white bands of color appear in a number of the designs.

²⁸ Steward, J. H., "Petroglyphs of California and Adjoining States," p. 221.

characteristic Basin elements than Stone Bridge; and (3) the Hole-in-the-Ground-Watson region with its magnificent elaboration of the Basin type.

This latter region has 23 design elements out of the 43 represented in our photographs. If we limit the total number of designs to those found principally in the Basin and not found to the north, the proportion is much greater. The reason for this elaboration of traits in a peripheral area is difficult to find. Comparison with Steward's work shows that the center from which most of these designs have come is evidently the Southwest. Neither the presence of water nor the availability of food alone seems to account for the profusion in the Owyhee Gorge. To these factors must be added at least one more, safety from marauders. Safety was probably most adequately provided at Hole-in-the-Ground and Watson, less adequately at Long Lake, and least of all at Stone Bridge in the Warner Valley. Could the combination of these three factors—water, food, and safety—account for the marked development in this marginal area? Or was there some socio-psychological situation which was the real cause? That is a question which must go unanswered for the present and perhaps forever.

To what extent the transmission of elements is due to the ordinary peaceful diffusion through contact, to the movements of peoples as they sought more favorable habitats with the variations in climatic conditions or withdrew before the pressure of vigorous raiders and marauders, to localized cultural conditions, or to the combinations of some or all of these, it is impossible to say. The striking fact is that, in such a small region, we have such clearly differentiated areas apart from a certain few designs of practically universal distribution.

Composition as a form of presentation is more readily perceived in the naturalistic designs than in the geometric. Symbolism and symbolic compositions are probably most likely to occur in the geometric designs. But any effort to indicate what details are used in these involved curvilinear designs as a part of a larger whole from which each derives its significance is doomed to be merely speculative. The geometric patterns may have told as much of a story to the people among whom they were produced as the naturalistic. But we have little or no clue to the nature of the symbolism.

It is, however, worthwhile to call attention to several efforts at composition in the naturalistic medium. Probably the most striking of these is the dancing group on the large boulder at Site 58 (Fig. 42, Plate VI). There are dancing figures scattered at random over the rock, but the main group is executed near the base in a slightly curving line which fits nicely to the form of the rock. The circle motif so important in this area is carried out in the curving line of the dancers and in the posture assumed by each with his hands on his hips and his arms curved. This petroglyph is very pleasing when seen in its natural setting. The whole design has an unusual sense of life, with motion and vivacity strongly expressed. Two other dancing scenes at Clarno (Site 17), and at Big Wocas (Site 25), both pictographs, are stiff and lifeless in comparison.

We also find hunting scenes in which a hunter and animal are involved, and scenes in which two humans are involved. Hunting scenes occur with some frequency throughout both pictograph and petroglyph areas. They indicate quite clearly what the artist had in mind, but their effectiveness is limited by the artist's

lack of knowledge of perspective. The two outstanding examples of the second type are at McKay Creek (Site 9, Fig. 5), where the two men dressed in ceremonial costume face each other, and at The Narrows (Site 43, Fig. 31) where we have a combat scene in which one of the combatants is run through with a spear. This is effectively done and has unusual force.

As has been pointed out, we are not in a position to interpret the geometrical patterns in terms of composition. But we can make comparisons between the two techniques so far as technical excellence in the use of naturalistic elements goes. One would expect a higher development of the art of rock decoration when paint was used as medium; for painting is much easier to use as a decorative device than is a technique of carving in stone. But for our areas the superior achievement seems to have been in the more difficult medium. Apparently the potentialities of the medium do not alone determine achievement; richness and vitality in the culture and skill in the artist are indispensable factors for artistic excellence. To be sure, other things being equal, a medium of many possibilities should release the artist's skill more effectively than one of limited effectiveness.

Various writers have attempted to arrive at some interpretation of these rock inscriptions. Popular writers, drawing freely upon their imagination with little or no regard for facts, have propounded many patent absurdities. Competent writers, on the other hand, have been very reluctant to offer interpretations. All scientifically trained men agree in seeing a certain amount of symbolism in the art. The interpretation of it, however, is difficult; for, until it can be recognized beyond a doubt either by relating it to known cultures or by submitting it to contemporary Indians, we still have the question, "What symbolism?" This uncertainty of the meaning of a highly symbolic art is nowhere more evident than on the British Columbia coast, where Boas has shown that there is often marked difference of opinion in a group of competent observers and between the artist and the observers as to the significance of a particular design. This is especially true where, for technical reasons, anatomical accuracy had to be completely disregarded, as in the decoration of the Chilkat blanket. Again, while a certain device such as the triangle may in one area stand for the female procreative powers, that is no proof that it must mean the same thing wherever it occurs. Whether it does or does not can only be ascertained by ethnographical study. The wide distribution of geometric forms such as the rectangular grid and the concentric circle would bespeak for these a long existence, although not necessarily any marked stability of meaning. Gardner,²⁹ writing of rock paintings in the Argentine, says:

The commonest of the geometrical figures are circles of various kinds, including a considerable number with rays, which may very probably be representations of the sun. There are a fair number of rectangular figures, some of which resemble gratings while others are not unlike certain of the so-called "tectiforms" of the European rock-paintings of Palaeolithic age. Combinations of dots and of short strokes are very common; many of the latter suggest the idea of some sort of score or tally, and few may possibly represent human footprints and the tracks of animals. . . .

A comparison of these rock-paintings of North-West Cordoba with a large number of others, including both paintings and petroglyphs, has shown that they do not resemble those of the Diaguite region—roughly the provinces of Los Andes, Salta, Tucumán and Catamarca—so much as might have been expected from their geographical situation, but rather those of

²⁹ Gardner, G. A., "On some Argentine Rock-Paintings (Province of Cordoba)," *Congrès International des Americanistes, Compte-Rendu de la XXI^e Session* (1925), pp. 584-595.

Patagonia, Bolivia, and the United States of America. There are a number of striking resemblances between many of the individual figures and certain of those of the French and Spanish groups of cave and rock-shelter paintings, as also with the Bushman paintings of South Africa.

On the object or meaning of the paintings it is not possible to say much, except that none of them convey the impression of having been done merely to pass the time. A few of them probably represent some notable event in tribal history . . . others may have been executed with a religious or magical intention . . . but the people who have left these relics of their art have long been extinct, and no tradition lingers behind them to throw even a faint light on the problem.

Steward writes:³⁰

It has frequently been stated that petroglyphs and pictographs are but meaningless figures made in idle moments by some primitive artist. The facts of distribution, however, show that this cannot be true. Since design elements and style are grouped in limited areas, the primitive artist must have made the inscriptions with something definite in mind. He must have followed a pattern of petrography which was in vogue in his area. He executed, not random drawings, but figures similar to those made in other parts of the same area. The elements of design, then, must have had some definite significance which was the same over wide areas.

We can probably never know precisely why many of the petroglyphs and pictographs were made. But we can guess that many of them were made for some religious or ceremonial purpose. Among the Quinault on Puget Sound,³¹ Mr. R. Olson states, pictographs were made by boys at their puberty ceremonies and the figures represented mythical water monsters seen by the boys in their visions. Among the Nez Percé, Spinden reports a number of pictographs made by girls during their puberty ceremonies and representing objects seen by them in dreams or connected with the ceremonies. And among the Cupeño and Luiseno of southern California pictographs were also made by girls during their adolescence ceremonies . . . These facts do not of course prove that all petroglyphs were made during puberty ceremonies. But it does strongly suggest that most if not all were undoubtedly more than the results of idle moments, even of efforts to produce works of art.

Mallery cites the belief prevalent among different tribes in North America of the relation of these designs to the shaman³²; and among the Klamath Spier found the same relationship, with the practice sometimes observed of the shaman repainting the designs from year to year.³³ In the Southwest their use as clan symbols is reported.³⁴

But the point needs to be insisted upon that, even if in contemporary cultures pictographs and petroglyphs are associated in some way with adolescent ceremonies, certain shamanistic activities, or clan designations, as has been reported from different areas, one cannot argue back to their function in past cultures on the basis of present cultural practices alone. The use of objects for ceremonial or mystical purposes would in all likelihood depend upon some quality of the extraordinary which they possessed. That which is common and intimate is not a source of stimulation of the sense of mystery or awe, either in the primitive or the modern, until it has had a quality of sacredness imposed upon it in some manner. A quality of sacredness may have been imposed upon petroglyphs by tribes in the region who were as ignorant of their original meaning as we are. Such cases have been recorded

³⁰ Steward, "Petroglyphs of California and Adjoining States," p. 225.

³¹ The Quinault are erroneously reported here as being on Puget Sound. Olson, in a recent publication, lists pictographs and petroglyphs as wholly absent in this culture. "The Quinault Indians," *University of Washington Publications in Anthropology*, vol. VI, no. 1 (1936), p. 184.

³² Mallery, Garrick, "Picture-Writing of the American Indians," pp. 31-36 *passim*.

³³ Spier, "Klamath Ethnography," p. 142.

³⁴ Colton, Mary R. F. and Harold S., "Petroglyphs, the Record of a Great Adventure," *American Anthropologist*, n.s., vol. XXXIII (1931), pp. 32-37.

by Mallery and Spier. Shamans, never slow to capitalize potential sources of power, might, when the original meaning was no longer known, use the petroglyphs for their own purposes. Power-giving adolescent ceremonies might have found in the duplication of the mysterious designs a psychologically valuable source of power. While it is valuable to know that the painting of pictographs was used at the termination of adolescent ceremonies, the point of real importance is—why this practice rather than some other device out of the many possibilities?

Granted that a reasonable explanation may be found in one culture, it does not follow that the same explanation will suffice for other areas. That must be shown. This study, as well as others, has shown conclusively that design elements diffuse widely in this form of art. In view of the well-known manner in which design elements and meanings tend to break down, diffuse, and recombine with other elements of a pattern, any effort to explain examples of this form of art must confine itself to the culture area of which it may be a part. The classic study by Boas³⁵ of "The Decorative Art of the North American Indians" shows the different content of the triangle design in basketry, Pueblo pottery, and Plains decoration. Recent efforts to take the inverted isosceles triangle as a design element and to interpret it as a symbol of female fecundity, whether in the palaeolithic cultures of France or in early Chinese ceramics, is interesting but unconvincing.

Study of this phase of aboriginal culture upon the rigid lines laid down by Boas is the only method by which light will eventually, if ever, be thrown upon these "writings" to clarify the part they have played in native life.

³⁵ Boas, Franz, "The Decorative Art of the North American Indians," *Popular Science Monthly*, vol. LXIII (1903), pp. 481-498.

PART V. CHRONOLOGY

The age of the petroglyphs and pictographs might conceivably be reckoned by use of the following data: (1) weathering; (2) superimposition; (3) association with animals known to have become extinct; and (4) association with elements of known cultural age.

The use of weathering of the design and rock surface must be disregarded: because of the inequalities of rate of weathering in different climates; because of the different exposures of designs conceivably executed at the same time; and because of varying resistance of different kinds of rocks to erosive forces. Until some constant can be established, which appears to be quite impossible, the method is useless.

Superimposition will indicate only the relative age of the related designs.

The design of animals known to have become extinct, as for example the mastodon or in more recent times the mountain sheep in south central Oregon, may be used. In this case the design might be from a period preceding the extinction of the species or from some shortly following period while the memory survived. But the design might have diffused from some other area, or it might have survived long after its source and meaning were lost.

Association with elements of a culture, the age of which is known, is the only dependable method. Designs may appear much later than the introduction of the known element, but not before. For instance, horse designs might conceivably be of a period in the Pleistocene before that animal became extinct. But when certain cultural traits such as Gardner reports, very accurate representations of the Spanish accoutrements of the conquest, appear in the designs, they are known elements in culture the date of which can be fixed.

If distribution is any criterion of age, as it is held to be, then of course the "rock writing" art is very old. Our palaeolithic records verify this conclusion. However, the age of any particular design or style cannot be determined from this general method, although relative ages of different elements may and can be established in this manner for a given stylistic area.

But for accurate or relatively accurate dating we are driven back to the method of cultural association with elements of culture the age of which is known.

PART VI. CONCLUSION

There are two types of rock designs found in Oregon, the pictograph and the petroglyph. These fall into four major areas according to distribution of techniques and styles: (1) the Willamette Valley, a petroglyph area; (2) the southeastern part of the state, a petroglyph area; (3) the north central part of the state, a pictograph area; (4) the Klamath Basin, a petroglyph and pictograph area distinguished from the north central pictograph area because of the use of one paint to outline another.

In the Willamette Valley area are found particularly primitive or elementary types of design, types that are practically universal. The later elements are lacking. For this reason, the rock designs of the area would appear to coincide with the earliest effort at this kind of art in the New World. The southeastern type is clearly an extension, and a very important one, of the Great Basin type. This type, although consisting of both naturalistic and geometrical designs, is dominated by the curvilinear style, even in the representation of the human form. Why this style did not cross the high plateau to the Columbia we cannot say; but the climatic conditions may have been important factors. Desiccation, with great desert stretches, are characteristic of the intervening country; yet archaeological evidence indicates that the great lakes which once filled the fault regions of south central and southeastern Oregon were the centers of important culture and large populations. These lakes (long since dry) and the Owyhee River are the center of the petroglyph art of the area.

The pictograph art outside of the Klamath area seems to be intrusive, and to have come from the east. Its most marked development is in a fairly wide area across the high plateau of the north central part of the state, centering upon the upper reaches of the John Day, Crooked, and Deschutes rivers, and their tributary streams.

The designs within the state correspond to those reported by other observers elsewhere; and we find that those generally listed as most widely distributed are the most frequently found in Oregon. This study has been concerned primarily with distributions and not with interpretations. The problem of interpretation has been only touched upon. The study of distributions needs to be carried on in regions to the north and east; and intensive studies of special areas are needed to determine, if possible, the relation of this aboriginal art to the religious and ceremonial life and to the ceramic and textile art of the people.



PLATE I. Site 3, Yoncalla.

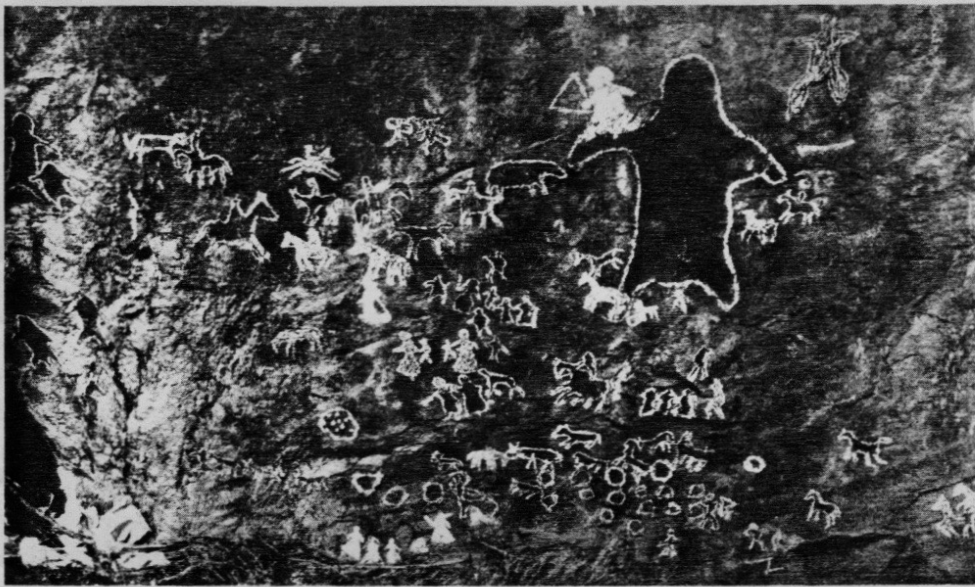


PLATE II. Site 4, Indian Caves.

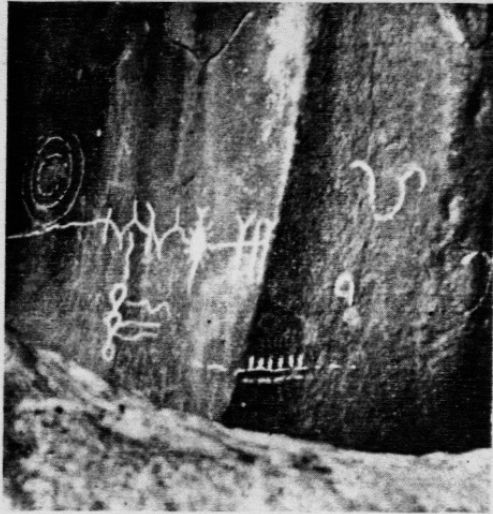


PLATE III. Site 37. Rim North of Long Lake.



PLATE IV. Site 39, Desert Lake.
(Reprinted from L. S. Cressman, *Archaeological Survey of the Guano Valley Region in South-eastern Oregon*, page 42.)



PLATE V. Site 48, Catlow Cave.



PLATE VI. Site 58, Yturrionobeitia Ranch.
(Reprinted from L. S. Cressman, *Contributions to the Archaeology of Oregon. Final Report on the Gold Hill Burial Site*, title page.)

Location	Concentric Circles	Wavy or Zigzag Lines	Human Figures	Humans with Headdress	Sun Disks	Hands	Bear or Human Tracks	Spirals	Snakes	Dots	Connected Circles	Circles in Series	Bisected Circles	Sheep Horns	Rectangular Grids	Bird Tracks	Rain Symbols	Diamond Series	Lizards	Spoked Wheels	
1. Gaston																					
2. Cascadia		X	X														X?	X?			
3. Yoncalla																					
4. Indian Cave				+																	
5. Devil's Lake																					
6. Tumalo Creek Trail																					
7. Tumalo				+																	
8. White Rock Ranch			+																		
9. Dry River Gorge			+	+																	
10. Crooked River Gorge			+	+																	
11. Crooked River																					
12. McKay Creek		+																			
13. Powell Ranch																					
14. Shearer's Bridge				X	+					X											
15. Fisher's Ranch				+																	
16. King's Canyon				+																	
17. Clarno				+																	
18. Mikkalo									+												
19. Lonerock																					
20. Picture Gorge																					
21. Picture Gorge		+		+																	
22. Dayville				+																	
23. Hall Ranch			+																		
24. Chilgoquin		+		+																	
25. Big Wocas			+	+																	
26. Picture Pass				X																	
27. Bly																					
28. Yocum																					
29. Willow Creek																					
30. Albert Rim																					
31. Stone Bridge		X	+	X	*	X															
32. Adel			X																		
33. Sucker Creek																					
34. Warner Valley																					
35. Twelve Mile Canyon																					
36. Long Lake			*	X						X											
37. Rims North of Long Lake			X	X																	
38. Lyon Ranch					X																
39. Desert Lake			X																		
40. Pot Holes				X																	
41. Silver Lake																					
42. Silver Lake																					
43. Narrows			+	+																	
44. Buena Vista Ranch				X																	
45. Bull Rock				*	X																
46. "P" Ranch			X	X																	
47. "P" Ranch				X																	
48. Catlow Cave																					
49. Krumbo River																					
50. Venator			+	+																	
51. Brogan																					
52. Hole-in-the-Ground Ranch		X	X	X	X																
53. Watson		X	X	X	X																
54. Jordan River		X	X	X	X																
55. Three Miles East of Jordan River																					
56. Murphy Ranch		X	X	X	X																
57. North of Arook		X	X	X	X																
58. Yturionobetia Ranch		X	X	X	X																
59. Willow Creek West of Burns																					
60. Riddle Ranch			+	+																	

X Petroglyph
 + Pictograph
 * Combined design
 ? Indicates marked mental reservations concerning correct classification

.....x.....+	Targets
.....+.....+	Pelts
.....+.....x.....x.....	Horned Toads
.....x.....x.....xx.....*.....x.....+	Horned Humans
.....x.....+.....+.....+.....+	Floral Designs
.....x.....+.....+	Crescents
.....xx.....x.....xx.....+.....+.....+++.....+	Series of Short Lines
.....x.....x.....xx.....x.....x.....x*.....+.....+	Double Loops
.....x.....x.....+.....+	Coyotes
.....xx.....x.....x.....+.....+	Saws
.....x.....x.....xx.....x.....x.....+.....+.....+.....+++.....+	Single Circles
.....xx.....x.....*.....+++.....	Cog Wheels
.....x.....x.....x.....x.....+.....+	Horses
.....x.....x.....+.....+	Mounted Humans
.....+.....xx.....xx.....x.....+.....	Mountain Sheep
.....x.....+.....	Elk
+.....x.....+.....+	Stars
+.....x.....xx.....xx.....x.....+.....x.....+.....+	Complex Designs
.....+.....x.....x.....x.....	Bowmen
.....x.....	Riflemen
+.....	Antelope (Deer)
+.....+.....+	Arrows