

Outland Coiled Basketry from the Caves
of West Central Nevada*

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The University of California has had a continuing program of archaeological reconnaissance and excavation in Humboldt Valley, Nevada, for the past forty-five years. The two most important sites excavated in this period are Lovelock Cave (Loud and Harrington, 1929) and Humboldt Cave (Heizer and Krieger, 1956). The most abundant kind of artifact recovered in these excavations was basketry--1528 pieces from Lovelock Cave and 2058 pieces from Humboldt Cave. About one-fourth of the basketry from both caves was made by the coiling technique as distinguished from the wicker and twined basketry also found there. The majority of the coiled baskets were flat trays, rather crude and coarse in construction, which had been used for parching seeds. A small percentage of the coiled basketry had been used for bowls which were light and delicate in construction and in some cases decorated with feathers.

It has often been noted that this fine coiled basketry bears an obvious resemblance to certain California basketry (e.g., Steward, 1940, pp. 464-66) but it has never been established whether or not the resemblance is fortuitous. It is proposed to examine the question here in some detail and to review its possible significance.

Loud (Loud and Harrington, 1929, p. 65) makes his primary division of Lovelock Cave coiled basketry according to type of foundation: multiple foundation (type a) and single rod foundation (type b). Within each of these basic types Loud established two subtypes based either upon technique of weft stitching (in type a basketry: split stitch and narrow stitch) or upon form (in type b basketry: roasting trays or bowls).

Krieger classified the Humboldt Cave coiled ware on the basis of form (Heizer and Krieger, 1956, pp. 45-53), the two main types being bowls and circular roasting trays. The fine coiling, with which we are concerned at the moment, occurs only in the coiled bowls from Humboldt Cave. Krieger separated these according to whether they were decorated or plain. In the present report the typology will be based on foundation structure and stitching technique but in each case we will indicate the category in which the specimen was classified in the published report.

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Rod-bundle foundation, split stitch (Pl. 1a)

Rod-bundle foundation is found in the majority of the coarse coiled basketry from the Humboldt Valley, virtually all the coiled roasting trays being of this structure. Its variations include 2-rod, 2-rod and slat, bundle, etc. (see Heizer and Krieger, 1956, fig. 7 for an illustration of the variations). It is clear that these variations in foundation are properly grouped into the same type and were not always distinguished by the weaver because several of them are often included in a single basket.

Split stitch sewing is one of the two stitch variations to be found on the Humboldt Valley coiled basketry. The alternative variety is interlocking stitch. Both split stitches and interlocking stitches may occur in the same basket but this ordinarily indicates error. In the Humboldt Valley specimens there seems always to have been a definite attempt to use one technique or the other, not both. Other varieties, such as intricate stitch and uninterlocking stitch as known in Anasazi coiled basketry (Morris and Burgh, 1941), have not been recorded thus far in this part of Nevada. The split stitch sewing in the fine coiled ware is always neatly done with the stitches being split on both the inside and outside of the basket. The weaver's awl evidently passed through both sides of the stitch and beneath the top element of the foundation of the coil below.

Specimens of this kind from Humboldt Cave include 12 fragments from a single basket, classified by Heizer and Krieger (1956, p. 51; Pl. 20, l-n) as a "fine decorated bowl." This basket has feathers secured under every other stitch on alternate coils and they must have covered the entire surface of the basket before they were chewed off by insects. The feathers are secured by slipping them under the stitches so that they are tangent to the surface of the basket. The feathers are not inserted between the coils as is the case with so many of the Pomo feathered baskets.

There were three fragments of this type from Lovelock Cave, classified by Loud as "type a, split stitch." No feathering or other decoration is to be observed on these specimens.

Rod-bundle foundation, interlocking stitch (Pl. 1c, d)

This type of fine coiled basketry has the same sort of foundation as that described above but differs in that the sewing element, instead of passing through the stitch of the coil below, passes diagonally beneath it. This gives the basket a different appearance; the split stitch basketry gives a rather crude appearance and is usually coarser since the splitting inevitably widens the stitch. The interlocking stitch basketry always gives a neat and even appearance.

The Humboldt Cave material of this type consists of eight undecorated pieces and one decorated piece. Krieger has described the plain pieces (Heizer and Krieger, 1956, p. 50) as follows:

"Eight specimens in this group represent five or six baskets. The foundation is similar to that of the trays and bowls described above; it consists of multiple elements and varies considerably, but the weave is much finer and the stitches interlock. The finest weave has 28 to 30 coils and 62 stitches per 10 cm.; the stitches are perfectly straight up and down, and so compact that the foundation is invisible (Loud and Harrington, 1929, Pl. 29, g and h, 'type a, narrow stitch'). . . . From the small entrance alcove [Humboldt Cave] came specimen 45354, with 28 coils and 58 interlocking stitches per 10 cm. A bit from the surface has 4 coils and 5 stitches per cm. and is only 3 mm. thick."

The decorated specimen from Humboldt Cave has a "double chevron to the left and a single line zigzagging to the right" (Heizer and Krieger, 1956, p. 52; Pl. 20, i). It has a three-rod and slat foundation and a very tight interlocking stitch. The decorative stitches are formed by introducing a different stitching material of darker color. The decorative thread is introduced for a single spiral or two, is then carried along the coil under the regular stitching for the required amount of offset, and used as the stitch at the appropriate place on the coil above. Thus a single strand of decorative material will be used for a height of several coils and amounts to what Balfet (Fig. 2, no. 67) calls "coiling with wound thread."

From Lovelock Cave there are three fragments with multiple foundation and interlocking stitch coiling. Two of these fragments fit the description given for the Humboldt Cave specimens except that they are decorated by means of black stripes which are formed by introducing a different colored sewing material along one or more coils (cf. Loud and Harrington, 1929, Fig. 14, c). The third fragment differs in being much finer and tighter. It is made on a strict three-rod triangular foundation and it is evident that care was taken to maintain a uniform diameter of about 1 mm. for each of the rods. The extreme fineness of this piece may be appreciated by noting that it has 42 coils and 94 stitches per 10 cm. It is decorated by means of dark threading which alternates with ordinary threading in a way appropriate to the design pattern. The pattern is illustrated by Loud (Loud and Harrington, 1929, Fig. 14, f) and as he notes (*Ibid.*, p. 67), the pattern bears considerable resemblance to the millipede design of the Maidu (cf. Dixon, 1900, Fig. 13). There is also some feathering on this piece; the little bit that remains appears to have been one of a series of short diagonal strips of feathering which may have encircled the basket.

Single-rod foundation, interlocking stitch (Pl. 1b)

There is only one fragment of this kind of basketry in the University of California Humboldt Valley collections, that one coming from Lovelock Cave (Loud and Harrington, p. 67; Pl. 29 f). This piece is the base of a bowl, with a single-rod foundation 1 to 2 mm. in diameter, probably of willow. The sewing is composite, two strands being carried along at the same time and used alternately to secure the coils. One of the strands is light

and one dark, so that the alternation produces a speckled effect. Close comparison of this fragment with ethnographic specimens in the University of California Museum of Anthropology reveals only Pomo basketry of precisely similar construction. Some of the Pomo treasure baskets (cf. Mason, 1904, Pl. 25) are very similar to the present specimen, i.e., they are made on a single-rod foundation with a black and white sewing material that gives the same appearance as that of the piece from Lovelock Cave. In the Pomo specimens the black material is used for designs on a white background rather than for a speckling effect as is the case here. One such Pomo basket has been analyzed by Ruth E. Merrill (1923)--the foundation is identified as willow (*Salix* sp.), the white sewing material as sedge (*Carex barbarae*), and the dark sewing material as redbud (*Cercis occidentalis*). In the present specimen the foundation and the white sewing material are of willow while the black material is not identifiable but is definitely not of redbud as in the Pomo specimens.

Several types of fine coiled basketry from the Humboldt Valley archaeological sites have thus far been identified. The average number of coils and stitches per 10 cm. for each variant is given in the following table and for comparative purposes the same statistic is given for the Humboldt Valley coarse coiled trays.

Table 1

	Rod-bundle Foundation		Single-rod Foundation	Coarse Coiled Trays
	Split Stitch	Interlocking Stitch	Interlocking Stitch	
Coils per 10 cm.	40	35	52	25
Stitches per 10 cm.	40	60	64	27

Although there are several varieties of this fine coiled basketry, only a few baskets are represented. For instance, from Humboldt Cave the estimate of the true number of baskets is as follows: wicker, 200; coiled (all types), 142; twined, 17 (Heizer and Krieger, 1956, Table 3). The maximum possible number of fine coiled baskets in this collection is 8 and more probably there were only 6 or 7. The disproportion of basketry wares in the Lovelock Cave material is as great or even greater, to judge from Loud's collection.

If the fine coiling had been an art practiced by the inhabitants of Humboldt Valley there would surely have been more specimens of this kind;

the finished product indicates a great deal of virtuosity attainable only by much practice and constant application.

One possible explanation is that the basketry was all produced within a brief span of time and that the proportion of fine coiling was at this time much greater than would appear from the above figures. Evidence from Harrington's Lovelock Cave collection at the Museum of the American Indian, Heye Foundation, indicates that this is not the case. Mr. Gordon Grosscup, who has recently surveyed this collection, kindly gave access to his notes and they show that the fine coiling was obtained in each level except the 5th in the stratigraphic pit dug by Loud and Harrington in 1924. The provenience of the fine coiled pieces follows. The levels refer to those shown by Harrington (Loud and Harrington, 1929, Fig. 5); the catalog numbers are those of the Museum of the American Indian, Heye Foundation.

Level 1 (highest level)	1 piece (13/4812)
Level 2	1 piece (13/4831)
Level 3	2 pieces (13/4848, 4874)
Level 4	1 piece (13/4707)
Level 5	none
Level 6 (deepest level)	1 piece (13/4926)

Certain of these levels have been dated by the radiocarbon method, tests having been made on three combined samples from level 2 and three combined samples from level 5 (Libby, 1954; Cressman, 1956). The level 2 samples yield a date of 1686 + 220 years while the level 5 samples give 3172 + 260 years. This indicates that the fine coiled basketry in Lovelock Cave covers a time span in excess of 1500 years and was known throughout the entire occupation of the cave. When we add to this the occurrence not only in the lower levels but in the latest Humboldt Cave deposits, probably dating to within the last 500 years, it is seen that the fine coiled basketry covers a time span in excess of 2500 years and is present in all periods of the Lovelock Culture.

From this we may conclude that fine coiling was not an art indigenous to the Humboldt Valley and that the pieces in the cave collection must therefore have been traded in from some outside area. On ethnographic evidence it seems unlikely that the fine coiled ware could have come from the north or the east. To the north the coiled basketry of recent times seems totally unlike the coiled basketry of the Great Basin and California (cf. Boas et al., 1928). In the Columbia Plateau the coiling is usually done on a bundle foundation and decoration is nearly always by means of imbrication. A suggestive bit of archaeological evidence comes from the north, however. Weltfish (1932, p. 110) describes some fine coiled basketry found with burials by H. W. Krieger near Wahluke, Grant County, Washington, on the Columbia River. Weltfish reports that "the burials were three to eight feet deep in solidified sand and were associated with abandoned pit-house village sites." The basketry is said to have been of a fineness comparable to the finest Lovelock Cave specimens. Both three-rod and single-rod foundations are present in the specimens and the stitches are interlocking. This instance may be

evidence of a former basket-making industry in the Plateau resembling that of Central California, and replaced later by techniques derived from the Northwest Coast. As yet, of course, the evidence is only suggestive. Further, little else is known of the prehistoric textile industry of the Northwest, and that region is, therefore, ruled out, but only tentatively, as the source of the Humboldt Valley fine coiling.

To the east of the Humboldt Valley the coiling done in the ethnographic period also was not of the extremely fine variety (cf. Steward, 1941, p. 238). There is some archaeological evidence of coiled basketry in Utah but it all seems to be of a coarse variety (Rudy, 1953; Enger, 1942; Steward, 1937). The "close coiling" from the top three levels of Danger Cave is obviously not similar to the fine coiled specimens from the Humboldt Valley region (cf. Jennings, 1957, pp. 247-250).

There also seems to be no relationship between the Humboldt Valley fine coiling and the basketry of the American Southwest. The Anasazi peoples, for example, produced quantities of coiled basketry. They occasionally produced some fine work (Tschopik, 1939, p. 96) but the great majority of the specimens found in the Southwest are quite crude (cf. Morris and Burgh, 1941, Figs. 23, 24).

This leaves California, the region to the west of the Humboldt Valley, as the probable source of the fine coiling. The extensive ethnographic collections of the University of California Museum of Anthropology have been consulted in an attempt to match the Humboldt Valley material. For the bulk of the specimens (all but one single-rod piece) the greatest similarity with the cave specimens is found in the Maidu baskets and it must be noted that the coarse coiled trays of the Maidu (e.g., compare Dixon, 1902, Pl. I, Fig. 5 with Loud and Harrington, 1929, Pl. 30a) also bear a close resemblance to the coiled trays from the Humboldt Valley archaeological sites. The Maidu coil on a three-rod foundation with stitches split on the concave side of the tray (Mason, 1904, p. 465). Dixon (1905) says that these trays were used both for winnowing (p. 185) and for parching (p. 189). The coiled trays of the Maidu, then, are virtually identical in both form and function with those of the lower Humboldt Valley region.

The ethnographic collections of the University of California are rather deficient in Washo basketry and this may have given a bias to our comparisons. It is a fact that Washo basketry is very nearly the same as that of the Maidu (Mason, 1904, p. 466) and since this is the case then the Humboldt Valley specimens must bear nearly as close a resemblance to the basketry of the Washo as to the basketry of the Maidu. If one consults S. A. Barrett's paper on Washo culture (Barrett, 1917) it is seen that most of the Humboldt Valley fine coiling specimens can be matched by some Washo specimen. The single-rod piece from Lovelock Cave is very similar to the baskets shown by Barrett (*op. cit.*) on Pl. X, Figs. 1 and 5. The rod-bundle foundation, interlocking stitch, pieces from Humboldt Valley resemble baskets shown by Barrett in Pl. IX. The only thing lack-

ing in the Washo pieces is the split stitch type (A. D. Krieger informs us that split stitches are also lacking on the Washo specimens in the Riverside [California] Municipal Museum). The Washo specimens in the University of California collections do not display split stitches and it is not clear from the illustrations whether the specimens (now in the Milwaukee Public Museum) shown by Barrett were made by this technique. On the other hand, many of the Maidu specimens in the University of California collections do have a split stitch technique (see also Mason, 1904, p. 465).

One other characteristic of the Humboldt Valley fine coiled ware must be mentioned--the fact that some specimens are feathered. One of the Humboldt Cave baskets is feathered (one of the rod-bundle foundation, split stitch specimens described above) and according to Loud (Loud and Harrington, 1929, p. 68) "Nine bowl-shaped baskets had been decorated with feathers which had worn away or been eaten by moths. Feathers were inserted in baskets only at wide intervals. In several cases the feathers were green, suggesting the merganser or mallard as their source." Several of the Lovelock Cave feathered baskets are of coarse coiling, however, indicating that feathering was done locally, at least in part. The feathering again suggests California, where this was a favored method of decoration (Mason, 1904, pp. 310-311). Stewart (1941, element 1066 and note p. 434) notes that the ethnographic Washo made feathered baskets, but that these were rare and were used by shamans. Some specialized use of this sort may in part account for the low frequency of feather-decorated baskets.

It is abundantly clear from the evidence presented here that the precise homologues of the Humboldt Valley fine coiled basketry are to be found in California, primarily in the Maidu-Washo area, and so far as is known the same types are rare or do not occur to the east, north or south of the Humboldt region. Since this is true it is evidently not unfair to conclude that the Humboldt Valley fine coiled specimens represent trade pieces from California. If this inference is correct then we have a suggestion that the California basketry art was already highly developed along traditional lines more than 3,000 years ago. California archaeological evidence, particularly the lack of bone awls, suggests that coiled basketry was either not present or was rare in the Early Horizon of Central California (Heizer, 1949, p. 29). Bone awls are found however in the Middle Horizon of Central California (Lillard, Heizer and Fenenga, 1939, p. 78) and it therefore seems probable that the Humboldt Valley specimens represent trade with Middle and Late Horizon California peoples. Since the Middle and Late Horizons together have a probable antiquity covering the past 4,000 years, the time span fits neatly with that of the Humboldt Valley sequence.

It has been shown elsewhere that an apparently continuous, though presumably small, flow of unworked marine shells and finished shell beads from Central California was absorbed by the peoples of the lower Humboldt Valley and Carson Sink region from Early Horizon times up to the historic period. The implication of some regularity or constancy in this ancient

commerce allows the inference that perhaps other items than shell beads were also being diffused. A second item of this trade material, it is proposed, was fine coiled and feathered basketry, specimens of which were probably admired as especially finely made and unusually decorative objects of art. What influence, if any, such exotic imports had upon the basket-making techniques of the Nevada cave-dwellers is not known. It must be admitted, however, that there is every probability that among the Nevada peoples where basketry ranked as a major industrial pursuit, the unusually close woven and feather-decorated California bowls must have been examined with especial care, and that such critical analyses as we suppose to have been made may have suggested new variations in foundation construction, manner of weft sewing, ornamentation, and the like. Such influences would be extraordinarily difficult to demonstrate, but we urge consideration of the proposition that we may have here a case of acculturation in process.

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Explanation of Plate 1: (facing following page)
(The scale shown refers to the photographs rather than to the line drawings below each specimen.)

- a. UCMA 1-42283. Rod-bundle foundation, split stitch specimen from Humboldt Cave. The dark spots in the lighter portions are the remains of feathers which once covered part of the basket.
- b. UCMA 1-20029. Single rod, interlocking stitch specimen from Lovelock Cave. Notice the double stitching in this piece.
- c. UCMA 1-45339. Rod-bundle foundation, interlocking stitch specimen from Humboldt Cave. The decoration in this piece is accomplished by introducing a darker stitching element at the appropriate places.
- d. UCMA 1-20027. Rod-bundle foundation, interlocking stitch specimen from Lovelock Cave. It is the same technique as the piece shown in Pl. 1c but is much finer. The decoration on the right is by a different stitching element, the black spots in the upper left are the remains of feathering.