
The Huntington California Expedition.

*Basketry Designs of the Indians of
Northern California.*

By ROLAND B. DIXON.

BULLETIN

OF THE

American Museum of Natural History,

VOL. XVII, PART I, pp. 1-32.

New York, February 12, 1902.

LIST OF ANTHROPOLOGICAL PAPERS FROM THE
BULLETIN OF THE AMERICAN MUSEUM OF
NATURAL HISTORY.

	PRICE
A Table of the Geographical Distribution of American Relics in a Collection exhibited in the American Museum of Natural History, with Explanatory Text, by A. E. Douglass (Vol. VIII, 1896). 22 pp.....	\$0.75
The Temple of Tepoztlan, Mexico, by M. H. Saville (Vol. VIII, 1896). 6 pp., 5 pl.....	.50
A Rock Painting of the Thompson River Indians, British Columbia, by James Teit, edited by Franz Boas (Vol. VIII, 1896). 4 pp.....	.30
The Decorative Art of the Indians of the North Pacific Coast, by Franz Boas (Vol. IX, 1897). 54 pp.....	.75
An Ancient Figure of Terra Cotta from the Valley of Mexico, by M. H. Saville (Vol. IX, 1897). 4 pp., 2 pl.....	.40
The Huichol Indians of Mexico, by Carl Lumholtz (Vol. X, 1898). 14 pp., 2 pl.....	.50
Marked Human Bones from a Prehistoric Tarasco Indian Burial-Place in the State of Michoacan, by Carl Lumholtz and Aleš Hrdlička (Vol. X, 1898). 20 pp., 5 pl.....	.60
Description of an Ancient Anomalous Skeleton from the Valley of Mexico, with Special Reference to Supernumerary and Bicipital Ribs in Man, by Aleš Hrdlička (Vol. XII, 1899). 28 pp., 5 pl.....	.50
The Eskimo of Smith Sound, by A. L. Kroeber (Vol. XII, 1899). 64 pp., 4 pl.....	.80
Symbolism of the Arapaho Indians, by Alfred L. Kroeber (Vol. XIII, 1900). 16 pp.....	.25
A Shell Gorget from the Huasteca, Mexico, by Marshall H. Saville (Vol. XIII, 1900). 6 pp.....	.25
An Onyx Jar from Mexico, in Process of Manufacture, by M. H. Saville (Vol. XIII, 1900). 4 pp., 1 pl.....	.30
Cruciform Structures near Mitla, by Marshall H. Saville (Vol. XIII, 1900). 18 pp., 10 pl.....	1.00
A Bilateral Division of the Parietal Bone in a Chimpanzee, with a Special Reference to the Oblique Sutures in the Parietal, by Aleš Hrdlička (Vol. XIII, 1900). 16 pp.....	.30
A Bronze Figurine from British Columbia, by Franz Boas (Vol. XIV, 1901). 2 pp., 1 pl.....	.25
A. J. Stone's Measurements of Natives of the Northwest Territories, by Franz Boas (Vol. XIV, 1901). 16 pp., 5 pl.....	.80
The Eskimo of Baffin Land and Hudson Bay, by Franz Boas (Vol. XV, 1901). 370 pp., 4 pl.....	3.00
Basketry Designs of the Indians of Northern California, by Roland B. Dixon (Vol. XVII, 1902). 32 pp., 37 pl.....	1.50

BULLETIN
OF THE
AMERICAN MUSEUM OF NATURAL HISTORY.

VOLUME XVII, 1902.

I.—BASKETRY DESIGNS OF THE INDIANS OF
NORTHERN CALIFORNIA.

By ROLAND B. DIXON.

PLATES I-XXXVII.

ONE of the earliest-noted and prime characteristics of the Indians of California is the great development among them of the art of basket-making. Not only did they excel in technique, in producing water-tight baskets of both the coiled and twined varieties, but also in the extent to which they developed the purely artistic side of basket-making in the elaboration of designs and methods of ornamentation. Carving and painting were, as far as we know, not numbered among the arts of this portion of the Pacific coast; pottery was unknown; and decoration in dress was, if we except the feather ornaments used at dances, as a rule, of the simplest sort in comparison with the elaborate and often profuse decoration found among many of the Indians of the plains. The California Indians were, therefore, practically confined, for the expression of their artistic sense, to basketry alone; and possibly this concentration of effort will afford a partial explanation, at least, of the great perfection to which the art was carried.

But, while we find that basket-making and basketry design and ornamentation are characteristic of the California Indians as a whole, these arts were not developed to the same extent, or along the same lines, in all parts of the region. We can,

in consequence, distinguish several more or less clearly defined areas, each of which has a somewhat characteristic type of basketry and design. There is, of course, much intergrading, much that is difficult to classify; but on the whole the type areas are quite clearly distinguishable. Leaving the more detailed discussion of these type areas till later, it will be sufficient to outline briefly the different areas proposed. Beginning at the north, we have what might be called the Northwestern Type, which includes the area occupied by the Hupa (Athapascan), Karok (Quoratean), Yurok (Weitspekan), and perhaps the Shasta (Sastean). The Northeastern Type would comprise the Modoc and Klamath (Lutuamian), Shasta (?), Pit Rivers (Palainihan), Yana (?), Wintun (Copehan), and Maidu (Pujunan). The Pomo Type is confined apparently to this stock (Kulanapan). The relations of the Yuki (Yukian) and Costanoan are still doubtful. This division must be regarded as only provisional, and further study and material may serve to alter it here and there.¹

Each type area includes, as a rule, several distinct groups of tribes, each group possessing, as will be seen, its own distinctive type of design. In discussing the designs, therefore, each group will be considered separately, beginning with the Maidu, in regard to which the information is most complete.

DESIGNS OF THE NORTHEASTERN AREA.

MAIDU.—The Indians of this stock occupied the region which may be described roughly as lying east of the Sacramento River, extending as far as the Nevada line, and stretching north and south from the southern line of Lassen and Tehama Counties to the Cosumnes River. A brief description of a number of designs from this stock has already been given elsewhere.² Further collections from all parts of the Maidu territory have afforded a large amount of new material; and,

¹ The majority of the baskets the designs of which are here discussed belong to the second or Northeastern Type, and were collected during the years 1899 and 1900. A few baskets are included from the Southeastern Type for comparison, although the meaning of the designs was not obtained. The Pomo baskets are from a collection purchased by the Museum, and the meanings of the designs are those given by the collector, Mr. Carl Purdy.

² R. B. Dixon, *Basketry Designs of the Maidu Indians of California* (*American Anthropologist*, N.S., Vol. II, pp. 266-276).

though it is probable that there are other designs in use by these Indians, the present enumeration may be regarded as fairly complete. Following the plan adopted in the preliminary description, the designs found on the baskets may be divided into three groups, according to the object said to be represented: (1) Animal designs, (2) Plant designs, and (3) Designs representing various natural or artificial objects.

1. *Animal Designs.*—One of the commonest designs on baskets from all parts of the area occupied by the Maidu is that of the quail, or more properly the quail-tip. The characteristic feature of the bird (the head-plume) is represented by a vertical line, the end of which is bent at right angles, and somewhat enlarged. On Plate I, Fig. 1 (Butte County), a very characteristic form of the design is shown, and a more elaborate form, apparently only found in the southern portion of Maidu territory, is shown in Figs. 2, 3 (Placer County). This design seems to be confined exclusively to baskets of the coiled type.

Quite rare, and very local in its distribution, is the design known as "duck's wing" (Plate I, Fig. 4, Plumas County). The basket here shown is of considerable age, and is the only example seen of this design, which is said to typify the patch of white seen on either side of the bird. Of equal rarity, and occurring within the same limited area, is what is called an "eye" (Plate I, Fig. 5, Plumas County). There is here some resemblance to be noted to the design known as "longko" or "diamond" (Plate XIII, Fig. 2); but, at least in this region, the two forms are regarded as distinct.

All members of the Maidu appear to use a design representing an earthworm or caterpillar. One of the simplest and commonest forms, a series of single parallelograms of solid color linked together by the corners, is shown on Plate II, Fig. 1 (El Dorado County). A slight variation in the design as applied to the flatter plaque-baskets is shown in Fig. 2 (Butte County). Still another treatment is that in Fig. 3 (El Dorado County). In this case it was said that the banded parallelograms signified the striped caterpillar. With these is classed, because of similarity, a design of rather uncertain

significance (Fig. 4, Butte County). The only explanation which could be obtained for this was "big tongues."

The design known as "gray squirrel's foot" (Plate II, Fig. 5, Butte County), is similar to two others of different significance occurring farther to the north. The design has but a small range, and seems restricted to the Northern Maidu exclusively. Confined apparently to the Maidu of the Sacramento Valley about Chico is the fish-teeth design (Plate III, Fig. 4, Butte County). The intent here is to show the wide-open mouth of the fish, and, viewed from below, the resemblance is quite striking.

Designs representing snakes seem to be restricted entirely to the Southern Maidu, particularly to those in Placer and El Dorado Counties. On Plate III, Fig. 1, we have the rattlesnake, a design which occurs again in Fig. 3, the diamond-shaped figures here being hollow, and combined with the arrow-point design, further examples of which will be given later. The diamonds in these designs seem to be an imitation of the spots on the common rattlesnake of the region, *Crotalus lucifer*. Beside the rattlesnake, we find also the water-snake. This is shown, as applied to a plaque, in Fig. 2, and on large soup-baskets on Plate IV, Figs. 4, 5. It is probable that the design on the two unfinished baskets shown on Plate XVII, Figs. 1, 2, is the same.

On Plate IV, Fig. 1 (El Dorado County), we have a design not common, but evidently widely spread. This is the milleped or thousand-legged worm, the many small triangular appendages to the zigzag line being the many feet of the creature. Plate IV, Fig. 2 (Butte County), shows the same design on a basket of much better workmanship, and Fig. 3 (Placer County) shows what is apparently the same design, which here, however, is explained as the fly.

The butterfly pattern (Plate V, Fig. 1, Butte County) is said to represent the wing pattern of a species of large yellow butterfly. A smaller butterfly is said to have its wing pattern shown on the basket figured on Plate V, Fig. 2 (Butte County); it is, however, strongly suggestive of the rattlesnake design on Plate III, Fig. 1. In the same group with the butterfly

should be mentioned the moth-miller (Plate V, Fig. 5, Placer County). The spread wings of the moth are said to be represented in this design, which is apparently confined to the Southern Maidu. Its resemblance to the black-oak on Plate IX, Fig. 3, to the spool pattern of the Wintun (Plate XXIV, Fig. 1), and to the pine-cone (Plate XX, Fig. 1) of the Pit Rivers, may be noted.

Among those designs having a very limited range is that of the raccoon (Plate V, Fig. 3, Butte County). This is the only specimen of the design seen, and is explained as representing either the stripes on the animal or the *os penis*. The real origin of the basket shown in Fig. 4 is not certain. Although in the possession of the Indians of the Maidu stock in Big Meadows, Plumas County, and claimed by them to have been made there by Indians of that stock, there are reasons for supposing that it may be a Pit River basket, although possibly only a good instance of the adaptation of Pit River designs slightly modified. The design on the body of the basket is said to be flying geese, the triangles and rhomboids in their arrangement typifying the flight of the bird. The design around the edge is said to represent mountains (compare Plate XXII, Fig. 5).

Three of the designs shown on Plate VI, representing the grasshopper leg or foot, are more widely variant than any others seen. In all three cases the meaning of the design was given confidently. The type prevailing among the Southern Maidu is that in Figs. 1, 2 (Nevada and El Dorado Counties). Among the Northern Maidu in the high Sierra, the form shown in Fig. 3 (Plumas County) is the one in use, but it is a design which, so far as observation shows, is seldom used. In the Sacramento Valley villages of the Northern Maidu, however, still another form is customary (Fig. 4, Butte County). Here it was pointed out that the lines bent at an angle denoted the bent leg of the grasshopper. It seems not impossible that the form shown in Fig. 3 may be genetically related to that in Figs. 1, 2; and further search may show intermediate stages in this development. All three of these, however, seem to differ considerably in intent from Fig. 4.

2. *Plant Designs.* — One of the noteworthy features of Maidu

decorative art is the unusually large number of designs which are said to represent plants of some sort. On Plate VII, Fig. 1 (Butte County), we have what is called simply a "plant," no more specific description being obtainable. The basket itself is a very old one, certainly fifty years old, if not more. What is described as a vine is shown in Fig. 2 (Plumas County) and again on Plate VIII, Fig. 1 (Butte County), here, however, with slight variations. The spiral character of this design is supposed to represent the twining of the vine about a pole, the points being the individual leaves protruding on each side. As far as known, this design is confined exclusively to the Northern Maidu. The common brake (*Pteris aquilina*) is shown on Plate VIII, Fig. 2 (Butte County). The points are here said to represent the pinnæ of the fern; the significance of the striped central bar is, in spite of further inquiries, still unknown. This design also seems to be restricted to the Northern Maidu.

Two other northern designs are those shown in Figs. 3, 4 (Butte County). The former was declared to be a tree, but of what species was not known, although it was suggested that it was most probably the sugar-pine. This would seem reasonable, inasmuch as the pendants from the ends of the horizontal arms in the design might very well stand for the beautiful drooping cones of this most attractive tree. The so-called "flower" design occurs in Fig. 4, and is of quite frequent occurrence on baskets from the Konkau and other Maidu of the northern Sacramento Valley. The design here is somewhat irregular, but represents the overlapping petals of a flower, the resemblance being most striking, as in the case of the fish-teeth, when the basket is viewed from below.

Local again in distribution, at least with this meaning, is the yellow-pine (Plate IX, Fig. 1, El Dorado County). The portion of the tree selected for representation is not known. The very close similarity of this design to that shown on Plate XIV, Fig. 3, there explained as animal tracks, is worthy of note. With the large pack-basket shown on Plate IX, Fig. 2 (Plumas County), we return again to a northern design. This is known as the "pine-cone," and is one of the most effective designs

of the series. In this the sharp, horizontally directed points represent the strong spines of the large pine-cone of the region. The design about the upper edge seems to be the main design but half carried out, and is said to represent mountains. If, however, we compare these designs with the lizard and owl's claw on Pit River baskets (Plate XIX; Plate XXII, Fig. 5), the very strong similarity is at once apparent, and we are led to the conclusion that in this basket we have either a Pit River basket, or a remarkably good case of borrowing a Pit River design. It would not be impossible for the basket to be really from the Pit River Indians, for it was obtained in Big Meadows, on the very borders of Palainihan territory.

On Plate IX, Figs. 3, 4 (El Dorado County), are two plant designs explained respectively as the black-oak (*Quercus Kelloggii*) and white-oak (*Quercus lobata*). These designs are confined to the southern part of the Maidu region, and what portion of the trees in question are represented is not known. The similarity of these designs to others within the stock is noticeable. Fig. 5 (Plumas County) is explained as bushes or brush, and Fig. 6 (Plumas County) as either bushes or flowers; but in regard to this latter the identification was very uncertain. The similarity of the former to the gray squirrel's foot, etc., should be noted.

3. *Designs representing Natural or Artificial Objects.* — The third group of designs is that which includes all representations of natural or artificial objects, or the phenomena of nature. One of the commonest, not only of this group, but of all the designs met with, is that known as the "feather," or sometimes "arrow-feather." On Plate X are shown three examples of a simple type of this design: Fig. 1 (El Dorado County), as it occurs in the south, and Figs. 2, 3 (Butte County), the prevailing forms in the Sacramento Valley villages of the Northern Maidu. The intent in all cases is to depict the feathers used on the war arrows, which were thus notched with great regularity. More complicated forms of this design, the details of which are not yet clear, are shown on Plate XI. Only a single example was seen of the type of Fig. 1 (Butte County),

the H-like figures in the central stripe being quite unusual and unexplained. Another variant is that in Figs. 2, 5 (Plumas County), here associated with the quail-tip design, which forms the triangular figure in the centre about the rim. The pack-basket, Fig. 3 (Plumas County), shows a simple form of the design more like those on Plate X; and Fig. 4 (Plumas County) presents still a fifth type of the design, with an irregular figure of unknown significance inside the "point."

Without doubt the most frequently used of all designs is the arrow-point or flint. Throughout the whole Maidu area this design seems to predominate, and while varying in a number of ways, yet it is almost always easy to recognize. A rather common form of the design in the south is that on Plate XII, Fig. 1 (Placer County). Another type occurs in Fig. 2 (Plumas County). Here in this Northern Type the arrow-points are doubled, being placed base to base. In Fig. 3 (El Dorado County) is another and simpler treatment, and in Fig. 4 (Butte County) a rather striking arrangement in spirals. In all these cases the design seems to be differentiated from the simpler forms of the feather by the fact that the triangles are typically isosceles and have their bases or shortest sides horizontal, whereas the triangles in the feather design are rarely isosceles, and have their bases or shortest sides vertical or oblique. A simple form recalling Plate XII, Fig. 2, is that on Plate XIII, Fig. 1 (Plumas County). Here the points are placed base to base as in the other design, but actually in contact, and are linked as before by narrow lines. Plate XIII, Fig. 2 (El Dorado County), shows a very pleasing symmetrical arrangement of these double points standing singly, and is also remarkable as being one of the two examples, out of many hundreds of baskets seen, in which the groundwork of the design is dark; all others, without exception, having dark designs on a light background. Another symmetrical treatment occurs again in Fig. 3 (Butte County), and serves apparently as a transitional form to the simple zigzag in Fig. 4 (El Dorado County), which is one of the common forms of the arrow-point in this region. A very odd design occurs on the plaque-basket in Fig. 5 (Plumas County),

and was identified positively with the arrow-point by the woman from whom the basket was obtained. No other examples of this design were seen anywhere, and its very considerable divergence from the rather coherent body of arrow-point designs as a whole, is quite marked. An example apparently of the arrow-point design is that on Plate XIV, Fig. 1 (Plumas County). Here the design about the edge is the simple zigzag, and is unquestionably the arrow-point. Beneath this is another design in which the zigzags vary greatly in length. This design is not a Maidu design, and is not understood by them, but is distinctly stated to be copied from the baskets of people living to the southward, in all probability the Washoe. It is interesting to note, that, in this case of a clearly borrowed design, no attempt seems to be made to invent a meaning.

For the design shown in Fig. 2 (Butte County) no other explanation could be obtained than that it represented an oblong or diamond, the same word ("longko") being used to describe any other diamond-shaped figure, as, for example, the diamonds in a pack of cards. In Fig. 3 (Butte County) the design is that known as "animal tracks," the particular animal being very uncertain. The branching of the pattern from the apices of the "points" is said to mean that the "track runs both ways." The design is of moderate frequency among the Northern Maidu.

Of rare occurrence, and very local in distribution, is the design called "mountains and clouds," shown in Fig. 4 (Plumas County). Here the superposed triangles represent a mountain-range seen end on, in perspective, the short vertical lines being trees. The clouds are represented by the zigzag about the edge of the basket; but this is practically identical with the zigzag explained as arrow-points in other cases. A rather asymmetrical and curious design is that in Fig. 5 (Butte County), said to be "something turning round." This is combined with arrow-points also.

Wood in sticks or billets is shown on Plate XV, Fig. 1 (Placer County), and again in Fig. 2 (El Dorado County). The latter, especially, strongly recalls the big-tongue on Plate II,

Fig. 4, and also the earthworm. A pair of tongs is said to be represented in Fig. 3 (Butte County), the allusion being to the split sticks used for removing heated stones from the fire in order to put them in the acorn-soup, for the purpose of cooking it. In Fig. 4 (El Dorado County) we have a representation of beads, while the somewhat similar design on a basket of much coarser make (Fig. 5, El Dorado County) is said to be a trail or path.

This completes the list of designs known with any certainty; but the following designs, although for the most part unexplained, are given, in order to have as large a collection as possible for comparison.

On Plate XVI are one or two, the meaning of which is still a mystery. Fig. 1 (El Dorado County) may be either a hornet or a tree. Fig. 2 (Nevada County) is completely unknown. Fig. 3 (Butte County) is identical with the fern of Plate VIII, Fig. 2, with the addition of the small triangles. Fig. 4 (Plumas County) is probably feather and arrow-point, although, in the absence of definite statement to that effect, this identification must be regarded as only provisional. Plate XVII also shows a number of designs the meaning of which is unknown or uncertain. Figs. 1, 2 (El Dorado County), are probably partly finished water-snakes, while Fig. 3 (El Dorado County) is apparently the feather (?), but very roughly made. The significance of Figs. 4 (Placer County), 5 (Plumas County), 6 (El Dorado County), is completely unknown, the last strongly suggesting a more southern origin, perhaps, with Fig. 3, in the Moquelumnian area. The curious and intricate design appearing in Fig. 7 (Butte County) seems to have arrow-points about the rim; but the main design is entirely unexplained, inquiries failing to elicit any information in regard to it. Fig. 8 (Plumas County) is of interest, for, although unexplained, it seems to show the deer-gut design so common among the Pit Rivers, and to be another case of borrowing or copying a design from some other stock.

Having now described and considered in some detail the various designs in use among the Maidu stock, there remain several more general considerations suggested by the study

of the designs as a whole. In the first place, it is quite clear that the designs are not rigidly fixed, but are subject to considerable variation. In some cases, as in the quail-tip (Plate I), the feather (Plates X, XI), and the arrow-point (Plates XII, XIII), the variation is effected chiefly by a different arrangement of the characteristic features of the design, — features which seem to remain quite constant throughout the entire stock, and to be more or less easily recognizable in all their modifications. In other cases, as, for example, the grasshopper-foot (Plate VI), we have apparently two types: Figs. 1, 2, 3, forming one, and Fig. 4 the other. The first of these types varies considerably, it is true, but may, I believe, be regarded as substantially the same in intent. In cases of this sort, where two or more different types for the same design occur, we never find both types in use in the same region apparently, either one or the other being consistently used all through a given area.

As regards variation in design depending on differences in weave, little can be said, since the very great majority of baskets now made by the Maidu are of the coiled variety alone. Only the pack-baskets are of the twined or woven variety, and of these but few are now made. The grasshopper-leg design on the pack-basket shown on Plate VI, Fig. 4, does not occur, so far as known, on baskets of the coiled variety, and this constitutes the only satisfactory case of woven-basket designs. In the other instances of woven baskets (Plate V, Fig. 4; Plate VII, Fig. 2; Plate XI, Fig. 3) there is some question whether they are genuine Maidu baskets; but, granting that they are all undoubtedly Maidu in their origin, we have only the feather common to both coiled and woven varieties, and this does not appear to differ to any extent. From these few and rather unsatisfactory instances, then, it would seem that the design was essentially the same, whether on coiled or woven baskets.

To some slight extent there is evidence of a restriction of certain designs to certain types of baskets; the quail, fish-teeth, moth-miller, vine, and fern not occurring, so far as known, on plaque-baskets or trays, but being restricted to

soup-baskets only. On the other hand, the earthworm, water-snake, milleped, feather, and arrow-point seem to be used indiscriminately on baskets of both types.

In the arrangement and grouping of designs there is a strongly marked preference for the spiral and zigzag line, the designs running either in equidistant spirals from top to bottom of the soup-baskets and in whorls on the plaques, or in a series of "points" placed symmetrically about the centre of the basket, forming a star. These differ as to the number of points; but three or four, more generally the former, is the rule. The arrangement of the design in a series of horizontal parallel bands is quite unusual, although it does occur in a few examples.

The distribution of the designs within the area occupied by the stock discloses one or two points of interest. Apparently of universal distribution and also of most frequent use are the quail-tip, feather, and arrow-point. One can hardly find a family anywhere among whose baskets one of these designs is not represented, or, perhaps, all. Less frequently used, but also known to all the stock, are the earthworm (and the similar wood or big-tongue designs), milleped, grasshopper-leg, etc. Of more local character, but still with a fairly wide distribution, are such designs as the rattlesnake and water-snake, confined apparently to the Southern Maidu; or the vine, in use only by the northern sections. Still more local are many of the other designs, such as the duck's wing, squirrel's foot, fish-teeth, moth-miller, tree, flower, etc., which are, so far as known, confined to single valleys or even villages. Of course, one can never be certain that a design is of local occurrence only; for many designs have died out locally, in all probability, or, even if still in use, the baskets on which they occur may have been overlooked. Except so far as the first cause of error is concerned, the distribution as here given is probably fairly accurate, as a record was kept of all baskets which could be found in every village and house visited, the whole number of baskets seen amounting to several hundred. Owing to the much smaller number of Indians in the southern part of the Maidu region, it is not quite fair to compare the number of de-

signs in use in the northern area with those in the southern; still, allowing for the scant population and the probability that as a consequence several designs have here become locally extinct, there seems to be a difference between the two areas. The total number of designs found north of the Yuba River is twenty-two (or twenty-four, including the two doubtful instances); of these, ten are representations of animals, five of plants, and seven of natural or artificial objects. South of the Yuba, only sixteen designs were found, of which eight represent animals; three, plants; and five, natural or artificial objects. These figures would seem to show a slightly greater paucity of designs in the southern section, with about the same relative proportion of the different types of design. The total number of designs in use by the stock as a whole amounts to something over forty.

Taken as a whole, the designs of this stock would seem to be characterized by a considerable conventionalization. In most cases the intent of the design is not clear from mere inspection, but must be explained before it can be understood. There are one or two designs, however, which, in so far as the nature of the material and the art will allow, are almost as realistic representations of the objects as one could expect. Such, for example, are the quail-tip, fish-teeth, milleped, feather, etc. Here, however, the object is, as a rule, so extremely simple, that, even although the design is a moderately good representation, it might pass equally well as the representation of something else. This "obscure realism," as it might be rather contradictorily termed, seems to be of moderate frequency in the designs.

In several instances, as, for example, in the linked parallelograms, what is virtually the same design receives different explanations among different members of the stock. Such designs are usually the most simple ones, and might be classed with the obscurely realistic designs just referred to. The bearing of these cases on the general problems of design will be referred to again later.

One of the most striking characteristics of the Maidu, as compared with other stocks, is the very strong tendency to

put but one design on a basket. There are four or five cases, in the seventy or more baskets here shown, in which more than one design is used. This proportion is certainly too large, the number of cases in which more than one design occurs on a basket averaging more nearly three out of a hundred. The distinctiveness of this characteristic will be apparent as the designs of the other stocks are taken up.

To sum up, then, the characteristic features of Maidu basketry-designs may be said to be the very large variety and number, the frequency of animal designs and the unusual predominance of plant designs, the considerable number of designs in which there is a more or less obscure realism, the strong tendency shown toward an arrangement in spiral or zigzag lines, and the well-nigh universal practice of putting but a single design on a basket.

PIT RIVER. — The Indians commonly known by this name, and belonging to the Palainihan linguistic stock, occupy the greater part of the valley and drainage basin of the Pit River in northeastern California, and are the immediate northern neighbors of the Maidu. The designs here given form but a portion of the whole body of design known to the stock, collections from this region not being as complete as from the Maidu area to the south. It will be noticed, that, whereas the Maidu make baskets of both the coiled and woven varieties (although principally of the former), the Pit River baskets are all, so far as known, of the woven type. Dividing the designs into groups as far as possible, we may again begin with —

1. *Animal and Plant Designs.* — Among the many peculiar and unique designs in use by these Indians is that known as "mussel's tongue" (the fresh-water mussel), shown on Plate XVIII, Figs. 1, 2, 3. One of the commonest forms is that in Fig. 1, which has combined with it, as a rim around the edge of the basket, the arrow-point. Fig. 2 shows another form of the design, combined here with the stripe. In Fig. 3 the design appears again, here subordinated to the pine-cone, represented by the hour-glass figures, which predominate in the ornamentation.

The design in Fig. 4 is known as "skunk," perhaps com-

bined with arrow-point. Whether this is the track of the animal, or refers to some part of it, or a marking, could not be discovered. Strongly resembling some of the Maidu designs is that known as "fish-tail," shown in Fig. 5, the larger terminal triangle being apparently the characteristic feature. The sharp zigzags in Fig. 6 represent a bent knee. Of much greater frequency, it seems, is the design shown on Plate XIX, Figs. 1-4. Of these, Figs. 1, 2, are declared to be the lizard, or lizard-foot, in Fig. 2 in combination with the diamond. The characteristic motive of this design appears again in Fig. 3, here, however, explained as the eye. It seems probable, however, that the central portion only of the figure is the eye, and that the border is again the lizard. In Fig. 4 the design (the same as that in Fig. 1) is declared to be the quail. About the rim of this basket we have the hill, or, as otherwise explained, the bear's foot. This alternates with the mussel's tongue, seen here to the extreme right. Below the lizard or quail design is another, in a series of points, about the very bottom, this being known as the "meadow-lark's neck," being a representation of the collar, or V-shaped mark, on the throat of the bird in question.

Suggesting somewhat the similarly named Maidu design is the flying-geese pattern shown in Figs. 5, 6. The design is simpler than the Maidu form, but, at least in Fig. 5, suggests fairly well the appearance of geese in flight. Plate XX, Fig. 1, is also, probably, the same design, to which has been added the pine-cone. The design in Fig. 2 is one of the few which are representative of plants, this being said to be bushes or brush of any kind. The only other plant design is the pine-cone already alluded to, shown in Fig. 1 and on Plate XVIII, Fig. 3.

2. *Designs representing Natural or Artificial Objects.* — On Plate XX, Figs. 3, 4, 6, we have what is called "intestines," or more specifically given sometimes as "deer-gut." There seem to be two slightly different forms of this design, although the continuous bent line seems to be the fundamental feature. Figs. 3, 6, are said to be combinations of the deer-gut with the arrow-point. Somewhat similar, superficially, is the deer-rib shown in Fig. 5, here said to be combined with the arrow-

point, as in the case of the deer-gut. Both deer-rib and deer-gut are very common designs, and may occur without the accompaniment of the arrow-point. Without doubt, the goblet-shaped form of Fig. 5 is not native, but is merely a copy of similarly shaped objects seen in the possession of the whites.

Another design of very frequent occurrence, and susceptible of several modifications, is that known as "deer-excrement," shown on Plate XXI, Figs. 1, 2, 3, in the last instance together with the so-called "rough" or "crooked" design. This is rather strikingly suggestive of the simpler forms of the Maidu feather, and is shown in Fig. 4 in combination with the familiar arrow-point, which occurs again in Fig. 5.

Plate XXII shows several designs the meaning of which is more or less in doubt. Fig. 1 is completely unknown. Fig. 2 is possibly the arrow-point, or perhaps flying geese (?). In Fig. 3 the design is, without doubt, the skunk-nose; while Fig. 4 is the arrow-point again. The design in Fig. 5 is explained variously as lizard (compare Plate XIX, Figs. 1-4) and as owl's claw. Fig. 6 is said to be flying geese, but the determination is very doubtful.

In so far as may be judged from the material at hand, the designs of this stock are subject to considerable variation in the mode of arrangement, shown here especially in the case of the deer-excrement and mussel's tongue. Variation depending on difference in make is here negligible, as no baskets of the coiled type are made. So far as noted, there is no restriction of certain patterns to certain types of basket. In the arrangement and grouping of designs, there is, as in the case of the Maidu, a very strong tendency toward spiral and zigzag lines, with the addition of the use of vertical or radial lines, as on Plate XVIII, Fig. 4; Plate XXI, Fig. 1; Plate XXII, Figs. 2, 5. Horizontal bands are rare, as in the case of the Maidu. The question of the distribution of the designs must wait for fuller material; but their relative frequency within the small area visited shows that the most common are the deer-rib, deer-gut, lizard, and owl's claw, followed closely by the eye, deer-excrement, flying geese, and crooked or zigzag lines

Even in the limited area so far studied, it is noticeable that in one or two cases, if not more, the same design receives a different explanation from different individuals, which is contrary to the rather remarkable uniformity of explanation among the Maidu, over considerable areas. In the nature of the designs there seems to be, perhaps, a slightly greater tendency toward conventionalization than is to be seen among the Maidu, and, as compared with these in the matter of the number of designs on the basket, there is a marked increase in the tendency to use several designs instead of one.

From the foregoing, it would seem that, as a group, the designs in use by this stock are characterized by a considerable variety and number (falling considerably short of the Maidu, however, in this regard), by the marked frequency of animal designs (absence of snake designs) and the equally marked infrequency of plant designs, by the considerable variation of some designs within small areas, by a greater tendency toward grouping several designs on a single basket, and, while preferring the spiral or zigzag arrangement, varying this with that in vertical and radial lines.

WINTUN. — The Copehan stock, to which these Indians belong, occupies that portion of the Sacramento Valley lying west of the river, from the mouth to the neighborhood of Redding, north of which it spreads considerably to the east, occupying all the head-waters of the river, and extending westward into the region of the Upper Trinity. The stock thus covers a large area, and is the western neighbor of both Maidu and Pit River peoples. As in the case of the latter, the art of making coiled basketry seems not to be practised by the Indians of the Copehan stock, at least not by the Wintun branch. The designs here shown¹ are probably but a portion of those in existence. Grouping them as far as possible into classes, we have, —

1. *Animal Designs.* — On Plate XXIII, Fig. 1, we have for the body of the design the bent elbow, and about the base arrow-points. It is probable that the points on the bent

¹ The baskets here figured were obtained in the vicinity of the Sacramento River, in the region above Red Bluff.

[*January, 1902*]

elbow are also arrow-points. The sucker's tail is shown in Fig. 2. Almost identical with the design known to the Pit River Indians as "deer-gut" is that shown in Fig. 3, here explained as a water-snake; while the rattlesnake's head is represented in Fig. 4. The wolf's eye is shown in Fig. 5. An obscure and rather complicated design, apparently, is that known as "flying geese" (Fig. 6), which occurs in a somewhat different form in Fig. 7. Here the body of the design is the flying-geese pattern, while about the edge is a row of arrow-points, and below, about the base, a row of rattlesnakes' heads (?). Fig. 8 seems to have an upper row of arrow-points, with the bear's foot below.

2. *Designs representing Natural or Artificial Objects.* — What is called simply the "empty spool" is shown on Plate XXIV, Fig. 1. This explanation is far from satisfactory, but at present no other can be given. Fig. 2 is given the same explanation. The design on the basket in Fig. 3 is declared to be "leaves strung along," and suggests at once the Maidu vine. The deer-excrement occurs in Fig. 4, in a somewhat different arrangement from that of either the Maidu or Pit River Indians. The diagonal stripes of Fig. 5 are stated to be "pulled around," alluding, apparently, to their spiral arrangement. Figs. 6, 7, are each explained as "striped;" while Fig. 8 is known as "crossways."

From the limited amount of material here presented, but few reliable conclusions can be drawn. We may note, however, that, in the matter of the arrangement of designs, while spiral and zigzag lines are common and horizontal bands are also quite frequent, vertical lines as used by the Pit River Indians, although sometimes met with, are rare. Of the thirteen designs here shown, more than half are animal designs, and but one is regarded as the representation of a plant. Although, as a rule, but one design is placed on a basket, yet we find instances where two or three are thus used.

The general characteristics of the stock would seem to be much the same as those of the Pit River or Palainihan; the chief difference being in the relative frequency here of snake designs, in the tendency to extremes in the grouping of the

designs (the rule being either one or many), and in the distinctly greater tendency toward arrangement in horizontal bands.

YANA. — Indians of this stock are now so few in number, that it is difficult to secure any material of which one can be certain that it is native to the stock. In former times this stock occupied the region between Little Cow Creek and Mill Creek in Shasta and Tehama Counties, being surrounded by the Maidu, Wintun, and Pit River Indians. At present, but a handful of these interesting people survive, and they are much mixed with the Pit Rivers. On Plate XXV, Figs. 1, 2, are two baskets, of which only the second can be regarded as showing with any certainty a native design. In Fig. 1 we have the wolf's eye, recalling somewhat the similarly named design among the Wintun. The design in Fig. 2 is said to be a house. Inasmuch as the basket itself is of a different shape and type from those seen among the Pit River or Wintun, it seems more probable that we have here a real Yana design. Both were, however, declared, by the half Yana, half Pit River Indian from whom they were obtained, to be real native designs.

DESIGNS OF THE SOUTHEASTERN AREA.

The following baskets, obtained in Amador and Calaveras Counties, from Indians belonging to the Moquelumnian stock, are introduced here only for comparison of the designs as such, inasmuch as the meaning of the designs was unfortunately not obtained.

On Plate XXV, Fig. 3, we have a very simple design, suggesting the Maidu earthworm and the Pit River and Wintun deer-excrement. Fig. 4 would seem to connect itself with the water-snake and rattlesnake designs of the Southern Maidu. On Plate XXVI, Fig. 1, is a design comparable, perhaps, with the eye and diamond; while in Fig. 2 the quail-tip is exactly reproduced. Fig. 3, again, is comparable to several of the designs given in the previous pages. Of a quite different type, however, is the design in Fig. 4, — a design seemingly rather closely related to designs in use by Indians of the Mariposan

stock farther to the south. In Fig. 5, also, we have a highly characteristic use of the simple zigzag,— a design which, in this shape, seems also to be more southern than northern in its affinities.

DESIGNS OF THE POMO GROUP.

The Indians of this stock occupied a considerable area to the west of the Wintun tribes of the Sacramento Valley, spreading over most of the Russian River region, and between it and the coast. Like the Maidu, the Pomo or Kulanapan tribes make both coiled and woven basketry, and their baskets have, as has been shown by Mason,¹ a remarkable number of forms. The Maidu were accustomed to decorate their baskets, to some extent, with interwoven feathers, and pendent and fixed bits of shell and beads, but never, apparently, reached anything like the perfection of the art to which the Pomo attained. Owing to the great extent to which several designs are combined on baskets from this stock, it is not possible to separate the baskets into classes as before; but to some slight extent we may preserve the same order of treatment.

Apparently quite common among the Pomo, is the quail or quail-tip design shown on Plate XXVII, Fig. 1. The design is here combined with the red mountains, these being the triangular figures; while the quail-tip is shown in the intervening space. A different treatment of the quail-tip is that in Fig. 2, the design here forming a fringe along the edge of the red mountains, and again slightly different in Fig. 3. In Fig. 6 the quail-tip occurs only on one side of the mountain design. The red mountains occur again in Fig. 4, in combination with the quail-tip and also with the spots on a fawn, represented by the linked parallelograms. Similar, except that the red mountains are in a double row, is the design in Fig. 5; and here, again, the quail-tip appears about the base, although in this form suspiciously similar to the zigzag on some of the pack-baskets. Fig. 7 contains the red mountains and also the buckeye (compare quail-tip). Red mountains

¹ O. T. Mason, *The Technique of Aboriginal Basketry* (*American Anthropologist*, N.S., Vol. III, pp. 109-129).

occur again in Fig. 8, with the addition of the grasshopper-shoulder, and with the "meshes of a fishnet" about the extreme edge. Still another form of mountain is shown in Fig. 9, in combination with leaves about the base.

The familiar quail-tip appears again on Plate XXVIII, Fig. 1, here in combination with crossing trails; the same design apparently occurring again in Fig. 6. In Fig. 2 the crossing trails occur once more, combined with what is called "zigzag." The remaining designs in this group are not explained. Fig. 4 is strikingly suggestive of the Maidu flower design, and is here executed with great symmetry. Figs. 5, 7, are apparently to be regarded as local variations of the red mountains.

Associated, apparently, with the zigzag, we have the quail-tip again on Plate XXIX, Fig. 1, the quail-tip here occurring as a row about the edge. Fig. 2 surely, and Fig. 3 probably, is the zigzag alone; the latter being an especially effective treatment. A very good example of the arrow-point is that shown in Fig. 4. In Fig. 5 the crossing trails again make their appearance.

The large woven baskets of the pack-basket and storage types show a profusion of ornament; a very considerable number of designs, or repetitions of the same design, occurring on a single basket. On Plate XXX, Fig. 1, for example, the upper row, immediately about the edge, is meshes in a fishnet, and consists of a succession of parallelograms or squares. This is succeeded, in passing toward the base, successively by zigzag, red mountains, half arrow-points, red mountains and zigzag combined, zigzag, red mountains, and zigzag. In Fig. 2 the design is not explained; but in Fig. 3 we have again a long series, beginning at the top with meshes in a fishnet, zigzag, red mountains and zigzag, red mountains and zigzag, red mountains, zigzag. A simpler ornamentation is that on Plate XXXI, Fig. 1, in which the red mountains are arranged in a spiral, and the meshes in a fishnet again occur in a row about the rim. Fig. 2 shows again a combination of designs, beginning as usual with the meshes in a fishnet, and followed by zigzag, meshes in a fishnet, zigzag, zigzag, and lastly, apparently, the meshes in a fishnet again, although this is not certain. The

designs on the two baskets on Plate XXXII are not explained, but seem to be combinations of red mountains and zigzags, with the usual meshes in a fishnet about the rim.

The large baskets used for storage, etc., show essentially the same designs. On Plate XXXIII, Fig. 1, we have the familiar red mountains and zigzag designs arranged in spirals. These occur again in Fig. 2, with the addition, probably, of arrow-points. The red mountains are also the dominant motive in Figs. 3, 4; the latter having again the zigzag, and presumably the arrow-point. All four of these baskets seem to have the meshes in a fishnet about the rim. Several designs, arranged in horizontal bands instead of spirals, are shown on Plate XXXIV, Figs. 1, 2. Fig. 1 has about the rim the meshes in a fishnet, and then, in succession, buckeye-trees, zigzag, red mountains, red mountains, crow's tracks. In Fig. 2, a very large basket, the designs are much the same, and occur in about the same order; viz., meshes in a fishnet, an unknown pattern, buckeye-tree, zigzag, red mountains, red mountains. Returning again to the spiral arrangement in Fig. 3, we find crossing tracks, zigzag, and red mountains, with the usual rim design. The meaning of the interlacing diamond figures is not given.

Two other large baskets of this same type are figured on Plate XXXV. Fig. 1 has the usual rim design followed by zigzag, red mountains, crow's tracks, and meshes in a fishnet. In Fig. 2 we have a striking treatment of the zigzag; the break in the design, known as the "dau," being filled with another figure. The plaque-baskets again present the same designs. On Plate XXXVI, Fig. 1, we see the arrow-point. In Fig. 2 we have, perhaps, the crossing tracks, strongly suggestive, however, of the empty spool among the Wintun, and the pine-cone among the Pit Rivers. Several varieties of the zigzag are shown in Fig. 4, apparently; and in Fig. 3 we find a simple treatment of the quail-tip once more.

From the preceding description of some of the designs in use among Indians of this stock, several general conclusions seem warranted. Variation in the designs is more or less noticeable, the zigzag having apparently the greatest number

of divergent forms. Variations in design, due to differences in weave, may perhaps be noted in one or two cases; as, for example, the strongly rectangular form of the zigzag in the two coiled baskets shown on Plate XXIX, Figs. 1, 3, a form which seems to be wanting in baskets of the woven variety, where the angles are more acute. There is, apparently, a restriction of certain designs to certain weaves, inasmuch as the quail-tip, leaf, the particular form of crossing trails shown on Plate XXIX, Fig. 5, etc., are not seen on any of the baskets of the woven variety, except in the case of the quail-tip on Plate XXXVI, Fig. 3. The zigzag, also, seems very much more common on baskets of the woven than on those of the coiled variety.

In the arrangement of designs, the very frequent use of horizontal or concentric bands on all baskets of the woven type is the most noticeable, this form of arrangement occurring on half of the baskets here shown. In the case of coiled baskets, the arrangement in spirals, or vertical lines, seems to prevail. If we compare the number and character of the designs found on the forty or more Pomo baskets here shown, with those found on baskets of the other stocks here described, we are at once struck by the comparative paucity of designs; only eleven being here shown. In another series of thirty-five Pomo baskets, about six additional designs were found, giving a total of seventeen designs (from seventy-five baskets), as compared with thirteen in the case of the Wintun (from sixteen baskets), sixteen from the Pit Rivers (from thirty baskets), and more than forty from the Maidu (from seventy-nine baskets). Not only is this paucity of designs as a whole very noticeable, but the extraordinarily small number of animal designs is remarkable, only three of the designs here shown being traced to animal motives; while, on the other hand, more than half of the whole number of designs relate to natural or artificial objects. In all the other stocks here described, the preponderance of animal motives was very marked. In the Pomo, then, we have a people who had developed the art of feather decoration to a very high degree, but who were at the same time far behind the

other stocks in the number and variety of the designs used. Perhaps the energy devoted to the elaboration of feather ornament drew the attention away from the development of new designs. But, be that as it may, the greatest manual dexterity and technical skill were here combined with the greatest artistic poverty.

A feature which differentiates the designs of this stock from all the others spoken of, is the existence in many cases — more particularly on baskets of the woven type, with spiral designs — of a gap in the design, filled by a design of a different sort. This break in the design, which is known as “dau,” is said to be for the purpose of “letting the soul escape.” The same break is found, if one may judge from a very few specimens only, also on the baskets of the Yuki, living immediately north of the Pomo, and in both cases suggests at once comparison with the similar openings left in designs on basketry and pottery in the Southwestern States. There are so few designs representing animals, that one can draw no very satisfactory conclusions as to the extent to which conventionalization has here progressed. It would seem, from what little material we have, however, that it had reached about the same stage as among the Maidu. As compared with the almost universal practice of the Maidu, of placing but one design on a basket, we find here exactly the opposite tendency; several designs, or repetitions of the same design, being the almost universal rule, the preference being for a considerable number, such as four or five.

The designs used by Indians of this stock, then, would seem to be characterized, as a whole, by their small number, by the great infrequency of animal designs, by the tendency to arrange the designs in a series of horizontal or concentric bands and to place a large number of designs on the same basket, and last, but not least in importance, by the occurrence of the “dau,” or gap in the design, in many cases, and by the great development of feather decoration, which art was here carried to its greatest perfection.

Having described and attempted to characterize separately

the designs of these several stocks, there remain certain generalizations which may be made from the material as a whole. It will be apparent, even from the most casual observation of the designs here shown, that there are a number of instances in which members of two or more different stocks have used the same design, or designs but very slightly differing from one another, sometimes with the same, sometimes with different meanings. Questions, therefore, very naturally arise as to the extent to which this goes, whether it is due to borrowing or to independent origin, and, if to borrowing, between which tribes the borrowing has been most extensive.

If the different designs here shown be tabulated without reference to the meanings offered for them, we find that there are really surprisingly few exact coincidences between tribe and tribe. Overlooking minor variations in form and arrangement, it is only the so-called "arrow-point," the linked parallelograms (variously explained as earthworm, wood, excrement, etc.), the crossing trails, and perhaps the hour-glass figure (known variously as pine-cone, moth, spool, etc.), which can be said to be found among all or most of the stocks here discussed. The quail-tip may, perhaps, be added to these, and probably the feather; but beyond these there are none which are of very wide distribution. It is noticeable, also, that it is only in the case of the quail-tip and arrow-point that the meaning of these more or less common designs is the same in different stocks. Except for the cases just noted, the chief examples of identity or similarity occur, as would be expected, between contiguous stocks. Thus the Southern Maidu show some points of similarity with the Moquelumnanian stock, which, in its turn, seems allied to the Mariposan stock bordering it to the south. On the north, the Pit Rivers and Maidu seem to have some designs in common, especially if we admit as Maidu the two or three baskets of somewhat doubtful provenience, to which reference has already been made. The Pit Rivers, in their turn, show unmistakable relations with the Klamath Indians farther north. The Wintun, at least as far as at present studied, seem to be more

closely affiliated to the Pit Rivers than to the Maidu, or other stocks with which they come in contact. The Pomo show one or two curious similarities with the Maidu (quail-tip, buck-eye-tree, squirrel's foot), with whom, however, they were not in contact.

If we attempt to trace individual designs, we find that the lines of affiliation become much confused, and lead now here, now there. With material from the other stocks as full as that from the Maidu, it may be possible to trace in more detail the distribution and wanderings of some designs; but at present such an attempt would be premature. It was stated at the outset of this paper, that several fairly well-marked types or type areas might be distinguished, within which the designs were more or less coherent in their character. The time has not yet come for any detailed discussion of these, or for the final marking-out of the limits and boundaries of such regions. Yet I believe that we may, with some degree of certainty, regard the Maidu, Pit Rivers, Klamath, Yana (?), and Wintun, at least, as forming a group characterized by great variety and number of designs, predominance of animal and plant motives, etc., differentiating this group from the Pomo on the one hand (which exhibit such a paucity of designs and lack of animal motives) and the Southeastern Group on the other hand, which, simply from the designs as such, seems more related to the types of Southern California. Material in regard to the Northwestern Type or Group is not yet at hand; but, from a considerable number of baskets seen, it is clear that its affinities are with the Northeastern Group, and especially with the Wintun and Pit Rivers. Yet, in spite of rather close affinities to these, the Northwestern Group seems to have sufficient character to stand alone. All definitive conclusions as to type areas and relationships must wait, however, for fuller material.

To return to the matter of the separate stocks whose designs have been here discussed, we find that, as a whole, it is clear that each stock is in possession of a body of designs the greater portion of which seem to be peculiar to the stock and characteristic of it; so much so, that the occurrence of any

one of these designs on a basket is almost sufficient evidence as to the stock, and even, in some cases, the part of the stock, whence it came. In addition to this body of strictly characteristic designs, there are some, generally only a few, however, which the stock in question shares with some other stock or stocks, usually those with which it is in contact. That in such cases the fact of the common possession of designs is to be explained as due to borrowing or copying of the designs of one stock by basket-makers of the other, is most probable, and any other explanation seems unnecessary. In the case of tribes which may show other evidences of close relationship, such instances may be due to inheritance from a common ancestor; but, until good evidence of this close relationship is forthcoming, such community of design can easiest be explained by borrowing. That the Indians themselves recognize the existence of such borrowing is shown by cases similar to the design on Plate XIV, Fig. 1, where it was expressly stated that the design had been taken from a type of basket common to the south. In this case, no attempt seems to have been made to explain the design, or invent a meaning for it.

As a rule, borrowed designs do not spread far, and are often confined to that part of the borrowing stock which lies directly along the line of contact. There are a few designs, however, which are of wider distribution, common not only to adjacent stocks or portions of stocks, but occurring here and there from Southern California to Washington and British Columbia. A design of this sort would be the arrow-point, for instance. Must we, in such cases, regard the wide distribution of the design as due to dissemination or to borrowing? As a rule, designs thus widely spread are extremely simple, and, owing to this, receive different explanations in different places, although sometimes, as in the case of the arrow-point, the same explanation is given at points widely separated. In view of the very simple nature, as a rule, of these widely spread designs, it would seem more probable that they have been invented locally and independently, and that in such cases we have no need to call in the hypothesis of contact or dissemination. That widely separated members of the same

race should independently develop similar designs, even under different environment, is, *a priori*, more probable than that members of two totally distinct races living on different continents should do so. Yet a most remarkable example of this has been noted recently. Several of the negro tribes of East Africa, living to the south of Lake Victoria Nyanza, are most expert makers of coiled basketry. A considerable collection of these baskets is to be found in the rich collections of the Königlische Museum für Völkerkunde in Berlin; and, having been struck by the remarkable similarity of the designs to those of the Maidu, permission was very kindly given to have several of the baskets photographed for the purpose of comparison here. On Plate XXXVII, seven of these East African baskets are shown; and the designs, the meaning of which is unfortunately unknown, may be compared with several Maidu designs already described. With the feather (Plate X, Fig. 3; Plate XI, Fig. 3), Fig. 1 may be compared. The similarity of Figs. 2, 3, to the vine (Plate VIII, Fig. 2, etc.), is so close as to be very striking; while the practical identity of Fig. 4 with the water-snake on Plate IV, Figs. 4, 5, is even more startling. The earthworm or deer-excrement design finds its counterpart in Fig. 7; whereas Figs. 5, 6, especially the latter, show close similarity to the Maidu flower as shown on Plate VIII, Fig. 4. The great similarity, not to say identity, of these designs, is most striking, and, as in this case we have no possible suggestion of borrowing or contact, we are forced to regard the instance as a remarkable example of the independent origin of similar designs by peoples not only antipodal in their location, but of entirely distinct races. Since, therefore, even in such extreme cases, simple designs may be independently devised, it is quite possible that such widely distributed designs as the arrow-point may here be explained in the same way, and we may not need to look to dissemination or borrowing to explain them.

While the facts here presented have some value and interest in and for themselves, they have also a significance in the light which they may throw on the general theories of art and the development of design in general. That the geometric designs

in use, for purposes of decoration and ornament, by savage tribes in all parts of the world, have a significance and a well-recognized meaning, has within the last few years been abundantly proved. The fact that such rigid and geometrical figures were thus in reality significant, and were representations of animals, plants, and other objects and phenomena, led at once to discussions as to whether the designs in question were in their origin realistic or decorative; whether, to quote from a recent admirable presentation of the whole question,¹ "original pictures were conventionalized into decorative symbolism," or whether "original ornament was expanded into symbolic decoration." In the paper here referred to, Kroeber concludes, starting from a study of Arapaho design, that we are not justified in regarding these designs as the outcome of either of these tendencies alone, but rather as a fusion of both. It is contended, that, in the mind of primitive man, realism and decoration are not differentiated, and that it is only with increased cultural development that a gradual differentiation of these two tendencies is brought about, until, in the end, they may become almost if not quite distinct. In the case of savages, moreover, the pictographic element may also come in, and this, with other tendencies, serves to complicate a situation already by no means simple. All of this, then, leads us to the conclusion that any such phenomenon as art is not to be ascribed in its origin to any single cause, but rather to the interaction of a multiplicity of causes; the relative importance of each as a factor varying in different cases and with different peoples.

We should, then, expect to find instances in which the balance between the two opposing tendencies of "realistic symbolism" and "decorative conventionalism" would not be as perfect as in the case of the Arapaho, and examples where the tendency either toward realism or decoration would preponderate. While, in most cases, the basketry designs from Washington and British Columbia, described by Farrand,² are distinctly geometric, and conventionalized to

¹ A. L. Kroeber, *Decorative Symbolism of the Arapaho* (*American Anthropologist*, N.S., Vol. III, pp. 308-337).

² L. Farrand, *Basketry Designs of the Salish Indians* (*Memoirs American Museum of Natural History*, Vol. II, pp. 391-399).

such an extent that one must needs be told their significance before he can form any idea as to the object intended to be represented, yet one or two designs occur within this area, in which the figures of men, of horses, dogs, etc., are represented with sufficient realism to be recognized almost at a glance. Others, on the other hand, as for example the flying birds (particularly the form shown in Fig. 318),¹ are conventionalized so slightly, that one notices the accuracy of representation when once the meaning and intent of the design is explained. In such case it would seem that the realistic tendency is greater than in Arapaho art; the purely decorative factor being less conspicuous, although by no means absent.

The designs here shown, I am tempted to regard as occupying a place about midway between the balance of Arapaho art and the somewhat preponderant realism of the Salish designs. We do not find here any such realistic figures as those of the men, dogs, and horses found farther north; but I believe we may class a few of the California designs with the flying-bird type, where, once the intent is known, the accuracy of representation (always bearing in mind the limitations of material) is quite striking. Thus, in the case of the Maidu, the quail-tip, fish-teeth, milleped, flower, and feather have been so little conventionalized, that, although each and all are repeated and joined to form a pattern clearly decorative in character, once the significance of the design is given, one cannot but observe the all but realistic manner in which the object is portrayed. Many of the other designs are to some extent of a similar character; while others, of course, are so thoroughly conventionalized that any resemblance they may once have had to the object they are declared to represent has completely disappeared.

This tendency to what might be called a "hidden" or "obscure realism" seems more characteristic of the Maidu than of the other stocks here discussed, all of which, it would seem, show a greater conventionalization. It is possible that the fact of the Maidu having so astonishingly large a number of designs, and so large a proportion of animal and plant motives,

¹ Basketry Designs of the Salish Indians, p. 304, Figs. 317, 318.

may have some bearing on the question. That so large a number of designs, referred in such overwhelming proportion to animals or plants, should not owe their origin and development more to the realistic than to the purely decorative tendency, seems unlikely; and while we have not here, as in the case of the Salish flying birds, any variants which are distinctly more realistic, it would seem not unreasonable to expect that they had existed. Here, however, we enter on the domain of pure speculation, which in such matters is exceedingly unsafe. On the whole, then, taking all the circumstances into consideration, the designs here discussed may be regarded as occupying a plane about midway between the designs of the Salish and the Arapaho.

It would be of considerable interest in this connection to know the meaning of the designs on the African baskets previously spoken of. In the absence of any information, we cannot say a design identical with the Maidu form is in this case the result of a similar relative importance of the two chief factors in primitive art. From the extremely simple character of these and all other designs on baskets from these African tribes, it seems possible that we have here, not a slight preponderance of realism, as in the Maidu and still more in the Salish, but rather an equilibrium, or even a preponderance on the other side; realism being subordinated somewhat to the purely decorative tendency.

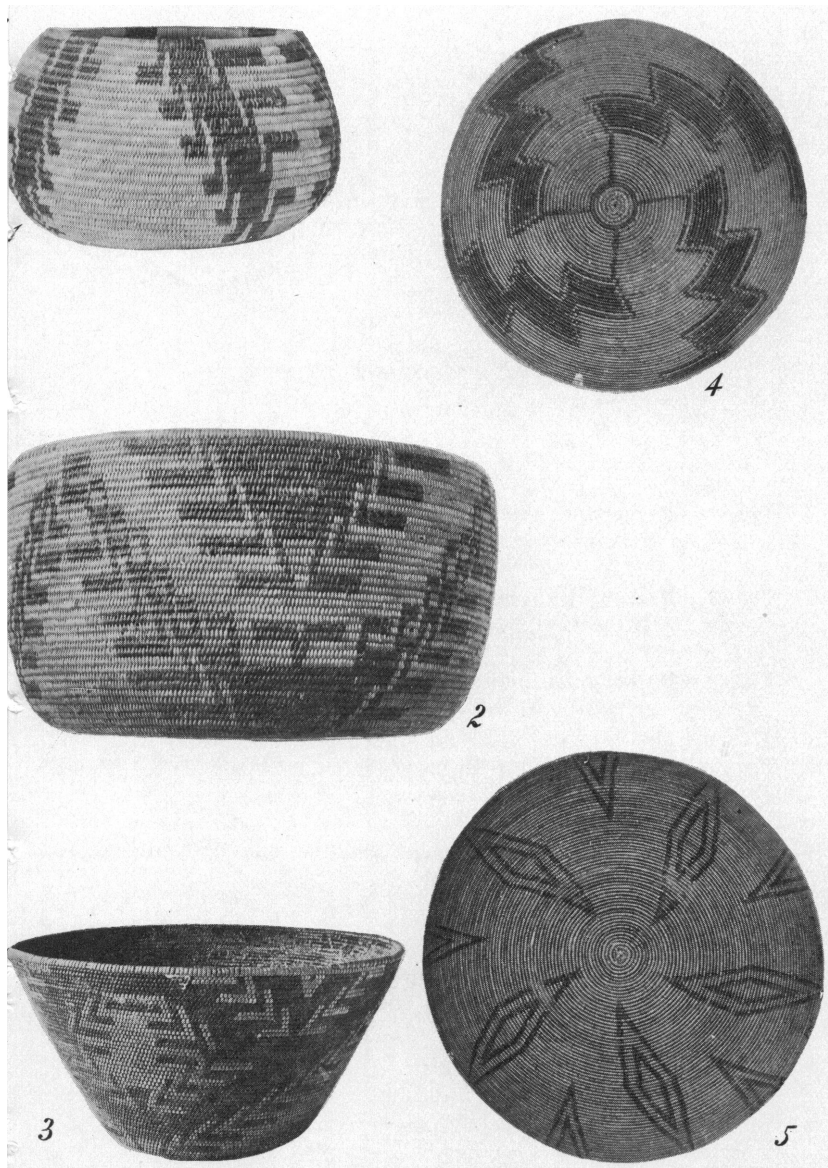
From the material here presented, then, as a whole, we may conclude, that, in so far as it has a bearing on the theories of the origin and development of art in general, it tends to confirm the belief, that in the mind of primitive man no design is either purely realistic or decorative, that all designs are to be ascribed in their origin to the interaction of both factors; now one, now the other, being in ascendancy. The great number and variety of designs in use by the stocks as a whole would seem to be the effect, partly, of a concentration of artistic effort upon a single type of art. On the other hand, the paucity of designs among the Pomo shows, again, the effect of such concentration; feather ornamentation here being exalted to first place, thus turning the attention away from the

development of new designs. And lastly, just as we find, in the case of mythology, that myths may be borrowed and transmitted from tribe to tribe, so designs may be copied, and disseminated from one tribe to another, perhaps for considerable distances. Just as, in the case of myths, we can be sure of such dissemination only when we have to deal with a moderately complex tale whose component parts must recur in the same form and order, so can we be sure of dissemination of designs, only when we have a design which is not too simple. Should we find instances, as I believe we may, where in different regions the same moderately complex design occurs, then we should be justified in regarding the coincidence of design as due to transmission: on the other hand, where the design is of a simple character, there seems good reason to believe it possible that it has originated independently. Although, from the data at present available, we can only surmise development and migration of designs in a few cases, it seems probable, that, with increased material from all the tribes in the Pacific coast region, we may be able to show, that, in a number of instances, designs extending over a considerable area, or even quite widely separated, have in reality a common origin.

EXPLANATION OF PLATE I.

MAIDU BASKETS.

- FIG. 1.—Basket with quail-tip design. Butte County. Height, 11
cm. Cat. No. $\frac{50}{1889}$.
- FIG. 2.—Basket with quail-tip design. Placer County. Height, 18
cm. Cat. No. $\frac{50}{1838}$.
- FIG. 3.—Basket with quail-tip design. Placer County. Height, 17
cm. Cat. No. $\frac{50}{1839}$.
- FIG. 4.—Basket with duck's-wing design. Plumas County. Diameter,
43 cm. Cat. No. $\frac{50}{556}$.
- FIG. 5.—Basket with "eye" design. Plumas County. Diameter, 47.5
cm. Cat. No. $\frac{50}{546}$.

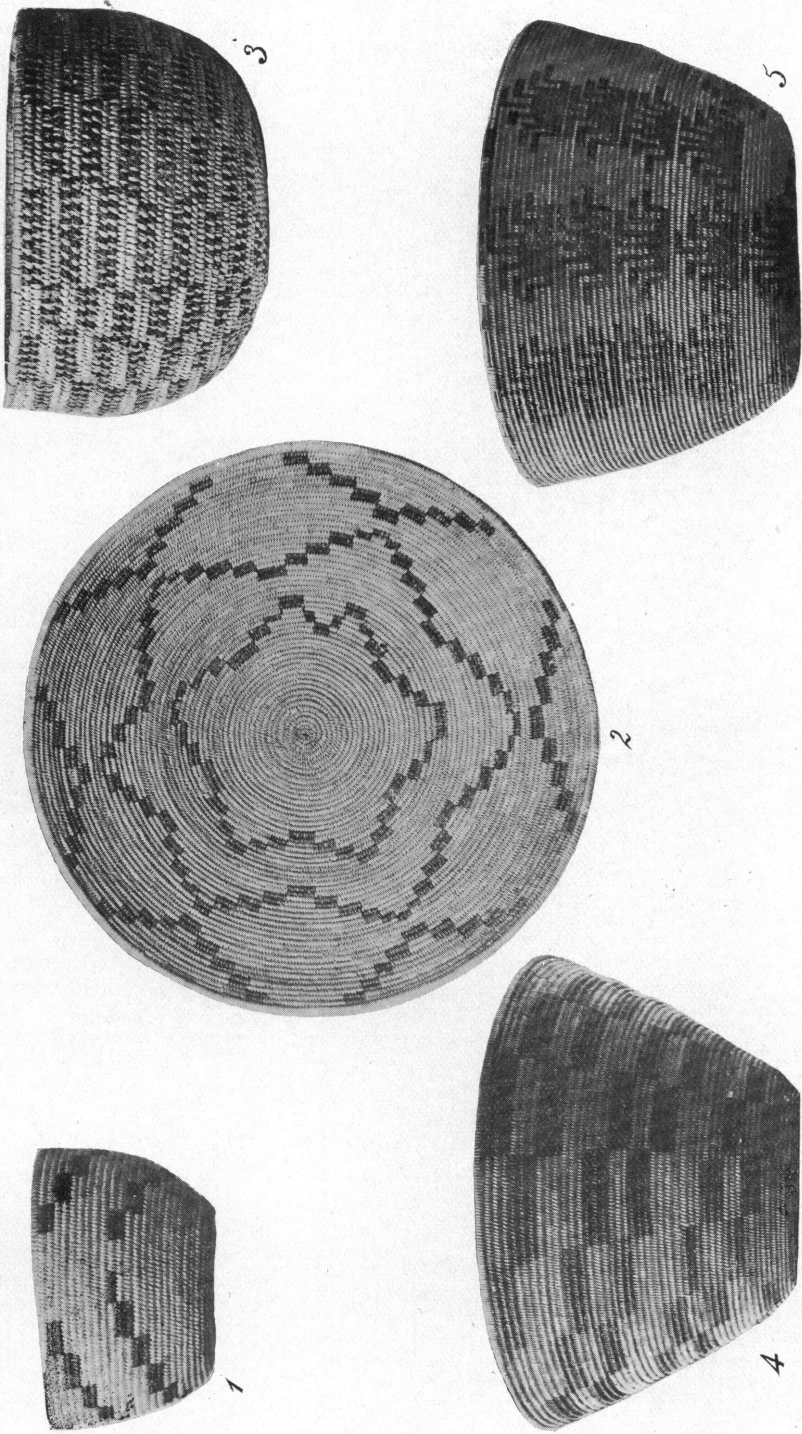


MAIDU BASKETS.

EXPLANATION OF PLATE II.

MAIDU BASKETS.

- FIG. 1.—Basket with earthworm design. El Dorado County. Height, 6.5 cm. Cat. No. $\frac{50}{1874}$.
- FIG. 2.—Basket with earthworm design. Butte County. Diameter, 41.5 cm. Cat. No. $\frac{50}{196}$.
- FIG. 3.—Basket with earthworm design. El Dorado County. Height, 20 cm. Cat. No. $\frac{50}{1887}$.
- FIG. 4.—Basket with "big-tongues" design. Butte County. Height, 22.5 cm. Cat. No. $\frac{50}{197}$.
- FIG. 5.—Basket with gray-squirrel's-foot design. Butte County. Height, 20.5 cm. Cat. No. $\frac{50}{1615}$.

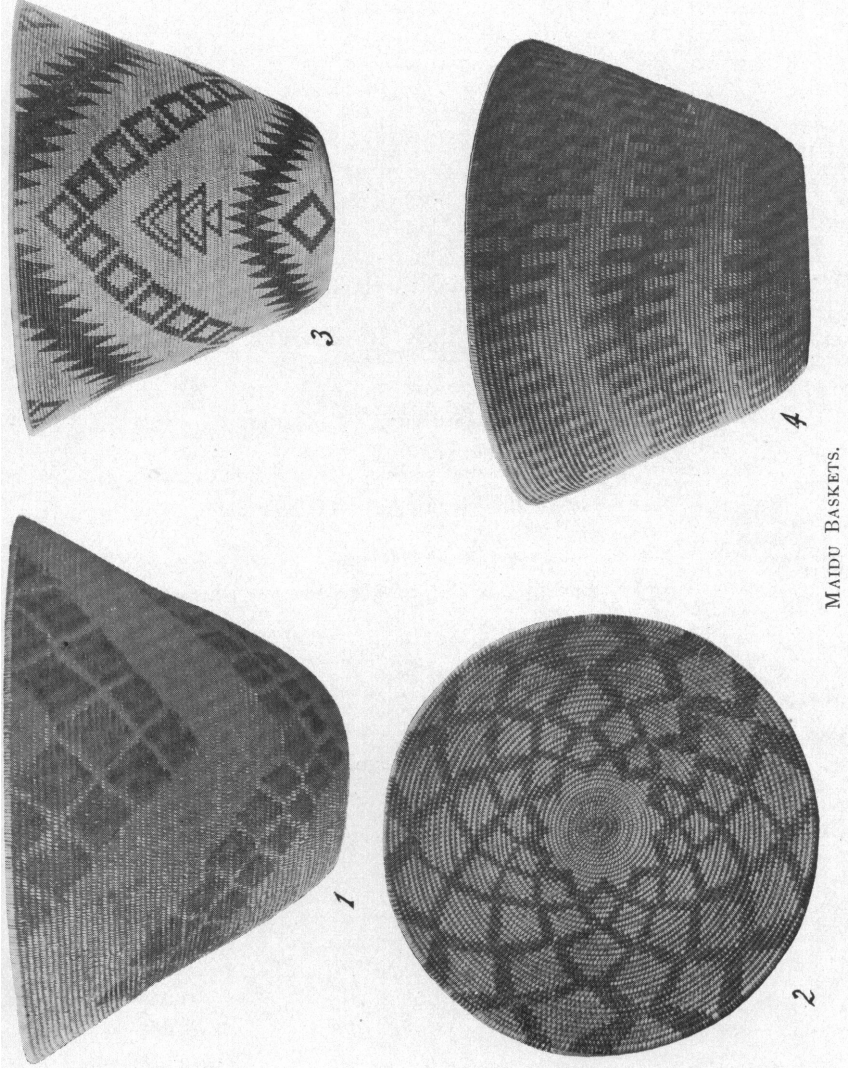


MAIDU BASKETS.

EXPLANATION OF PLATE III.

MAIDU BASKETS.

- FIG. 1.—Basket with rattlesnake design. El Dorado County. Height, 27.5 cm. Cat. No. $\frac{50}{1887}$.
- FIG. 2.—Basket with water-snake design. El Dorado County. Diameter, 36.5 cm. Cat. No. $\frac{50}{1885}$.
- FIG. 3.—Basket with rattlesnake design. Placer County. Height, 36.5 cm. Cat. No. $\frac{50}{1718}$.
- FIG. 4.—Basket with fish-teeth design. Butte County. Height, 26 cm. Cat. No. $\frac{50}{198}$.

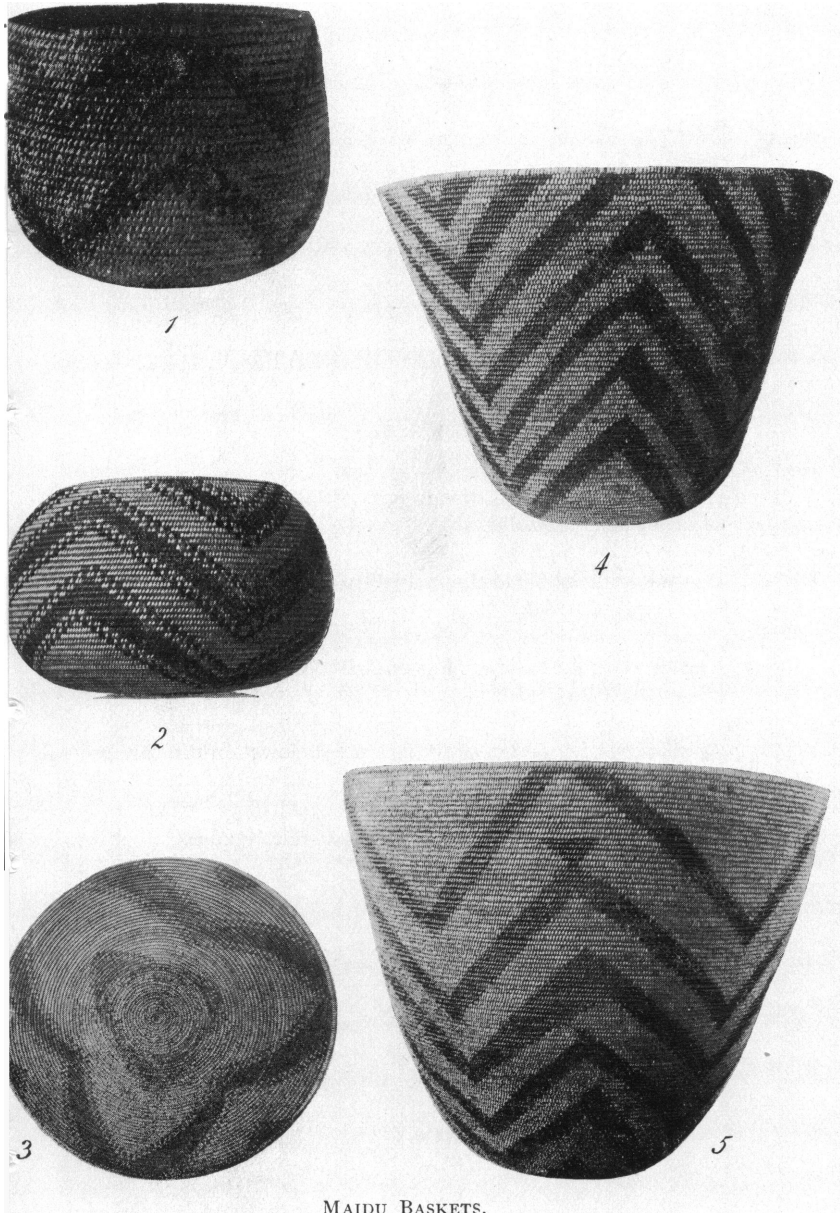


MAIDU BASKETS.

EXPLANATION OF PLATE IV.

MAIDU BASKETS.

- FIG. 1.—Basket with milleped design. El Dorado County. Height, 15 cm. Cat. No. $\frac{50}{1872}$.
- FIG. 2.—Basket with milleped design. Butte County. Height, 10.5 cm. Cat. No. $\frac{50}{288}$.
- FIG. 3.—Basket with fly design. Placer County. Diameter, 35.5 cm. Cat. No. $\frac{50}{1882}$.
- FIG. 4.—Basket with water-snake design. El Dorado County. Height 33.5 cm. Cat. No. $\frac{50}{1880}$.
- FIG. 5.—Basket with water-snake design. El Dorado County. Height, 50.5 cm. Cat. No. $\frac{50}{1717}$.

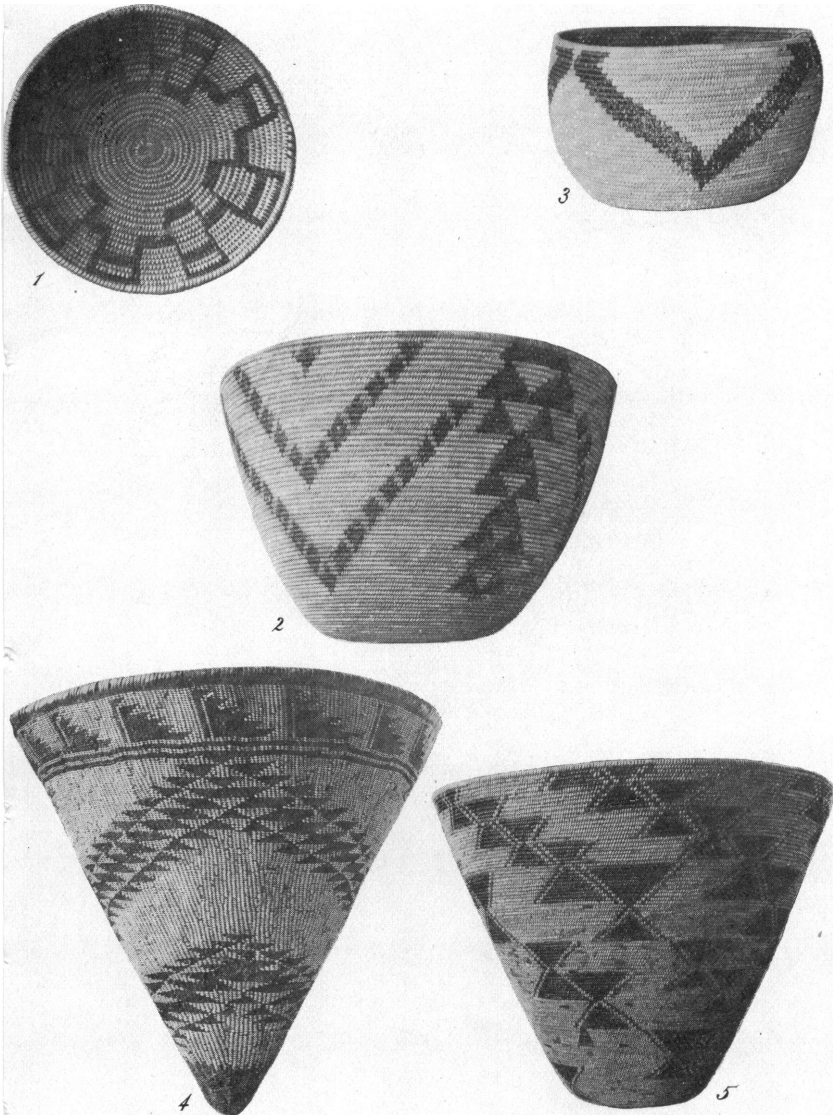


MAIDU BASKETS.

EXPLANATION OF PLATE V.

MAIDU BASKETS.

- FIG. 1.—Basket with butterfly design. Butte County. Diameter, 15 cm. Cat. No. $\frac{50}{1802}$.
- FIG. 2.—Basket with butterfly design. Butte County. Height, 26.5 cm. Cat. No. $\frac{50}{558}$.
- FIG. 3.—Basket with raccoon design. Butte County. Height, 10.5 cm. Cat. No. $\frac{50}{567}$.
- FIG. 4.—Basket with design of flying geese below; on the rim, mountains. Plumas County. Height, 47 cm. Cat. No. $\frac{50}{557}$.
- FIG. 5.—Basket with moth-miller design. Placer County. Height, 48.5 cm. Cat. No. $\frac{50}{1891}$.



MAIDU BASKETS.

EXPLANATION OF PLATE VI.

MAIDU BASKETS.

- FIG. 1.—Basket with grasshopper-leg design. Nevada County.
Height, 26.5 cm. Cat. No. $\frac{50}{1711}$.
- FIG. 2.—Basket with grasshopper-leg design. El Dorado County.
Height, 41 cm. Cat. No. $\frac{50}{1808}$.
- FIG. 3.—Basket with grasshopper-leg design. Plumas County.
Height, 7.5 cm. Cat. No. $\frac{50}{540}$.
- FIG. 4.—Basket with grasshopper-leg design. Butte County. Height,
60 cm. Cat. No. $\frac{50}{1808}$.



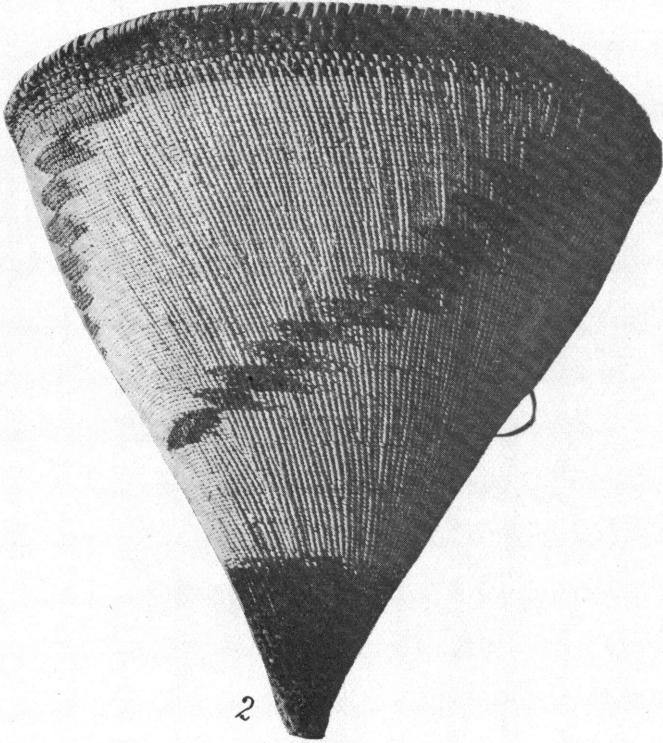
MAIDU BASKETS.

EXPLANATION OF PLATE VII.

MAIDU BASKETS.

FIG. 1.—Basket with plant design. Butte County. Height, 32.5 cm.
Cat. No. $\frac{50}{178}$.

FIG. 2.—Basket with vine design. Plumas County. Height, 54 cm.
Cat. No. $\frac{50}{530}$.

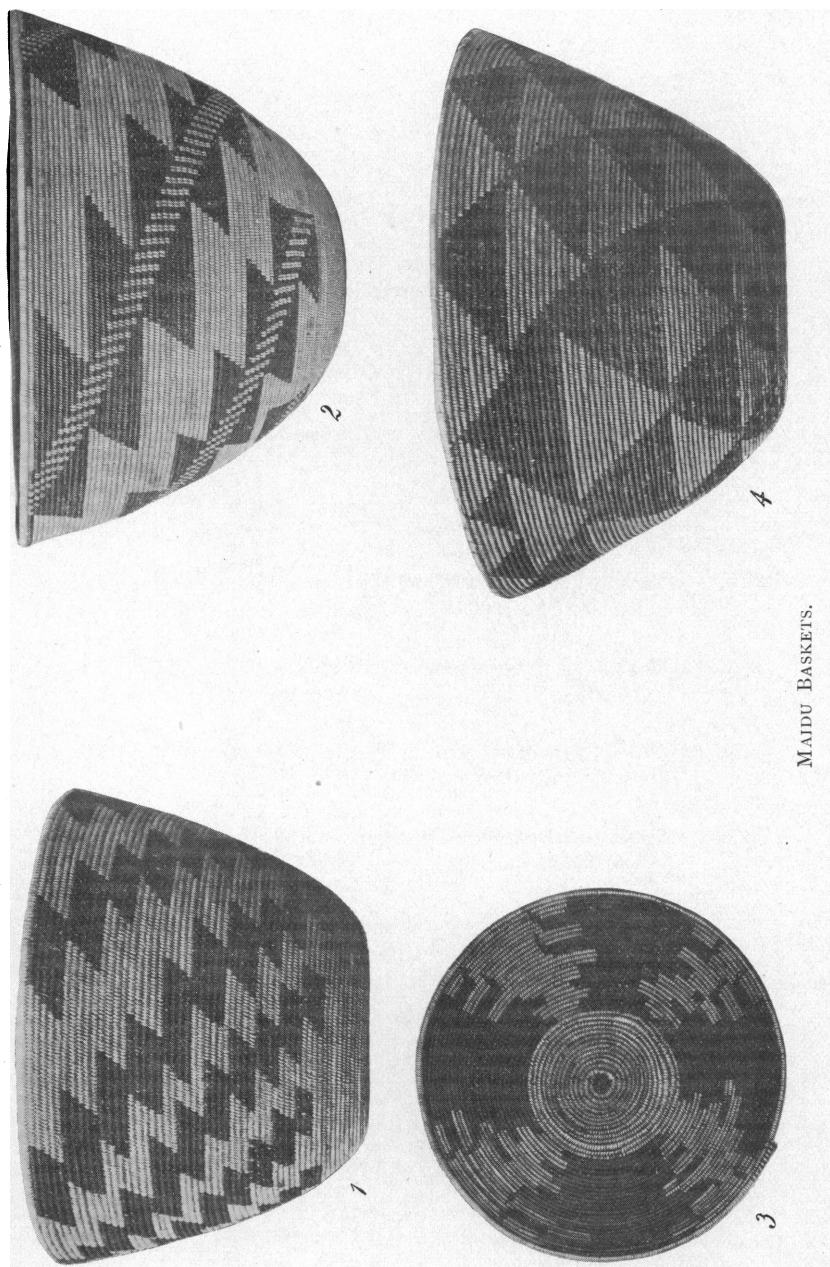


MAIDU BASKETS.

EXPLANATION OF PLATE VIII.

MAIDU BASKETS.

- FIG. 1.—Basket with vine design. Butte County. Height, 23 cm.
Cat. No. $\frac{50}{188}$.
- FIG. 2.—Basket with brake design. Butte County. Height, 25.75
cm. Cat. No. $\frac{50}{188}$.
- FIG. 3.—Basket with design of a sugar-pine (probably). Butte
County. Diameter, 31 cm. Cat. No. $\frac{50}{188}$.
- FIG. 4.—Basket with flower design. Butte County. Height, 22.5 cm.
Cat. No. $\frac{50}{187}$.

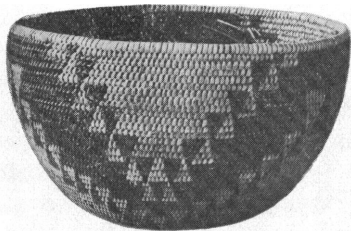


MAIDU BASKETS.

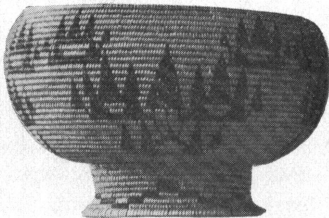
EXPLANATION OF PLATE IX.

MAIDU BASKETS.

- FIG. 1.—Basket with yellow-pine design. El Dorado County. Height, 10.5 cm. Cat. No. $\frac{50}{1888}$.
- FIG. 2.—Basket with design below of pine-cones; on the rim, of mountains. Plumas County. Height, 48 cm. Cat. No. $\frac{50}{542}$.
- FIG. 3.—Basket with black-oak design. El Dorado County. Height, 18 cm. Cat. No. $\frac{50}{1888}$.
- FIG. 4.—Basket with white-oak design. El Dorado County. Height, 20.25 cm. Cat. No. $\frac{50}{1892}$.
- FIG. 5.—Basket with design of bushes. Plumas County. Height, 13.5 cm. Cat. No. $\frac{50}{549}$.
- FIG. 6.—Basket with design of bushes or flowers. Plumas County. Height, 12 cm. Cat. No. $\frac{50}{552}$.



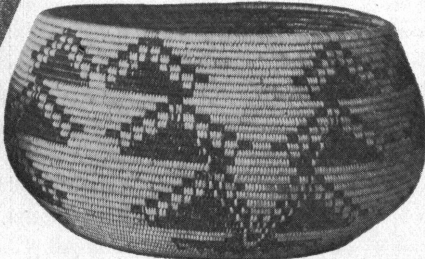
1



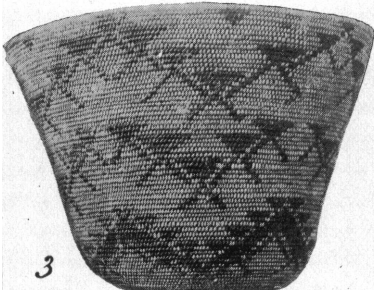
6



2



5



3



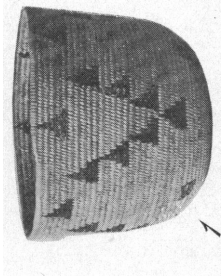
4

MAIDU BASKETS.

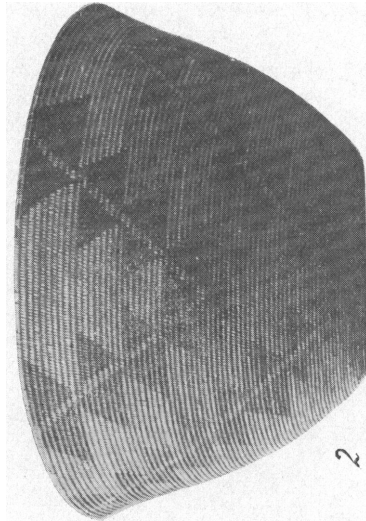
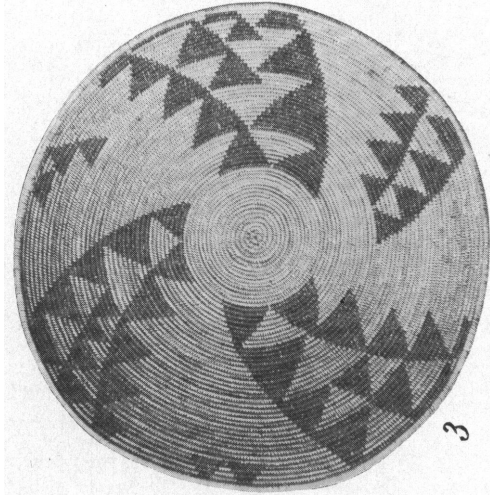
EXPLANATION OF PLATE X.

MAIDU BASKETS.

- FIG. 1.—Basket with arrow-feather design. El Dorado County.
Height, 8.25 cm. Cat. No. $\frac{50}{1878}$.
- FIG. 2.—Basket with arrow-feather design. Butte County. Height,
23 cm. Cat. No. $\frac{50}{186}$.
- FIG. 3.—Basket with arrow-feather design. Butte County. Diameter,
44.5 cm. Cat. No. $\frac{50}{193}$.



1/2

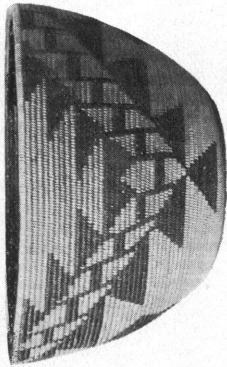


MAIDU BASKETS.

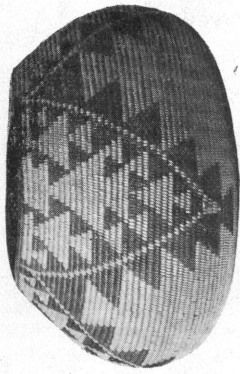
EXPLANATION OF PLATE XI.

MAIDU BASKETS.

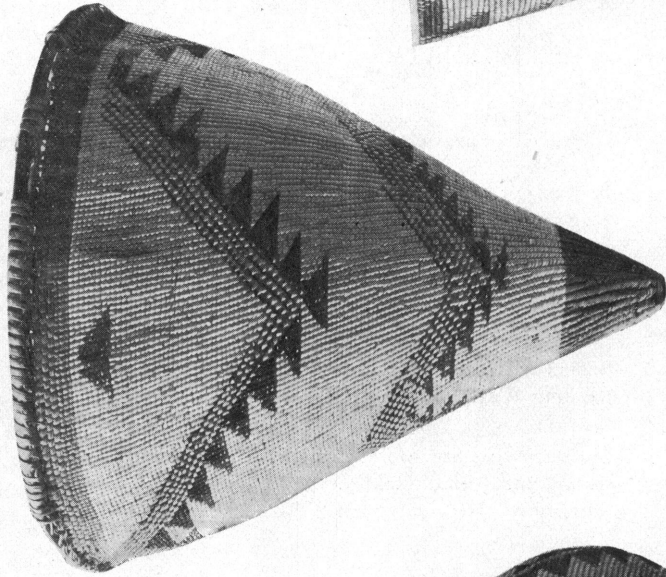
- FIG. 1.—Basket with arrow-feather design. Butte County. Height, 12 cm. Cat. No. $\frac{50}{287}$.
- FIG. 2.—Basket with arrow-feather and quail-tip design. Plumas County. Height, 12.5 cm. Cat. No. $\frac{50}{557}$.
- FIG. 3.—Basket with arrow-feather design. Plumas County. Height, 44 cm. Cat. No. $\frac{50}{884}$.
- FIG. 4.—Basket with arrow-feather design. Plumas County. Height, 24 cm. Cat. No. $\frac{50}{528}$.
- FIG. 5.—Basket with arrow-feather and quail-tip design. Plumas County. Height, 16 cm. Cat. No. $\frac{50}{1310}$.



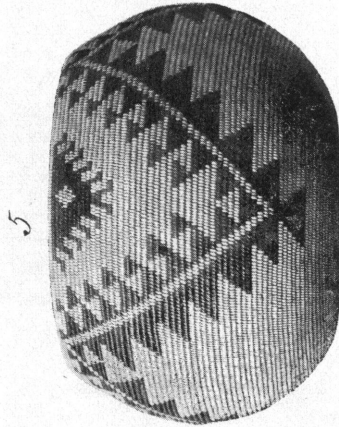
1



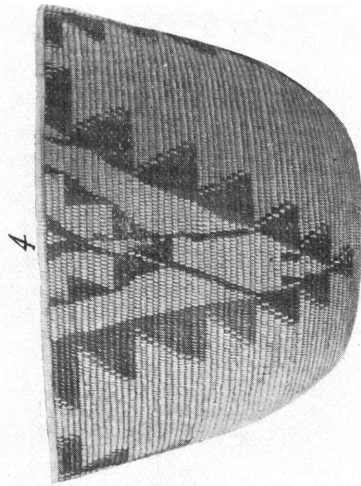
2



3



5



4

MAIDU BASKETS.

EXPLANATION OF PLATE XII.

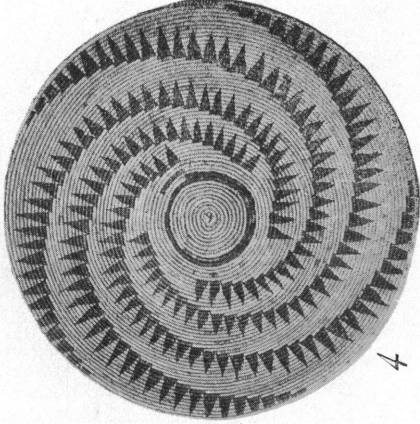
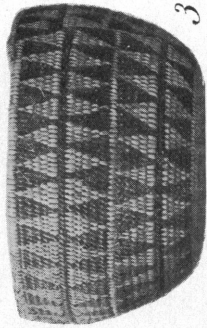
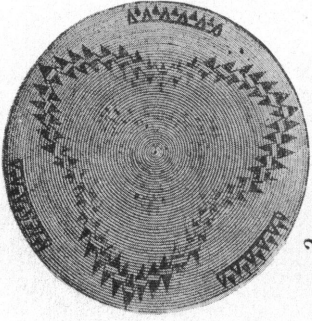
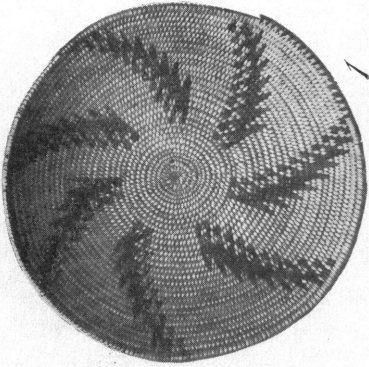
MAIDU BASKETS.

FIG. 1.—Basket with arrow-point design. Placer County. Diameter, 15 cm. Cat. No. $\frac{50}{1881}$.

FIG. 2.—Basket with arrow-point design. Plumas County. Diameter, 36 cm. Cat. No. $\frac{50}{847}$.

FIG. 3.—Basket with arrow-point design. El Dorado County. Height, 9 cm. Cat. No. $\frac{50}{1883}$.

FIG. 4.—Basket with arrow-point design. Butte County. Diameter, 46.5 cm. Cat. No. $\frac{50}{1603}$.



MAIDU BASKETS.

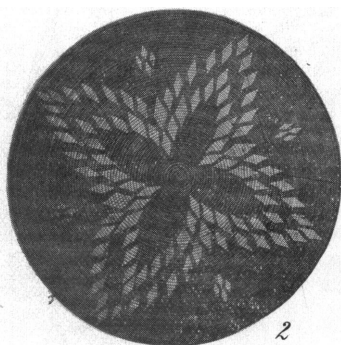
EXPLANATION OF PLATE XIII.

MAIDU BASKETS.

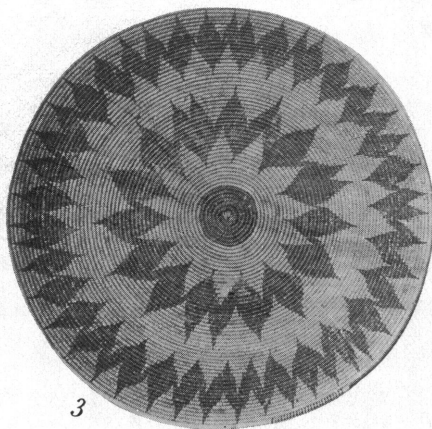
- FIG. 1.—Basket with arrow-point design. Plumas County. Height, 11.5 cm. Cat. No. $\frac{50}{851}$.
- FIG. 2.—Basket with arrow-point design. El Dorado County. Diameter, 31 cm. Cat. No. $\frac{50}{1383}$.
- FIG. 3.—Basket with arrow-point design. Butte County. Diameter, 45.5 cm. Cat. No. $\frac{50}{1808}$.
- FIG. 4.—Basket with arrow-point design. El Dorado County. Height, 11 cm. Cat. No. $\frac{50}{1378}$.
- FIG. 5.—Basket with arrow-point design. Plumas County. Diameter, 44.5 cm. Cat. No. $\frac{50}{543}$.



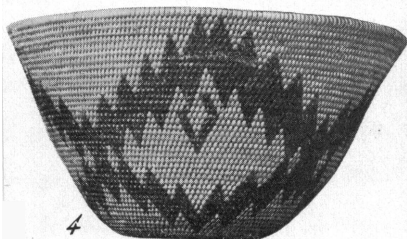
1



2



3



4



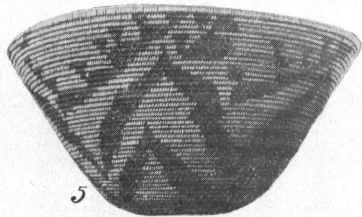
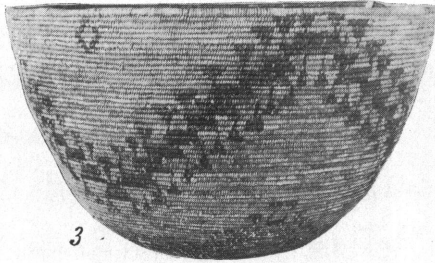
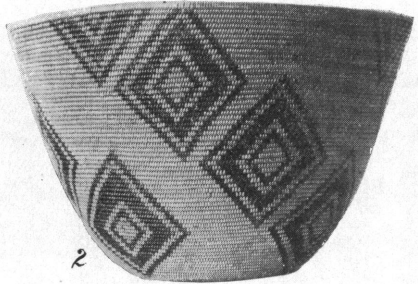
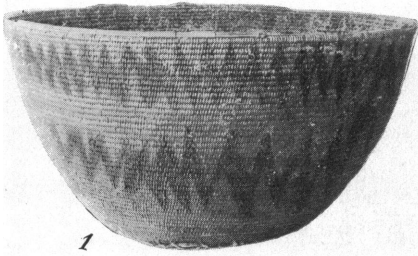
5

MAIDU BASKETS.

EXPLANATION OF PLATE XIV.

MAIDU BASKETS.

- FIG. 1.—Basket with design, on the rim, of arrow-point; below, a pattern of unknown significance. Plumas County. Height, 19 cm. Cat. No. $\frac{50}{841}$.
- FIG. 2.—Basket with diamond design. Butte County. Height, 21.5 cm. Cat. No. $\frac{50}{1807}$.
- FIG. 3.—Basket with design of animal tracks. Butte County. Height, 22.5 cm. Cat. No. $\frac{50}{178}$.
- FIG. 4.—Basket with mountain-and-cloud design. Plumas County. Height, 11.5 cm. Cat. No. $\frac{50}{550}$.
- FIG. 5.—Basket with design of "something turning round" and arrow-points. Butte County. Height, 16 cm. Cat. No. $\frac{50}{1811}$.

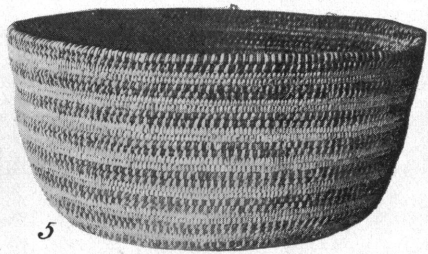
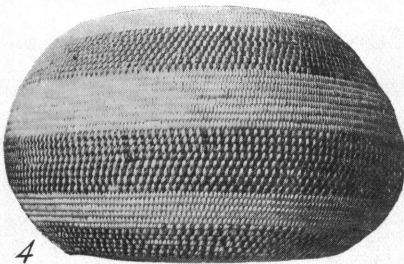
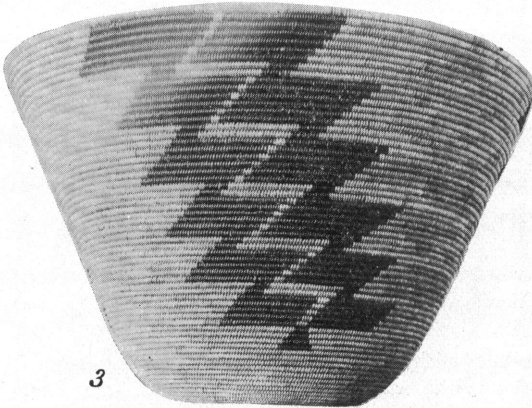
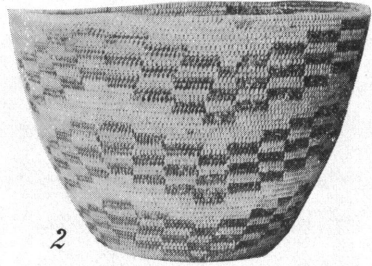
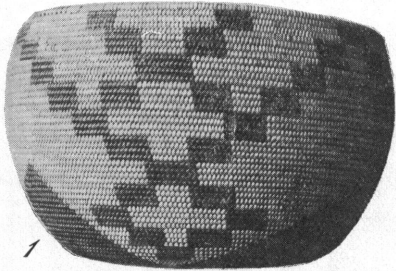


MAIDU BASKETS.

EXPLANATION OF PLATE XV.

MAIDU BASKETS.

- FIG. 1.—Basket with design of wood in billets. Placer County.
Height, 13.5 cm. Cat. No. $\frac{50}{1387}$.
- FIG. 2.—Basket with design of wood in billets. El Dorado County.
Height, 20 cm. Cat. No. $\frac{50}{1388}$.
- FIG. 3.—Basket with design of a pair of tongs. Butte County. Height,
27 cm. Cat. No. $\frac{50}{1711}$.
- FIG. 4.—Basket with bead design. El Dorado County. Height, 13.5
cm. Cat. No. $\frac{50}{1382}$.
- FIG. 5.—Basket with bead design. El Dorado County. Height, 11.5
cm. Cat. No. $\frac{50}{1377}$.

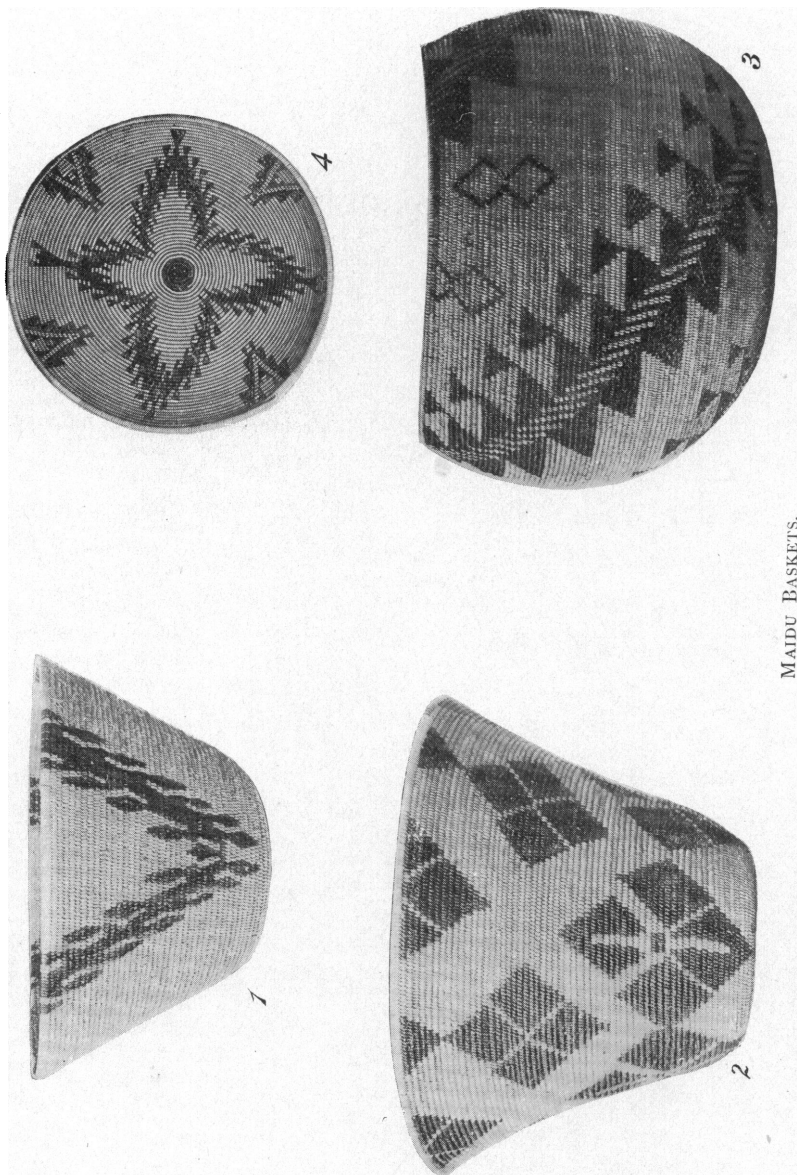


MAIDU BASKETS

EXPLANATION OF PLATE XVI.

MAIDU BASKETS.

- FIG. 1.—Basket with design representing either a hornet or a tree.
El Dorado County. Height, 19 cm. Cat. No. $\frac{50}{1718}$.
- FIG. 2.—Basket with design of unknown significance. Nevada County.
Height, 29.5 cm. Cat. No. $\frac{50}{1718}$.
- FIG. 3.—Basket with design of unknown significance. Butte County.
Height, 17 cm. Cat. No. $\frac{50}{176}$.
- FIG. 4.—Basket with feather and arrow-point design (probably).
Plumas County. Diameter, 33.5 cm. Cat. No. $\frac{50}{848}$.

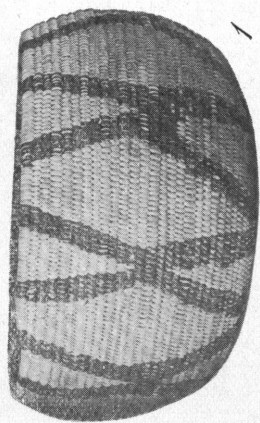


MAÏDU BASKETS.

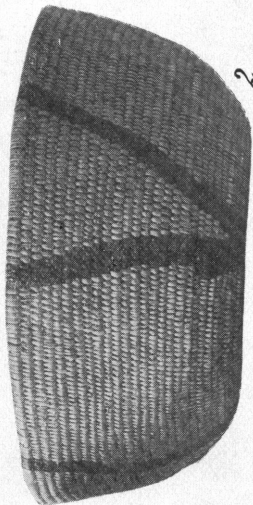
EXPLANATION OF PLATE XVII.

MAIDU BASKETS.

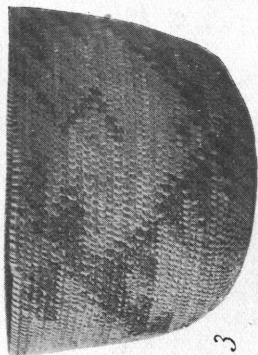
- FIG. 1.—Basket with water-snake (?) design. El Dorado County.
Height, 11 cm. Cat. No. $\frac{50}{1374}$.
- FIG. 2.—Basket with water-snake (?) design. El Dorado County.
Height, 10 cm. Cat. No. $\frac{50}{1374}$.
- FIG. 3.—Basket with feather (?) design. El Dorado County. Height,
11.5 cm. Cat. No. $\frac{50}{1370}$.
- FIG. 4.—Basket with design of unknown significance. Placer County.
Height, 4.25 cm. Cat. No. $\frac{50}{1330}$.
- FIG. 5.—Basket with design of unknown significance. Plumas County.
Diameter, 25 cm. Cat. No. $\frac{50}{548}$.
- FIG. 6.—Basket with design of unknown significance. El Dorado
County. Height, 10 cm. Cat. No. $\frac{50}{1371}$.
- FIG. 7.—Basket with design of unknown significance. Butte County.
Height, 10.5 cm. Cat. No. $\frac{50}{1338}$.
- FIG. 8.—Basket with design of unknown significance. Plumas County.
(Compare Plate XX, Figs. 3, 4, 6.) Height, 14.5 cm.
Cat. No. $\frac{50}{1305}$.



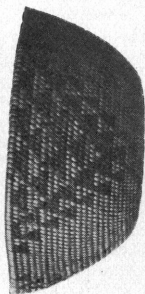
1



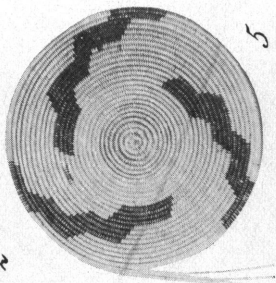
2



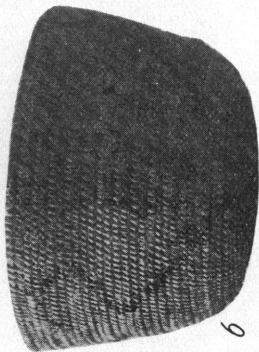
3



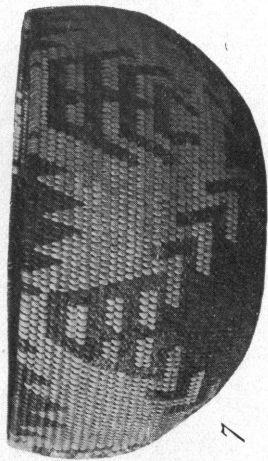
4



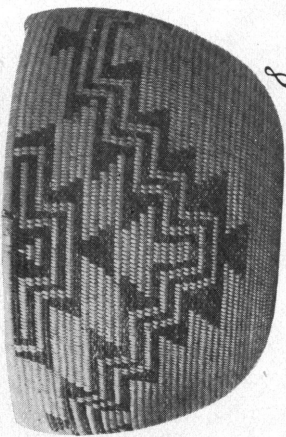
5



6



7



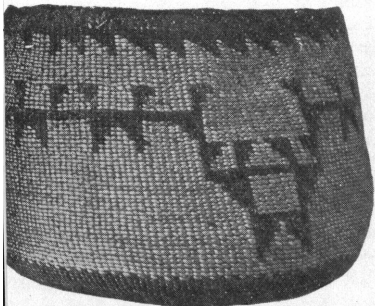
8

MAIDU BASKETS.

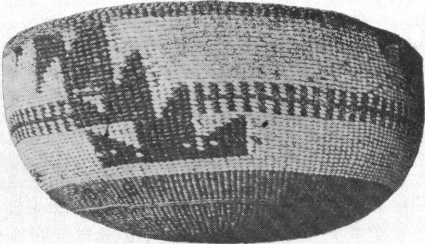
EXPLANATION OF PLATE XVIII.

PIT RIVER BASKETS.

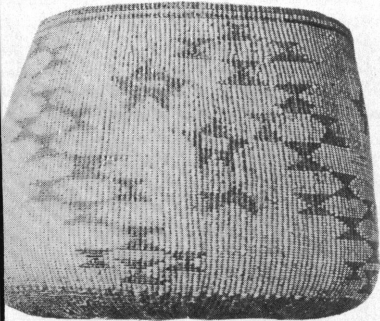
- FIG. 1.—Basket with design of mussel's tongue. Height, 13 cm.
Cat. No. $\frac{50}{1645}$.
- FIG. 2.—Basket with design of mussel's tongue. Height, 8.5 cm.
Cat. No. $\frac{50}{1642}$.
- FIG. 3.—Basket with design of mussel's tongue. Height, 22 cm. Cat.
No. $\frac{50}{1639}$.
- FIG. 4.—Basket with skunk design. Height, 10.5 cm. Cat. No. $\frac{50}{1636}$.
- FIG. 5.—Basket with fish-tail design. Height, 21.5 cm. Cat. No. $\frac{50}{1634}$.
- FIG. 6.—Basket with "bent-knee" design. Height, 16.5 cm. Cat.
No. $\frac{50}{1640}$.
-



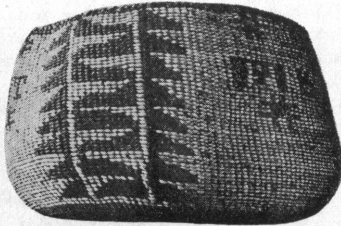
1



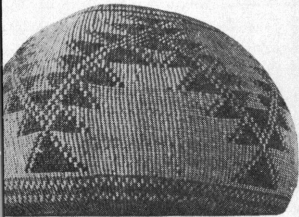
2



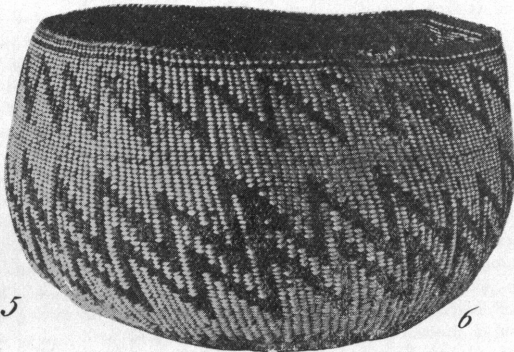
3



4



5



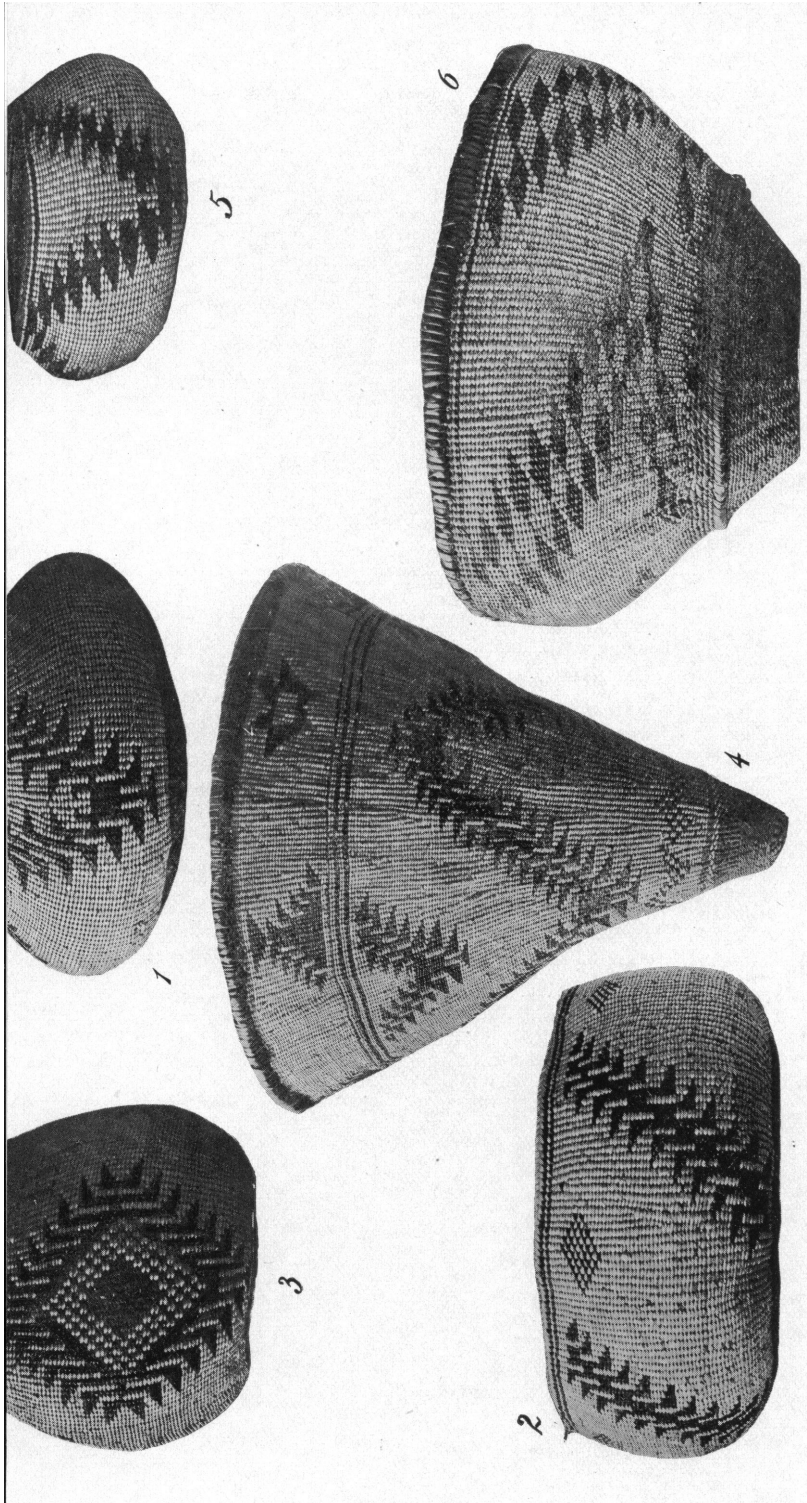
6

PIT RIVER BASKETS.

EXPLANATION OF PLATE XIX.

PIT RIVER BASKETS.

- FIG. 1.—Basket with lizard or lizard-foot design. Height, 9 cm.
Cat. No. $\frac{50}{1824}$.
- FIG. 2.—Basket with lizard or lizard-foot and diamond design.
Height, 11.5 cm. Cat. No. $\frac{50}{1838}$.
- FIG. 3.—Basket with "eye" and lizard-foot design. Height, 11.5 cm.
Cat. No. $\frac{50}{1841}$.
- FIG. 4.—Basket with design, on the bottom, of meadow-lark's neck;
above, quail; on the rim, mountain or bear's foot and
mussel's tongue. Height, 40 cm. Cat. No. $\frac{50}{1875}$.
- FIG. 5.—Basket with flying-geese design. Height, 7.5 cm. Cat. No.
 $\frac{50}{1844}$.
- FIG. 6.—Basket with flying-geese design. Height, 25 cm. Cat. No.
 $\frac{50}{1827}$.

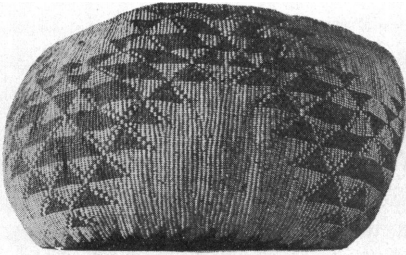


PIT RIVER BASKETS.

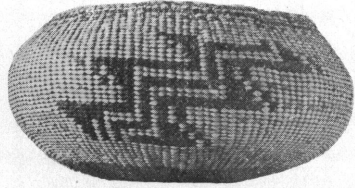
EXPLANATION OF PLATE XX.

PIT RIVER BASKETS.

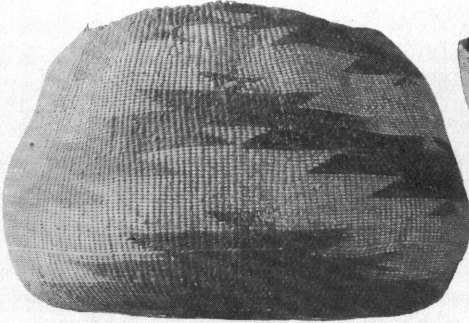
- FIG. 1.—Basket with flying-geese (?) and pine-cone design. Height, 25 cm. Cat. No. $\frac{50}{1887}$.
- FIG. 2.—Basket with design of bushes. Height, 20.25 cm. Cat. No. $\frac{50}{1848}$.
- FIG. 3.—Basket with design of deer-guts and arrow-points. Height, 7 cm. Cat. No. $\frac{50}{1825}$.
- FIG. 4.—Basket with deer-gut design. Height, 9.5 cm. Cat. No. $\frac{50}{1852}$.
- FIG. 5.—Basket with deer-rib and arrow-point design. Height, 12.5 cm. Cat. No. $\frac{50}{1823}$.
- FIG. 6.—Basket with deer-gut and arrow-point design. Height, 28 cm. Cat. No. $\frac{50}{1821}$.



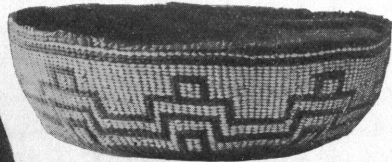
1



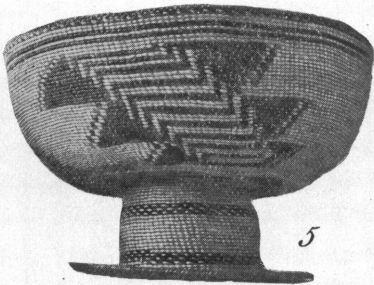
3



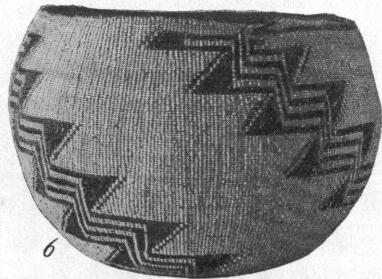
2



4



5



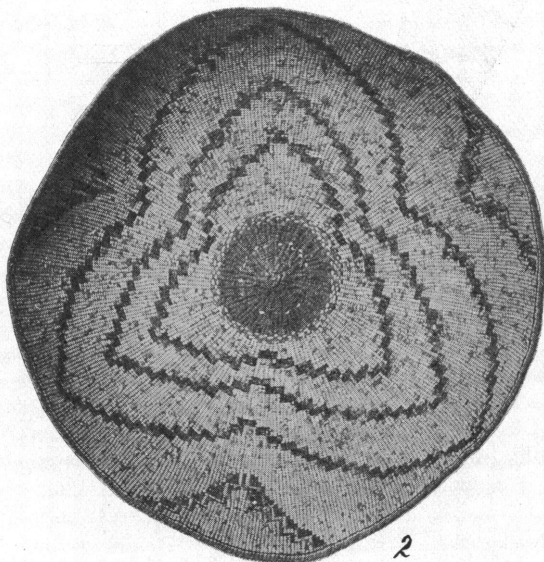
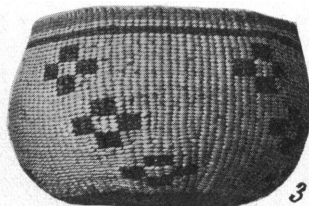
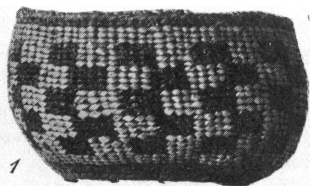
6

PIT RIVER BASKETS.

EXPLANATION OF PLATE XXI.

PIT RIVER BASKETS.

- FIG. 1.—Basket with deer-excrement design. Height, 8 cm. Cat. No. $\frac{50}{1881}$.
- FIG. 2.—Basket with deer-excrement design. Diameter, 51.5 cm. Cat. No. $\frac{50}{1881}$.
- FIG. 3.—Basket with deer-excrement and "rough" or "crooked" design. Height, 8 cm. Cat. No. $\frac{50}{1813}$.
- FIG. 4.—Basket with "rough" or "crooked" and arrow-point design. Height, 10.5 cm. Cat. No. $\frac{50}{1813}$.
- FIG. 5.—Basket with arrow-point design. Height, 8 cm. Cat. No. $\frac{50}{1881}$.

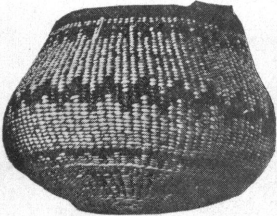


PIT RIVER BASKETS.

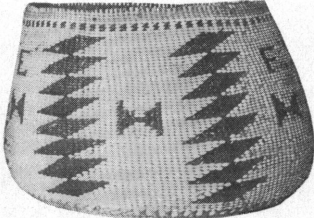
EXPLANATION OF PLATE XXII.

PIT RIVER BASKETS.

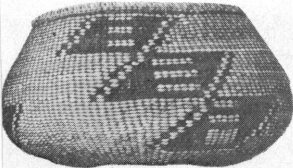
- FIG. 1.—Basket with design of unknown significance. Height, 7.5 cm. Cat. No. $\frac{50}{1884}$.
- FIG. 2.—Basket with arrow-point (?) or flying-geese (?) design. Height, 12 cm. Cat. No. $\frac{50}{1880}$.
- FIG. 3.—Basket with design of skunk's nose. Height, 19.5 cm. Cat. No. $\frac{50}{1886}$.
- FIG. 4.—Basket with arrow-point design. Height, 23 cm. Cat. No. $\frac{50}{1882}$.
- FIG. 5.—Basket with design of lizard (?) or owl's claw (?). Diameter, 12.5 cm. Cat. No. $\frac{50}{1888}$.
- FIG. 6.—Basket with flying-geese (?) design. Height, 20 cm. Cat. No. $\frac{50}{1888}$.



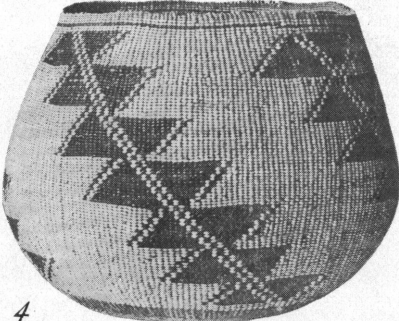
1



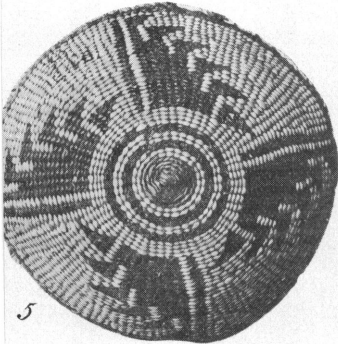
2



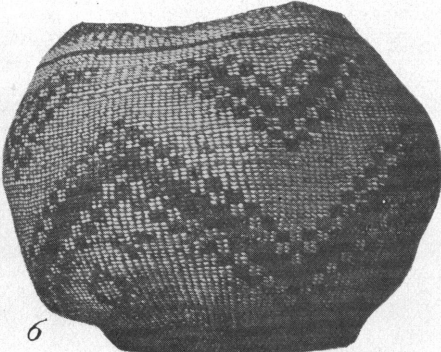
3



4



5



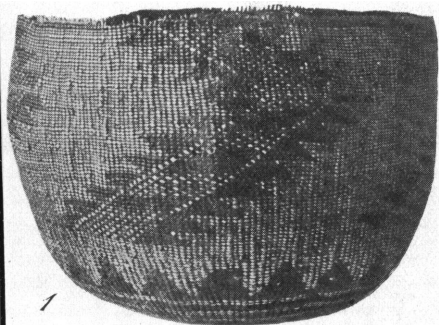
6

PIT RIVER BASKETS.

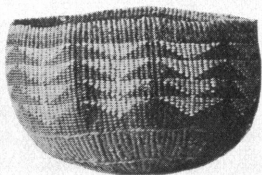
EXPLANATION OF PLATE XXIII.

WINTUN BASKETS.

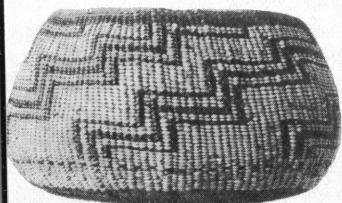
- FIG. 1.—Basket with design, at base, of arrow-points; above, of "bent elbow." Height, 18 cm. Cat. No. $\frac{50}{1702}$.
- FIG. 2.—Basket with fish-tail design. Height, 9.5 cm. Cat. No. $\frac{50}{1700}$.
- FIG. 3.—Basket with water-snake design. Height, 10.75 cm. Cat. No. $\frac{50}{1898}$.
- FIG. 4.—Basket with rattlesnake-head design. Height, 12 cm. Cat. No. $\frac{50}{1891}$.
- FIG. 5.—Basket with design of wolf's eye. Height, 10 cm. Cat. No. $\frac{50}{1894}$.
- FIG. 6.—Basket with flying-geese design. Height, 9 cm. Cat. No. $\frac{50}{1701}$.
- FIG. 7.—Basket with design, at base, of rattlesnake-heads (?); above, of flying geese; on the rim, of arrow-points. Height, 19.5 cm. Cat. No. $\frac{50}{1708}$.
- FIG. 8.—Basket with design below of bear's foot; above, of arrow-points. Height, 10 cm. Cat. No. $\frac{50}{1707}$.



1



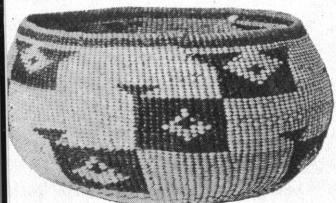
2



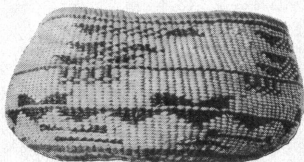
3



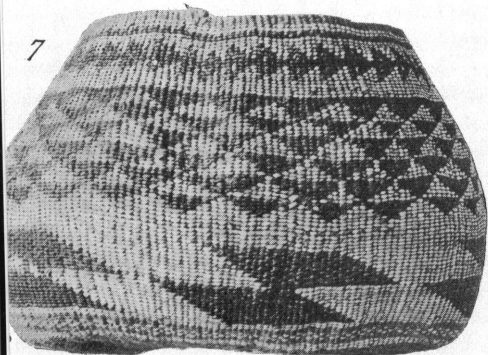
4



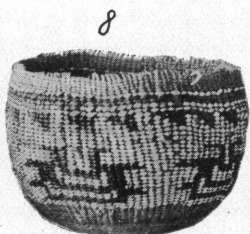
5



6



7

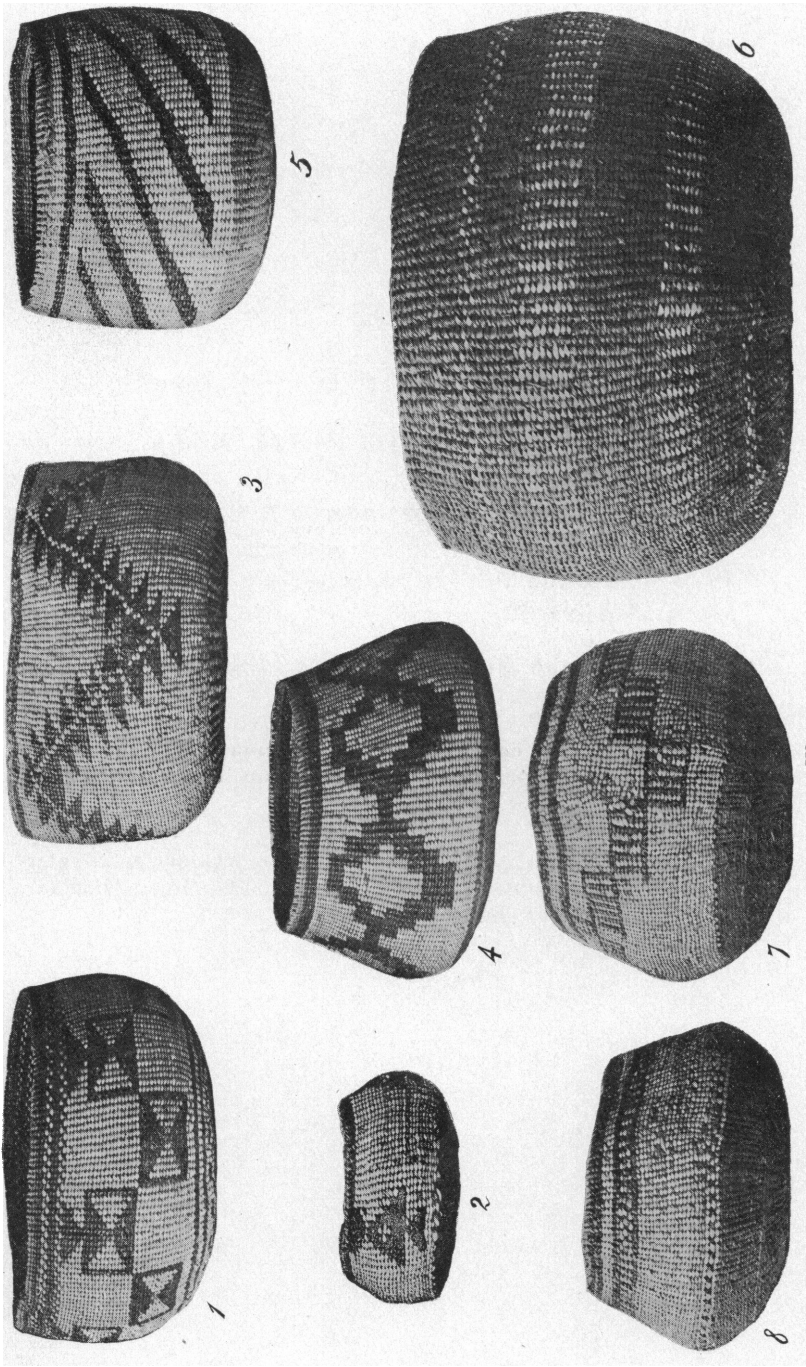


8

EXPLANATION OF PLATE XXIV.

WINTUN BASKETS.

- FIG. 1.—Basket with “empty-spool” design. Height, 10 cm. Cat. No. $\frac{50}{1898}$.
- FIG. 2.—Basket with “empty-spool” design. Height, 6 cm. Cat. No. $\frac{50}{1898}$.
- FIG. 3.—Basket with design of “leaves strung along.” Height, 12 cm. Cat. No. $\frac{50}{1898}$.
- FIG. 4.—Basket with deer-excrement design. Height, 10.5 cm. Cat. No. $\frac{50}{1897}$.
- FIG. 5.—Basket with “pulled-around” design. Height, 10.5 cm. Cat. No. $\frac{50}{1898}$.
- FIG. 6.—Basket with “striped” design. Height, 22.5 cm. Cat. No. $\frac{50}{1899}$.
- FIG. 7.—Basket with “striped” design. Height, 14 cm. Cat. No. $\frac{50}{1703}$.
- FIG. 8.—Basket with design of cross-waves. Height, 9 cm. Cat. No. $\frac{50}{1704}$.



WINTUN BASKETS.

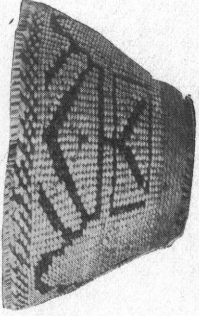
EXPLANATION OF PLATE XXV.

YANA AND MOQUELUMNIAN BASKETS.

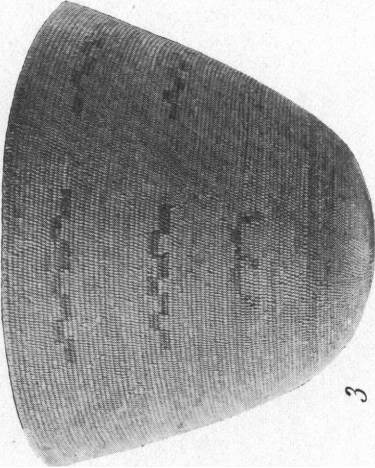
- FIG. 1.—Basket with wolf's-eye design (Yana). Height, 18.5 cm. Cat. No. 1708.⁵⁰
- FIG. 2.—Basket with house design (Yana). Height, 12.5 cm. Cat. No. 1709.⁵⁰
- FIG. 3.—Basket with design similar to the Maidu earthworm and Pit River deer-excrement pattern (Moquelumnian). Height, 31 cm. Cat. No. 1887.⁵⁰
- FIG. 4.—Basket with design similar to the rattlesnake and water-snake pattern of the southern Maidu (Moquelumnian). Height, 36 cm. Cat. No. 1888.⁵⁰



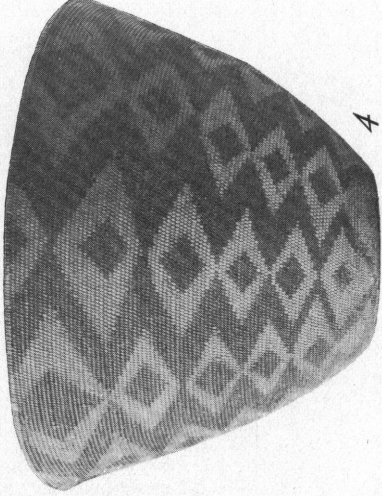
1



2



3



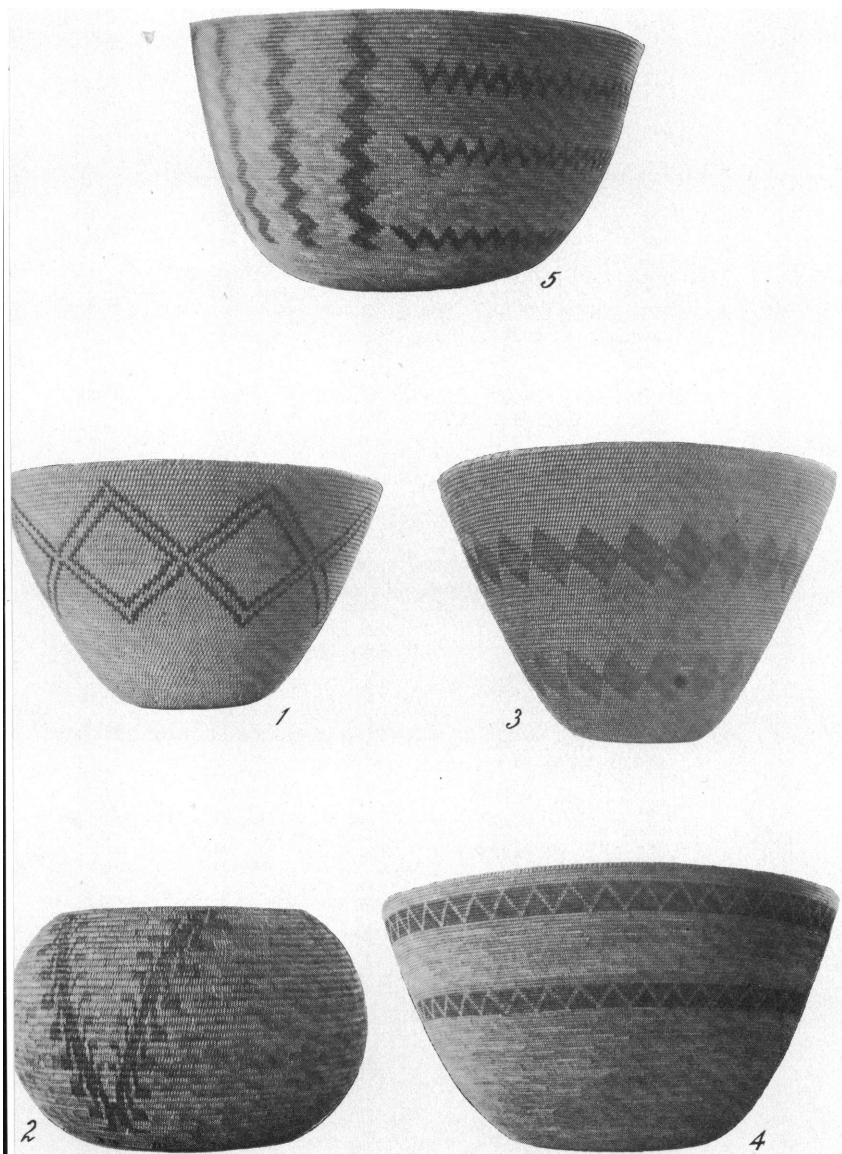
4

YANA AND MOQUELUMNIAN BASKETS.

EXPLANATION OF PLATE XXVI.

MOQUELUMNIAN BASKETS.

- FIG. 1.—Basket with design similar to the “eye” and diamond pattern of the Maidu. Height, 22.5 cm. Cat. No. $\frac{50}{1888}$.
- FIG. 2.—Basket with quail-tip design. Calaveras County. Height, 18.5 cm. Cat. No. $\frac{50}{1888}$.
- FIG. 3.—Basket with design of unknown significance. Height, 30 cm. Cat. No. $\frac{50}{1886}$.
- FIG. 4.—Basket with design of unknown significance. Height, 29 cm. Cat. No. $\frac{50}{1888}$.
- FIG. 5.—Basket with design of unknown significance. Height, 25 cm. Cat. No. $\frac{50}{1884}$.

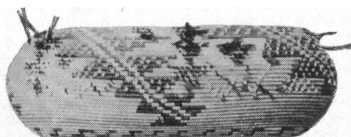
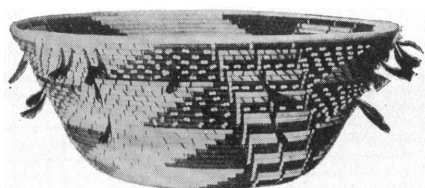


MOQUELUMNIAN BASKETS.

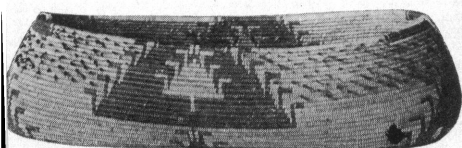
EXPLANATION OF PLATE XXVII.

POMO BASKETS.

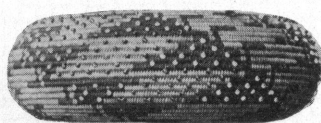
- FIG. 1.—Basket with design of quail-tip and red mountains. Height, 10 cm. Cat. No. $\frac{50}{779}$.
- FIG. 2.—Basket with design of quail-tip and red mountains. Height, 5 cm. Cat. No. $\frac{50}{778}$.
- FIG. 3.—Basket with design of quail-tip and red mountains. Height, 6.5 cm. Cat. No. $\frac{50}{780}$.
- FIG. 4.—Basket with design of red mountains, quail-tip, and spotted skin of fawn. Height, 10.5 cm. Cat. No. $\frac{50}{785}$.
- FIG. 5.—Basket with design of red mountains and quail-tip. Height, 7 cm. Cat. No. $\frac{50}{770}$.
- FIG. 6.—Basket with design of quail-tip and red mountains. Height, 6 cm. Cat. No. $\frac{50}{793}$.
- FIG. 7.—Basket with design of red mountains and buckeye. Height, 5.5 cm. Cat. No. $\frac{50}{801}$.
- FIG. 8.—Basket with design of red mountains and grasshopper-leg. Height, 11 cm. Cat. No. $\frac{50}{791}$.
- FIG. 9.—Basket with leaf design around the base, and mountains above. Height, 5.5 cm. Cat. No. $\frac{50}{794}$.



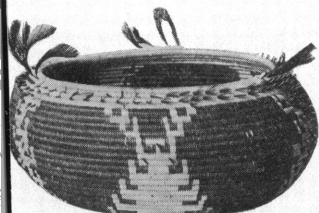
5



2



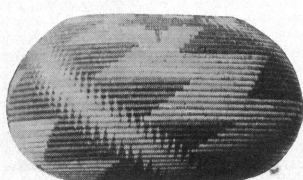
6



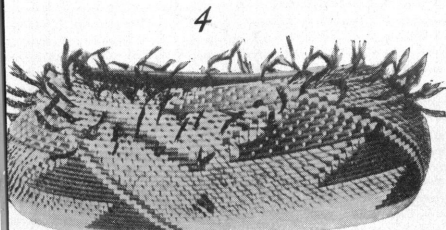
3



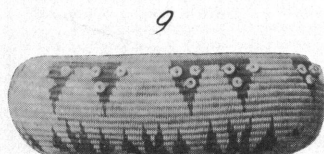
7



8



4



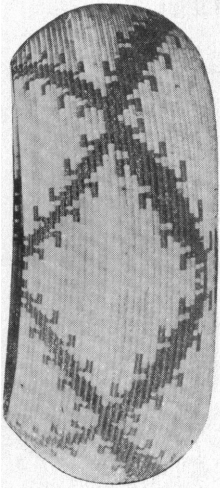
9

POMO BASKETS.

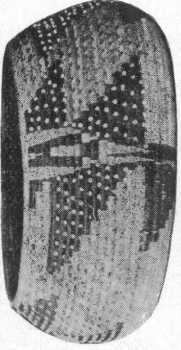
EXPLANATION OF PLATE XXVIII.

POMO BASKETS.

- FIG. 1.—Basket with design of crossing trails and quail-tips. Height, 11.25 cm. Cat. No. $\frac{50}{784}$.
- FIG. 2.—Basket with design of crossing trails and zigzag. Height, 3.5 cm. Cat. No. $\frac{50}{786}$.
- FIG. 3.—Basket with design of unknown significance. Height, 7.75 cm. Cat. No. $\frac{50}{785}$.
- FIG. 4.—Basket with design of unknown significance. Diameter, 57.5 cm. Cat. No. $\frac{50}{782}$.
- FIG. 5.—Basket with design of unknown significance. Height, 5.5 cm. Cat. No. $\frac{50}{788}$.
- FIG. 6.—Basket with design of crossing trails and quail-tips. Height, 5.5 cm. Cat. No. $\frac{50}{803}$.
- FIG. 7.—Basket with design of unknown significance. Height, 8.5 cm. Cat. No. $\frac{50}{776}$.



1



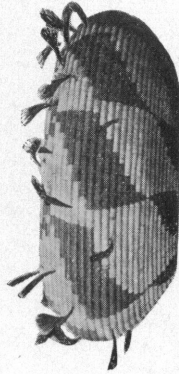
7



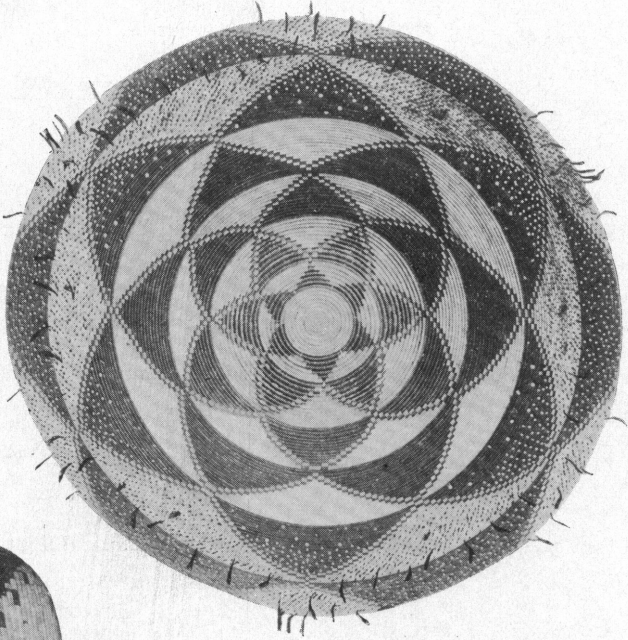
2



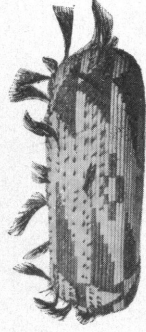
6



3



4



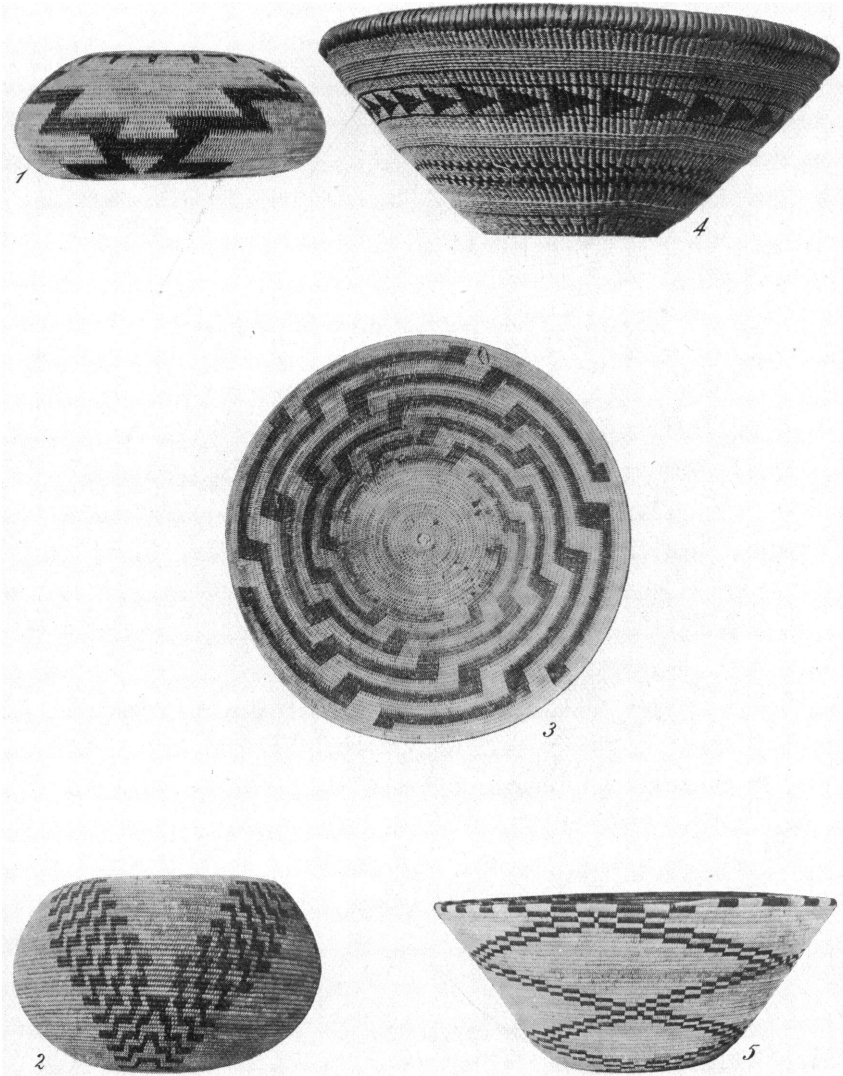
5

POMO BASKETS.

EXPLANATION OF PLATE XXIX.

POMO BASKETS.

- FIG. 1.—Basket with zigzag and quail-tip design. Height, 7.5 cm.
Cat. No. $\frac{50}{777}$.
- FIG. 2.—Basket with zigzag design. Height, 12 cm. Cat. No. $\frac{50}{817}$.
- FIG. 3.—Basket with zigzag (?) design. Diameter, 39 cm. Cat. No.
 $\frac{50}{781}$.
- FIG. 4.—Basket with arrow-point design. Height, 15 cm. Cat.
No. $\frac{50}{786}$.
- FIG. 5.—Basket with design of crossing trails. Height, 13.25 cm.
Cat. No. $\frac{50}{796}$.

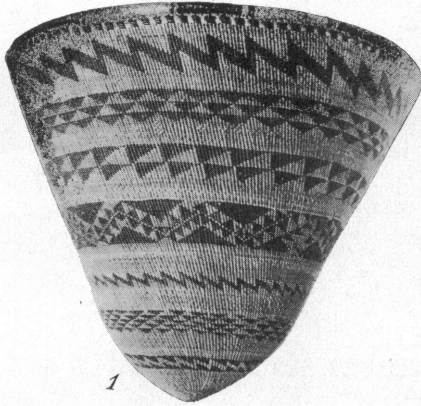


POMO BASKETS.

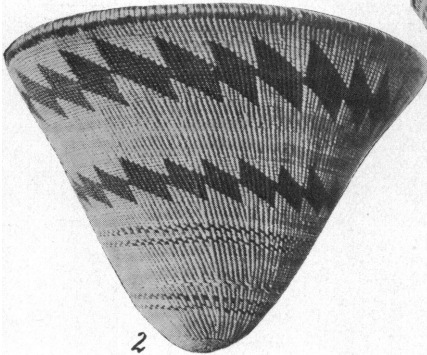
EXPLANATION OF PLATE XXX.

POMO BASKETS.

- FIG. 1.—Basket with designs from below upward as follows: zigzag, red mountains, zigzag, red mountains and zigzag combined, half arrow-points, red mountains, zigzag, meshes in fishnet. Height, 39.5 cm. Cat. No. $\frac{50}{773}$.
- FIG. 2.—Basket with design of unknown significance. Height, 29.5 cm. Cat. No. $\frac{50}{784}$.
- FIG. 3.—Basket with designs from below upward as follows: zigzag, red mountains, red mountains and zigzag, red mountains and zigzag, zigzag, meshes in fishnet. Height, 48 cm. Cat. No. $\frac{50}{798}$.



1



2



3

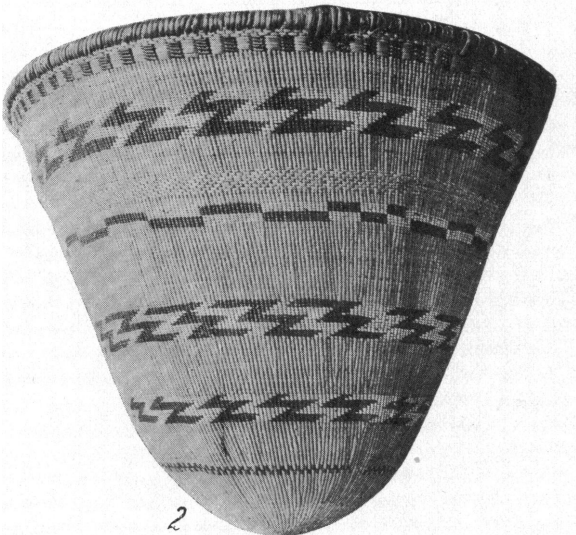
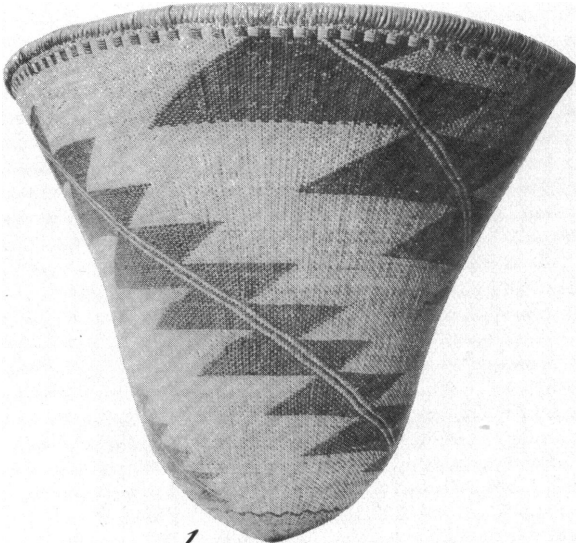
POMO BASKETS.

EXPLANATION OF PLATE XXXI.

POMO BASKETS.

FIG. 1.—Basket with design of red mountains; round the rim, of meshes in fishnet. Height, 46.5 cm. Cat. No. $\frac{59}{786}$.

FIG. 2.—Basket with designs from below upward as follows: meshes in fishnet, zigzag, zigzag, meshes in fishnet, zigzag, meshes in fishnet. Height, 47.5 cm. Cat. No. $\frac{59}{774}$.



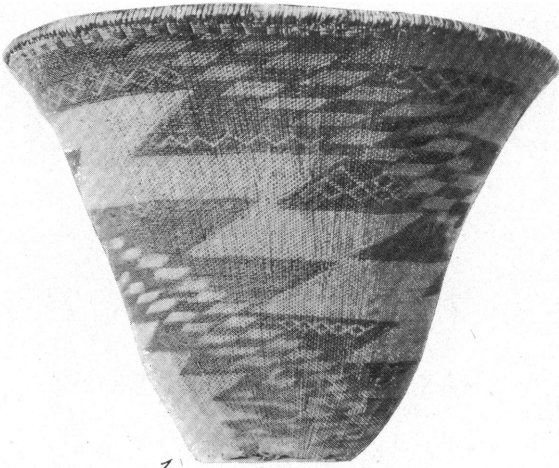
POMO BASKETS.

EXPLANATION OF PLATE XXXII.

POMO BASKETS.

FIG. 1.—Basket with design of unknown significance. Height, 47.5
cm. Cat. No. $\frac{50}{788}$.

FIG. 2.—Basket with design of unknown significance. Height, 53
cm. Cat. No. $\frac{1}{2701}$.



1



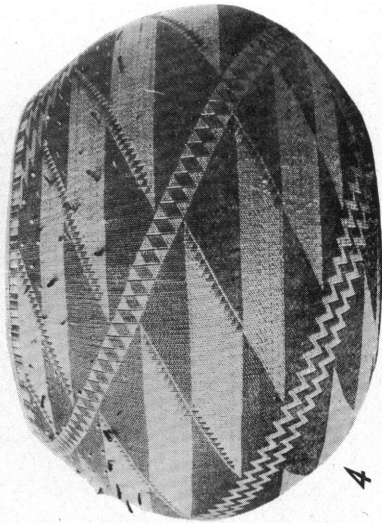
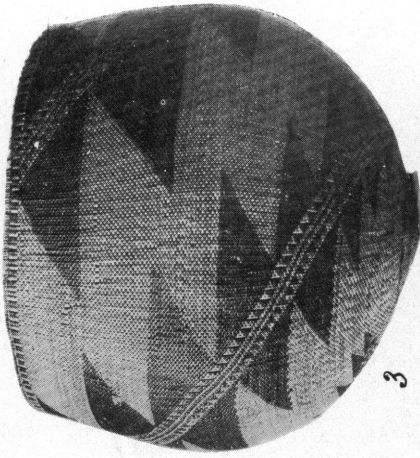
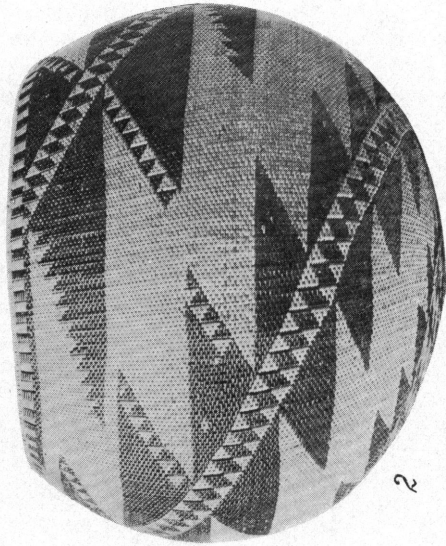
2

POMO BASKETS.

EXPLANATION OF PLATE XXXIII.

POMO BASKETS.

- FIG. 1.—Basket with design of zigzag and red mountains. Height, 18 cm. Cat. No. $\frac{50}{771}$.
- FIG. 2.—Basket with design of zigzag, red mountains, and arrow-points. Height, 30 cm. Cat. No. $\frac{50}{807}$.
- FIG. 3.—Basket with design of red mountains. Height, 25.5 cm. Cat. No. $\frac{1}{2702}$.
- FIG. 4.—Basket with design of red mountains, zigzag, and arrow-points. Height, 39.5 cm. Cat. No. $\frac{1}{2703}$.

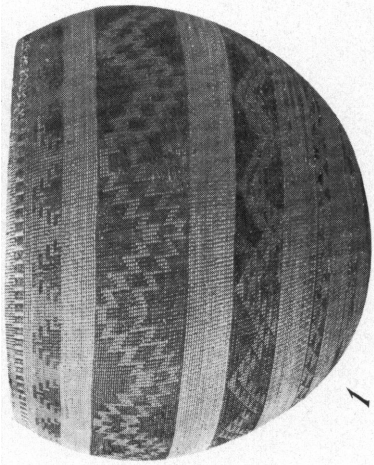


POMO BASKETS.

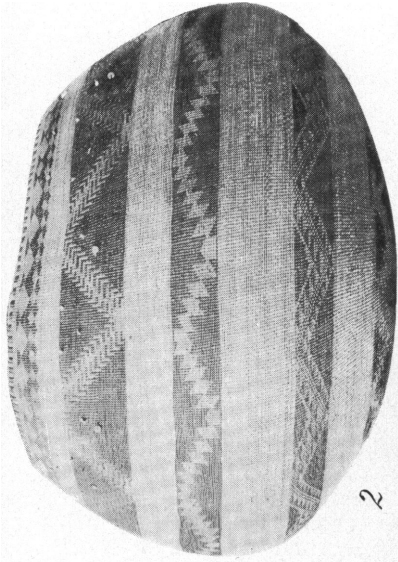
EXPLANATION OF PLATE XXXIV.

POMO BASKETS.

- FIG. 1.—Basket with designs from below upward as follows: crow's tracks, red mountains, red mountains, zigzag, buckeye-trees, meshes in fishnet. Height, 34.5 cm. Cat. No. $\frac{50}{787}$.
- FIG. 2.—Basket with designs from below upward as follows: red mountains, red mountains, zigzag, buckeye-trees, design of unknown significance, meshes in fishnet. Height, 55.5 cm. Cat. No. $\frac{50}{802}$.
- FIG. 3.—Basket with designs of crossing tracks, zigzag, red mountains; around the rim, meshes in fishnet; design on the right not explained. Height, 27 cm. Cat. No. $\frac{50}{778}$.



1



2



3

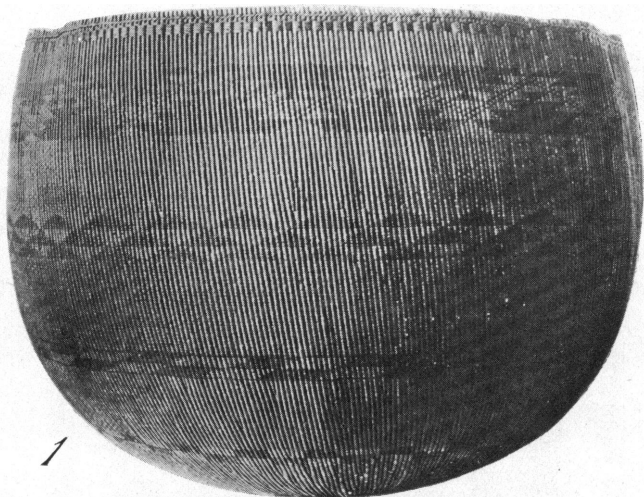
POMO BASKETS.

EXPLANATION OF PLATE XXXV.

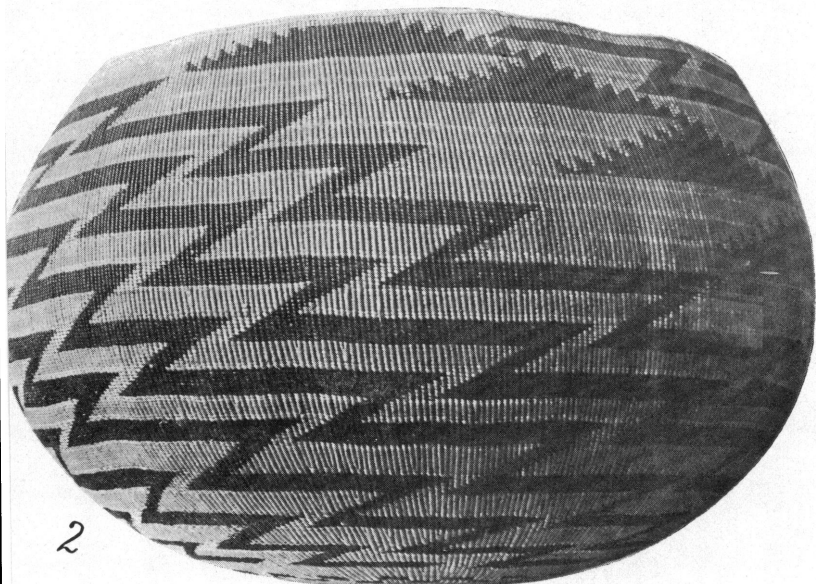
POMO BASKETS.

FIG. 1.—Basket with designs from below upward as follows: meshes in fishnet, crow's tracks, red mountains, zigzag, meshes in fishnet. Height, 44.5 cm. Cat. No. $\frac{50}{811}$.

FIG. 2.—Basket with zigzag design, a break in the design. Height, 37 cm. Cat. No. $\frac{50}{792}$.



1



2

POMO BASKETS.

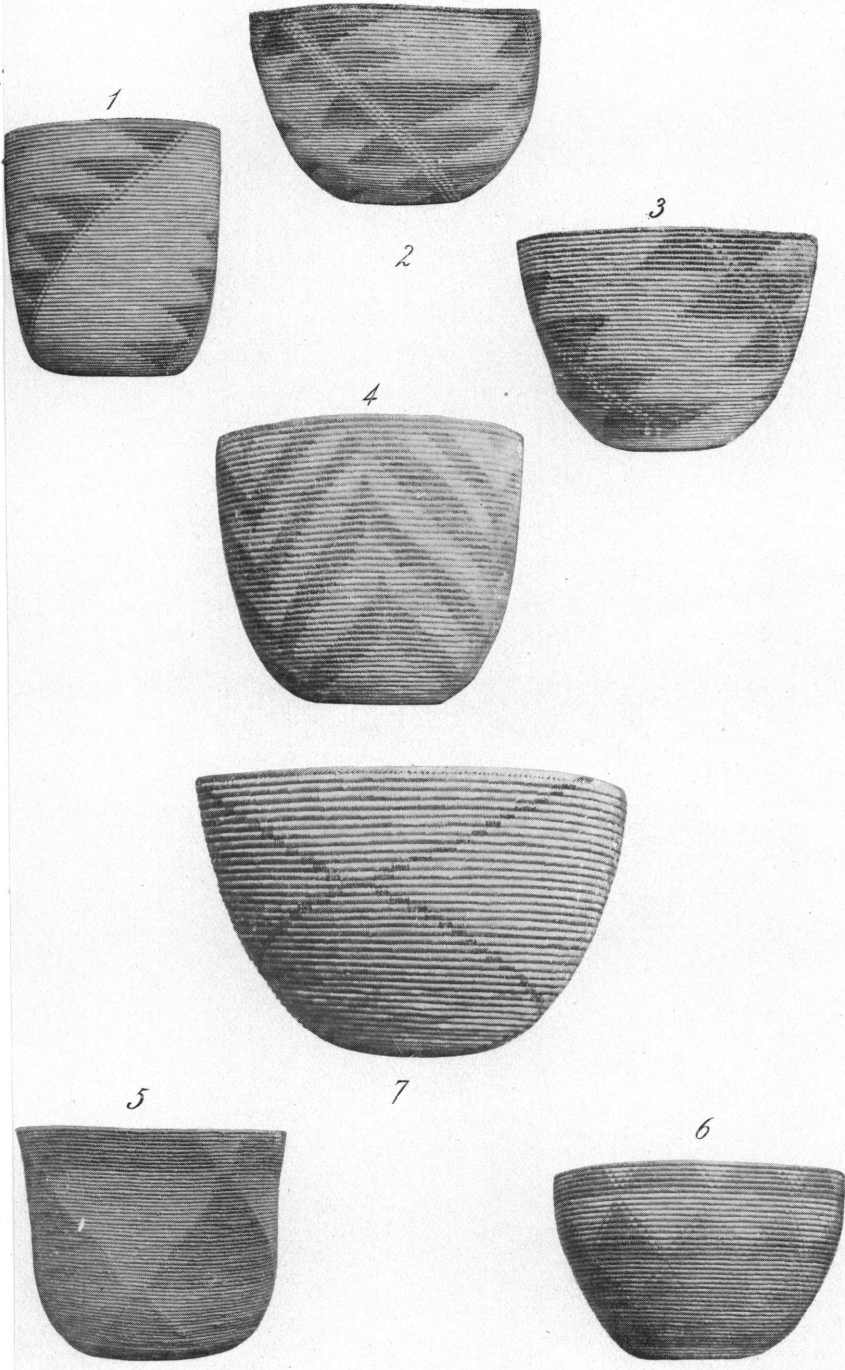
EXPLANATION OF PLATE XXXVI.

POMO BASKETS.

- FIG. 1.—Basket with arrow-point design. Diameter, 47.5 cm. Cat. No. $\frac{50}{813}$.
- FIG. 2.—Basket with design of crossing tracks (?). Diameter, 50 cm. Cat. No. $\frac{50}{788}$.
- FIG. 3.—Basket with zigzag design. Diameter, 41 cm. Cat. No. $\frac{50}{814}$.
- FIG. 4.—Basket with quail-tip design. Diameter, 56 cm. Cat. No. $\frac{50}{772}$.



POMO BASKETS.



EAST AFRICAN BASKETS.

(Continued from 4th page of cover.)

Vol. III. Anthropology (not yet completed).

PART I.—Symbolism of the Huichol Indians. By Carl Lumholtz. Pp. 1-228, pll. i-iv, and 291 text figures. May, 1900. Price, \$5.00.

Vol. IV. Anthropology (not yet completed).

Jesup North Pacific Expedition.

PART I.—Traditions of the Chilcotin Indians. By Livingston Farrand. Pp. 1-54. June, 1900. Price, \$1.50.

PART II.—Cairns of British Columbia and Washington. By Harlan I. Smith and Gerard Fowke. Pp. 55-75, pll. i-v, and 9 text figures. January, 1901. Price, \$1.50.

PART III.—Traditions of the Quinault Indians. By Livingston Farrand and W. S. Kahnweiler.

Vol. V. Anthropology (not yet completed).

Jesup North Pacific Expedition.

PART I.—Kwakiutl Texts. By Franz Boas and George Hunt.

Vol. VI. Anthropology.

Hyde Expedition.

The Night Chant, a Navaho Ceremony. By Washington Matthews.

Vol. VII. Anthropology (not yet completed).

Jesup North Pacific Expedition.

PART I.—The Decorative Art of the Amur Tribes. By Berthold Laufer. Pp. 1-79, pll. i-xxxiii, and 24 text figures. December, 1901. Price, \$3.00.

ETHNOGRAPHICAL ALBUM.

Jesup North Pacific Expedition.

Ethnographical Album of the North Pacific Coasts of America and Asia. Part I, pp. 1-5, pll. 1-28. August, 1900. Sold by subscription, price \$6.00.

BULLETIN.

The matter in the 'Bulletin' consists of about twenty-four articles per volume, which relate about equally to Geology, Palæontology, Mammalogy, Ornithology, Entomology, and (in the recent volumes) Anthropology, except Vol. XI, which is restricted to a 'Catalogue of the Types and Figured Specimens in the Palæontological Collection of the Geological Department.'

Volume I, 1881-86.....	Price, \$5.00	Volume XI, Part I, 1898, Price, 1.25	
" II, 1887-90.....	" 4.75	" " " II, 1899 " 2.00	
" III, 1890-91.....	" 4.00	" " " III, 1900 " 2.00	
" IV, 1892.....	" 4.00	" " " IV, 1901 " 1.75	
" V, 1893.....	" 4.00	" " (Complete). " 5.00	
" VI, 1894.....	" 4.00	" XII, 1899.....	" 4.00
" VII, 1895.....	" 4.00	" XIII, 1900.....	" 4.00
" VIII, 1896.....	" 4.00	" XIV, 1900.....	" 4.00
" IX, 1897.....	" 4.75	" XV, Part I, 1901 " 3.00	
" X, 1898.....	" 4.75		

AMERICAN MUSEUM JOURNAL.

The 'Journal' is a popular record of the progress of the American Museum of Natural History, issued in numbers. Price, \$1.00 a year.

For sale by G. P. PUTNAM'S SONS, New York and London ;
J. B. BAILLIÈRE ET FILS, Paris ; R. FRIEDLÄNDER & SOHN, Berlin ;
and at the Museum.

PUBLICATIONS
OF THE
American Museum of Natural History

The publications of the American Museum of Natural History consist of the 'Bulletin,' in octavo, of which one volume, consisting of about 400 pages, and about 25 plates, with numerous text figures, is published annually; and the 'Memoirs,' in quarto, published in parts at irregular intervals. Also an 'Ethnographical Album,' issued in parts, and the 'American Museum Journal.'

MEMOIRS.

Each Part of the 'Memoirs' forms a separate and complete monograph, with numerous plates.

Vol. I (not yet completed).

- PART I.**—Republication of Descriptions of Lower Carboniferous Crinoidea from the Hall Collection now in the American Museum of Natural History, with Illustrations of the Original Type Specimens not heretofore Figured. By R. P. Whitfield. Pp. 1-37, pll. i-iii, and 14 text cuts. September 15, 1893. Price, \$2.00.
- PART II.**—Republication of Descriptions of Fossils from the Hall Collection in the American Museum of Natural History, from the report of Progress for 1861 of the Geological Survey of Wisconsin, by James Hall, with Illustrations from the Original Type Specimens not heretofore Figured. By R. P. Whitfield. Pp. 39-74, pll. iv-xii. August 10, 1895. Price, \$2.00.
- PART III.**—The Extinct Rhinoceroses. By Henry Fairfield Osborn. Part I. Pp. 75-164, pll. xiii-xx, and 49 text cuts. April 22, 1898. Price, \$4.20.
- PART IV.**—A Complete Mosasaur Skeleton. By Henry Fairfield Osborn. Pp. 165-188, pll. xxi-xxiii, and 15 text figures. October 25, 1899.
- PART V.**—A Skeleton of Diplodocus. By Henry Fairfield Osborn. Pp. 189-214, pll. xxiv-xxviii, and 15 text figures. October 25, 1899. Price of Parts IV and V, issued under one cover, \$2.00.
- PART VI.**—Monograph of the Sesiidæ of America, North of Mexico. By William Beutenmüller. Pp. 215-352, pll. xxix-xxxvi, and 24 text cuts. March, 1901. Price, \$5.00.
- PART VII.**—Fossil Mammals of the Tertiary of Northeastern Colorado. By W. D. Matthew. Pp. 353-447, pll. xxxvii-xxxix, and 34 text cuts. November, 1901. Price, \$3.00.

Vol. II. Anthropology.

Jesup North Pacific Expedition.

- PART I.**—Facial Paintings of the Indians of Northern British Columbia. By Franz Boas. Pp. 1-24, pll. i-vi. June 16, 1898. Price, \$2.00.
- PART II.**—The Mythology of the Bella Coola Indians. By Franz Boas. Pp. 25-127, pll. vii-xii. November, 1898. Price, \$2.00.
- PART III.**—The Archæology of Lytton, British Columbia. By Harlan I. Smith. Pp. 129-161, pl. xiii, and 117 text figures. May, 1899. Price, \$2.00.
- PART IV.**—The Thompson Indians of British Columbia. By James Teit. Edited by Franz Boas. Pp. 163-392, pll. xiv-xx, and 198 text figures. April, 1900. Price, \$5.00.
- PART V.**—Basketry Designs of the Salish Indians. By Livingston Farrand. Pp. 393-399, pll. xxi-xxiii, and 15 text figures. April, 1900. Price, 75 cts.
- PART VI.**—Archæology of the Thompson River Region. By Harlan I. Smith. Pp. 401-442, pll. xxiv-xxvi, and 51 text figures. (With title-page, contents, and index to Vol. II.) June, 1900. Price, \$2.00.

(Continued on 3d page of cover.)