

III. PINYON NUT GATHERING EQUIPMENT

FROM THE VICINITY OF GARDNERVILLE, DOUGLAS COUNTY, NEVADA

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The materials described in this report were collected in the near vicinity of Gardnerville, Douglas County, Nevada during the late 1930's and early 1950's by R. F. Heizer. The basketry consists of three conical, twined, openwork burden baskets that were found cached in the branches of a pinyon pine (Pinus monophylla), 10 miles southeast of Gardnerville. The gathering hooks, of which three of a total of four are described here, along with several nondescript seed beaters, were collected in 1950 by members of a University of California Field Party in the Pine Nut Mountains east of Gardnerville. All the artifacts are believed to be of recent manufacture and their chief value lies in the fact that they are assignable to the ethnographic Washo Indians residing in the area (see Stewart 1966:196-203 for a discussion of the Washo territorial area).

Since these are the only three burden baskets in the ethnographic collections of the Robert H. Lowie Museum of Anthropology, University of California, Berkeley, known to have come from Washo territory, it was not possible to make an exhaustive comparison of attributes with other known Washo burden baskets of comparable function. However, a comparison was made with two other burden baskets from the S. A. Barrett collection in the Lowie Museum attributed to the Washo, although they were not collected in the Washo territory. A conical burden basket (LMA 1-10477) and an openwork burden basket (LMA 1-10493) were used for the comparison. Both are described as Washo by Barrett in the main museum catalogue. Except for the up to the right weft helix slant present on 1-10483, a pattern found in all Washo basketry where split and peeled shoots are used, the burden baskets are comparable in every way. Thus, on the basis of this limited comparative sample, their provenience in Washo territory and their dissimilarity to known ethnographic Paiute basketry, these three burden baskets can be assigned to the Washo.

The inferred uses of both the basketry and gathering hooks as part of the material culture of pinyon nut gathering, is based on both the use evidence present, especially in regards to the basketry, and on their direct association with the pinyon nut stands in the Pine Nut Mountains as well as on the ethnographic/descriptive reports on pine-nut gathering that exist in the literature (see Coville:1892, Dutcher:1893, and Wheat:1967:29-39 among others for descriptions of the pine nut harvest).

DESCRIPTIONS

LMA 1-39558 - Openwork, twined pinyon basket.

Native Name and Classification - mama'í - Burden basket - coarsely woven, plain twine technique (Barrett:1917:20).

Size - 63.5 cm high; 55.9 cm diameter at rim.

Work Habit Features - Woven from point of base upward and rightward working on the exterior face. It is not possible to tell whether or not the strands were pulled to the front or back with each turn of the twining.

Warp Material - Whole, peeled shoots. (Salix sp.). Average of 4mm thickness.

Start - Simple layered crossing of 6 warp elements probably crossing 6 more elements and twined (over two) together. Much of the start destroyed by use.

Warp Arrangement - Conical from the start.

Warp Insertions - Butts sharpened with metal knife and wedged into weft rows so that they do not project on either face. Butt ends project 10-15mm below top row of twining turn.

Degree of Warp Slant - 6° to the left of vertical (slightly more pronounced in upper portion of basket).

Warp Selvage - Warp ends trimmed flush with last row of twining; probably trimmed and reworked when 'new' rim added. Onto this a semi-peeled shoot hoop, 9.0 mm thick, (Salix sp.) is lashed (up to the right slant).

Weft Material - Whole, peeled roots. (Salix sp.). Average of 2.5 mm thick.

Main Construction Weave - Plain twining over single warp elements.

Auxiliary Weave - Plain twining over two warp elements for 12.7 cm up from base of half-split non-peeled shoots (Salix sp.).

Slant of Turns in Weft Helix - Main = Down to the right.
Auxiliary = Up to the right.

Spacing of Weft Rows - Openwork. Space between rows varies from 45-50 mm.

Splices - Moving and fag ends both trimmed on work face. Two types of splices present. In the more common one, the fag end is caught under a turn of the twining on the work face with the end projecting down; moving ends continue

doubled up with the new strand until used up. In a few cases, the moving end is trimmed on the work face after being caught under the second turn of twining after the fag end appears.

Weft Turn Count - 14.0 - 16.0 weft turns per 10.0 cm.
3.0 weft courses per 10.0 cm.

Decoration - None.

Superstructural Supports - 1. Hoop of partially peeled shoot (Salix sp.) lashed on to rim.
2. Interior hoop, 7.0 mm thick, of partially peeled shoot (Salix sp.) lashed on to interior, 23.5 cm. down from rim, with half-split, unpeeled shoots (Salix sp.) (up to the right slant).
3. Cloth strip for carrying basket tied to hoop rim support at two points 56.0 cm apart.
4. Leather thong (on outside) tied to interior rim.
5. Base - covered with a piece of leather (boot remnant) and lashed onto basket with a leather thong.

Use Evidence - Small globules of pitch of Pinus monophylla (?) on interior of basket. Basket heavily used - mended in many places due to breaking of warp and weft elements. Mending consists of simple lashing of broken elements together with either whole or half split unpeeled shoots (Salix sp.). Rim is pulled loose in some places and is semi-detached. From a comparison with the other burden baskets studied and with other specimens present in the Lowie Museum collections, it appears that the original selvage of this piece has been trimmed and a new hoop rim lashed on. Dawson (personal communication) indicates that it was customary for a new rim to be fitted if the previous one had been broken through hard usage, and in this particular specimen, this appears to have been the case.

LMA 1-39559 - Openwork, twined pinyon basket.

Native Name and Classification - mama'í - Burden basket - coarsely woven, plain twined technique (Barrett:1917:20).

Size - 71.0 cm high; 62.9 cm diameter at rim.

Work Habit Features - Woven from point of base upward and rightward working on the exterior face. It is not possible to tell whether or not the strands were pulled to the front or back with each turn of the twining.

Warp Material - Whole, peeled shoots. (Salix sp.). Average of 5.0 mm thick.

Start - Simple layered crossing of 6 warp (?) elements crossing 6 more (?) and twined (over two) together. Much of the start destroyed by use.

Warp Arrangement - Conical from the start.

Warp Insertions - Butts sharpened with a metal knife and wedged into weft rows so that they do not project on either face. Butt ends project 13-16 mm below top of twining turn.

Degree of Warp Slant - 8° to the left of vertical (slightly more pronounced in upper portion of basket).

Warp Selvage - The warp ends are bunched together either into groups of two or three, with three being the more common arrangement. Usually one of the elements in each grouping is trimmed flush, 4.7-5.2 cms above the last row of twining and the element or elements remaining is then bent down to the right and plain twined a few turns with an up to the right slant around the group of elements ahead and to the right. Those warps that serve as wefts in the selvage end up trimmed on the exterior side of the basket, tips pointing downward. This process is repeated until all the warps have been so treated. (Process is similar to that illustrated in Barrett:1917:19). Onto this, a peeled shoot hoop (Salix sp.), 11.0 mm thick is lashed (up to the right slant).

Weft Material - Whole, peeled roots. (Salix sp.). Average of 3.0 mm thick.

Main Construction Weave - Plain twining over single warp elements.

Auxiliary Weave - Plain twining over two warp elements for 2.5 cm up from base of half split, non-peeled shoots (Salix sp.).

Slant of Turns in Weft Helix - Main = Down to the right.
Auxiliary = Up to the right.

Spacing of Weft Rows - Openwork. Space between rows varies from 44-47 mm.

Splices - Moving and fag ends trimmed on work face. Two types of splices present. In the more common one, the fag end is caught under a turn of the twining on the work face with the end projecting down; moving ends continue doubled up with the new strand until used up. In a few cases, the moving end is trimmed on the work face after being caught under the second turn of twining after the fag end appears.

Weft Turn Count - 14.0 - 16.0 weft turns per 10.0 cm.
3.0 weft courses per 10.0 cm.

Decoration - None.

- Superstructural Supports - 1. Hoop of peeled shoot (Salix sp.) lashed on to rim.
2. Interior hoop, 11.0 mm thick, of peeled shoot (Salix sp.), lashed on to interior, 23.5 cm down from rim, with half split unpeeled shoots (Salix sp.) (up to the right slant).
 3. Two leather thongs (on outside) tied to interior rim and placed 34.0 cm apart. Joining these is a piece of canvas webbing approximately 72.0 cm long.
 4. Base - covered with a piece of leather and lashed to the basket with a leather thong.

Use Evidence - Small globules of pitch of Pinus monophylla (?) on interior of basket. Basket heavily used - mended in many places due to the breaking of warp and weft elements. Mending consists of simple lashing of broken elements together with either whole or half split unpeeled shoots (Salix sp.) (up to the right slant). Rim is broken and loose in several places and is semi-detached from the basket.

LMA 1-39560 - Openwork, twined pinyon basket.

Native Name and Classification - mama'i - Burden basket - coarsely woven, plain twined technique (Barrett:1917:20).

Size - 86.4 cm high; 76.8 - 65.4 cms diameter at rim (varies due to use).

Work Habit Features - Woven from point of base upward and rightward. It is not possible to tell whether or not the strands were pulled to the front or back with each turn of the twining.

Warp Material - Whole, peeled shoots. (Salix sp.). Average of 4.0 mm thick.

Start - Simple layered crossing of 7 warp elements crossing 7 more and twined (over two) together.

Warp Arrangement - Conical from the start.

Warp Insertions - Butts sharpened with a metal knife and wedged into weft rows so that they do not project on either face. Butt ends project 11-16 mm below top of twining turn.

Degree of Warp Slant - 7° to the left of vertical (slightly more pronounced in upper portion of basket).

Warp Selvage - The warp ends are bunched together either into groups of two or three, with three being the more common arrangement. Usually one of the elements in each grouping is trimmed flush, 4.6-5.3 cms above the last row of twining

and the element or elements remaining is then bent down to the right and plain twined a few turns with an up to the right slant around the group or elements ahead and to the right. Those warps that serve as wefts in the selvage end up trimmed on the exterior side of the basket, tips pointing downward. This process is repeated until all the warps have been so treated. (Process is similar to that illustrated in Barrett:1917:19). Onto this, a semi-peeled shoot hoop (Salix sp.), 10.0 mm thick is lashed (up to the right slant).

Weft Material - Whole, peeled roots. (Salix sp.). Average of 2.5 mm thick.

Main Construction Weave - Plain twining over single warp elements.

Auxiliary Weave - Plain twining over two warp elements for 4.0 cm up from base of half split, un-peeled shoots (Salix sp.).

Slant of Turns in Weft Helix - Main = Down to the right.
Auxiliary = Up to the right.

Spacing of Weft Rows - Openwork. Space between rows varies from 43-47 mm.

Splices - Moving and fag ends both trimmed on work face. Two types of splices present. In the more common one, the fag end is caught under a turn of the twining on the work face with the end projecting down; moving ends continue doubled up with the new strand until used up. In a few cases, the moving end is trimmed on the work face after being caught under the second turn of twining after the fag end appears.

Weft Turn Count - 15.0 - 16.0 weft turns per 10.0 cm.
2.5 weft course per 10.0 cm.

Decoration - None.

- Superstructural Supports - 1. Hoop of partially peeled shoot (Salix sp.) lashed on to rim.
2. Interior hoop, 12.0 mm thick, of unpeeled shoot (Salix sp.), lashed on to interior, 39.4 cm down from rim, with half split, unpeeled shoots (Salix sp.) (up to the right slant).
 3. Base - covered with a piece of leather and lashed to the basket with a leather thong.

Use Evidence - Small globules of pitch of Pinus monophylla (?) on interior of basket. Basket mended in several places due to breaking of warp and weft elements. Mending consists of simple lashing of broken elements together with either whole or half split, unpeeled shoots (Salix sp.) (up to the right slant).

LMA 2-28469 - Pinyon gathering hook.

Length - 152.0 cm.

Maximum Thickness at Butt - 2.8 cm (measurement taken at hooked end).

Maximum Thickness at Tip - 1.4 cm.

Material - Peeled willow (Salix sp.).

Description - A long, slightly tapering, fairly straight willow branch showing only slight weathering with a natural hook, 14.0 cm long at one end making an angle of 35° with the main branch. Both butt and tip ends, as well as the tip of the hook, show evidence of cutting with a metal knife, with no subsequent finishing of the primary cut marks. Much of the branch shows evidence of having been peeled with a metal knife as cut marks and small pieces of bark are present on the branch in many places.

Function - Used to hook the cones of the pinyon pine (Pinus monophylla) from the tree (Dutcher:1893:379).

LMA 2-28470 - Pinyon gathering hook.

Length - 187.0 cm.

Maximum Thickness at Butt - 2.3 cm.

Maximum Thickness at Tip - 2.3 cm.

Material - Peeled willow (Salix sp.).

Description - A long, fairly straight pole of peeled willow showing only minimal weathering with a short, worked, tapered piece of willow, 22.0 cm long, lashed at an angle of 30° to one end of the pole with several lengths of baling wire. (Similar to Wheat:1967:30). Shallow notches that extend approximately half way around the two pieces are cut into both the main and auxiliary pieces at two locations to provide support of the baling wire ties. Much of the pole shows evidence of having been peeled with a metal knife, as cut marks and small pieces of bark are present on the pole in many places. All the trimming, shaping and cutting of the two components was done with a metal knife.

Function - Used to hook the cones of the pinyon pine (Pinus monophylla) from the tree (Dutcher:1893:379, Wheat:1967:31).

LMA 2-28472 - Pinyon gathering hook.

Length - 205.0 cm.

Maximum Thickness at Butt - 2.3 cm (measurement taken at hooked end).

Maximum Thickness at Tip - 1.2 cm.

Material - Peeled willow (Salix sp.).

Description - A long tapering, curving, badly weathered willow branch with a natural hook, 10.0 cm long, at one end, making an angle of 35° with the main branch. The butt end near the hood has been smooth and rounded with a metal knife.

Function - Used to hook the cones of the pinyon pine (Pinus monophylla) from the tree (Dutcher:1893:379).

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APPENDIX

Since much of the information of first hand accounts of pinyon nut gathering is not readily available or accessible, it was thought to be worthwhile and of some value, to include several selected excerpts from various sources on this with the intention of rounding out the descriptions of the material culture items presented above. It should be pointed out, that while these accounts do not refer specifically to the Washo, the items and methods of collection appear to be similar among the many groups who gathered the pinyon nut harvest.

The first excerpt is taken from the chapter "Nevada Forests" in the book Steep Trails by John Muir, published in 1918. In this essay, Muir describes the pinyon nut harvest as he witnessed it in 1878 in the Sierra Nevadas.

The second excerpt by Frederick Vernon Coville appeared in a brief report entitled The Panamint Indians of California (American Anthropologist, Vol. V, October, 1892, pp. 352-53) and discusses only briefly the pinyon nut harvest in relation to other gathered food sources.

The final excerpt and the most informative, is taken from the report by B. H. Dutcher on Pinon Gathering Among the Panamint Indians which appeared in the American Anthropologist in 1893 (American Anthropologist, Vol. VI, October 1893, pp. 377-386).

J. MUIR

"Long before the harvest-time, which is in September and October, the Indians examine the trees with keen discernment, and inasmuch as the cones require two years to mature from the first appearance of the little red rosettes of the fertile flowers, the scarcity or abundance of the crop may be predicted more than a year in advance. Squirrels, and worms, and Clarke crows, make haste to begin the harvest. When the crop is ripe the Indians make ready their long beating-poles; baskets, bags, rags, mats, are gotten together. The squaws out among the settlers at service, washing and drudging, assemble at the family huts; the men leave their ranch work; all, old and young, are mounted on ponies, and set off in great glee to the nut lands, forming cavalcades curiously picturesque. Flaming scarfs and calico skirts stream loosely over the knotty ponies, usually two squaws astride of each, with the small baby midgets bandaged in baskets slung on their backs, or balanced upon the saddle-bow, while the nut-baskets and water-jars project from either side, and the long beating-poles, like old-fashioned lances, angle out in every direction.

Arrived at some central point already fixed upon, where water and grass is found, the squaws with baskets, the men with poles, ascend the ridges to the laden trees, followed by the children; beating begins with loud noise and chatter; the burs fly right and left, lodging against stones and sagebrush;

the squaws and children gather them with fine natural gladness; smoke-columns speedily mark the joyful scene of their labors as the roasting-fires are kindled; and, at night, assembled in circles, garrulous as jays, the first grand nut feast begins. Sufficient quantities are thus obtained in a few weeks to last all winter."

F. V. COLVILLE

"As in the case of most civilized communities, the greater portion of their plant food consists of starchy material in the form of seeds. Most important is the Nevada nut pine, Pinus monophylla, which grows abundantly in the mountains at an altitude of six to eight thousand feet. In early autumn, after the seeds have matured, but before the cone scales have opened, the cones are beaten from the trees, gathered in baskets, and spread out on a smooth piece of ground exposed to the heat of the sun. The scales soon become dry and crack apart, and the seeds are shaken out by blows from a stick or the more persistent ones rattled out by hand. The empty cones are then removed from the ground and the seeds gathered in baskets. Large quantities of pine nuts are thus collected, and most of them are cached in dry places among the rocks for use during the year. They are said to remain fresh and edible for several years if properly stored.

To prepare them for food the nuts are put into a basket with some live coals and shaken or stirred until they are gradually roasted. In this state pine nuts are often sold in market in California and other Western States, being disposed of precisely as peanuts are in the East. These roasted seeds, after the removal of their thin shells, may be munched entire or ground in a wooden mortar with a stone pestle and eaten dry or made into a soup."

B. H. DUTCHER

"Shortly after daylight all hands, one after another, rolled slowly out of their scanty blankets and gathered around the feeble flames that the more energetic had succeeded in starting. Crouching down on their haunches, they endeavored to drive the chill from their bones by presenting first one side to the blaze, then the other, and to remove the sleep from their eyes by vigorous rubbing. Before sunrise a meager breakfast had been eaten, and they began the work of the day, the women betaking themselves to the nutting, the men to further sleep, tobacco, or cards. In fact, with the exception of acting as rather disinterested spectators at times and of eating the pinons on all possible occasions, the men took no part in the industry. My guide at one time during the morning attempted to shoot some of the quail that abounded in the neighborhood, but failed.

Immediately after the meal several of the women equipped themselves with large, conical pack-baskets and beating sticks and sallied forth to gather the

cones from the trees in the vicinity. The baskets were made of light wicker-work, shaped like the frustum of a right cone, about two to two and one-half feet high and nearly as broad. The upper base of the frustum, or the bottom of the basket, was flat, and from three to five inches in diameter. A leather thong was fastened into the side just below the rim, passed around the forehead, and similarly inserted into the wicker-work on the other side of the head, thus serving to bind the basket to the carrier. The beating or pulling sticks were straight rods, about an inch in diameter and five or six feet long, stripped of bark and with all the branches removed, save one at the outer extremity, which was cut off about six inches from its union with the main staff. The stick itself terminated immediately beyond this point. To prevent this spur or limb from being split off by the rough usage to which it was subjected a stout thong was wrapped around from one branch to the other about three or four inches from the vertex of the angle. To give a clearer idea of this instrument, it may be compared to an A, in which the uprights stand for the limbs, one being greatly prolonged, and the cross-bar for the binding thong.

Thus equipped with basket and stick, a squaw would advance to some untouched tree and proceed to beat and pick the cones from the limbs until her receptacle was full, when she would return to camp, empty the load onto the ground, and start off again to refill the basket or remain to open cones, as necessity dictated. Those not engaged thus in keeping up the supply of fresh cones busied themselves in removing the nuts.

The cones of Pinus monophylla are small, perhaps three inches long by two in diameter, with strong, thick scales, under each of which are found two, rarely one, of the small seeds called "pinons" or pine nuts. Being quite tough when fresh and having moreover an abundant supply of sticky pitch, they are rather difficult to open, unless subjected to a drying treatment. To this end a dense pile of brush is prepared, six or eight feet across and two feet high, and caused to burn slowly or rather to smoulder, the density and close packing of the mass preventing any strong or rapid combustion. On top of this heap and through it the fresh cones are mixed and left until the heat has dried the pitch and caused the cone leaves to open out to an angle of perhaps 45° or 50° and expose the nuts beneath. When a sufficient number of the cones had been dried and opened and the mass had cooled the women would seat themselves in a circle around the heap, each with a shallow, shell-shaped basket, a small stick, and two stones, and proceed to work. One of these stones was flat, of the size of a small plate, and was laid on the ground as an anvil; the other, about the size of the fist, was used as a hammer. Having raked out a few of the dried cones with her stick, she would grasp one in her left hand and, holding it with its base on the anvil and its apex upward, would strike it from one to three sharp blows with the hammer; then, dropping the hammer, she would grasp the cone in both hands, hold it over the basket-saucer, and by a slight twisting motion, moving the hands in opposite directions, accompanied by a shaking up and down, dislodge the already loosened nuts from under the opened leaves.

This operation almost invariably resulted in the removal of all the nuts; but to guard against loss each cone was examined immediately after the shaking, and if any remained they were picked out by the fingers. The empty cones were tossed aside into a heap.

So completely do they remove the kernels by these operations that though I carefully searched many of the discarded cones not a single nut did I find in any of them."

REFERENCES CITED

- Barrett, Samuel A.
1917 The Washo Indians. Bulletin of the Public Museum of the City of Milwaukee, Vol. 2, No. 1, Milwaukee.
- Coville, Frederick V.
1892 The Panamint Indians of California. American Anthropologist, Vol. V, October, 1892, Washington.
- Dutcher, R. H.
1893 Pinon Gathering Among the Panamint Indians. American Anthropologist, Vol. 6, October, 1893, Washington.
- Muir, John
1918 Steep Trails. William Frederic Bade (ed.), Houghton Mifflin Co., Boston and New York.
- Stewart, Omer C.
1966 Tribal Distributions and Boundaries in the Great Basin IN d'Azevedo, Warren L. et. al., (eds.), The Current Status of Anthropological Research in the Great Basin:1964. Desert Research Institute, Technical Report Series S-H, Social Sciences and Humanities Publications No. 1, Reno.
- Wheat, Margaret M.
1967 Survival Arts of the Primitive Paiutes. University of Nevada Press, Reno.

Plate 1a - View of LMA 1-39560
Typical of the burden baskets
described.

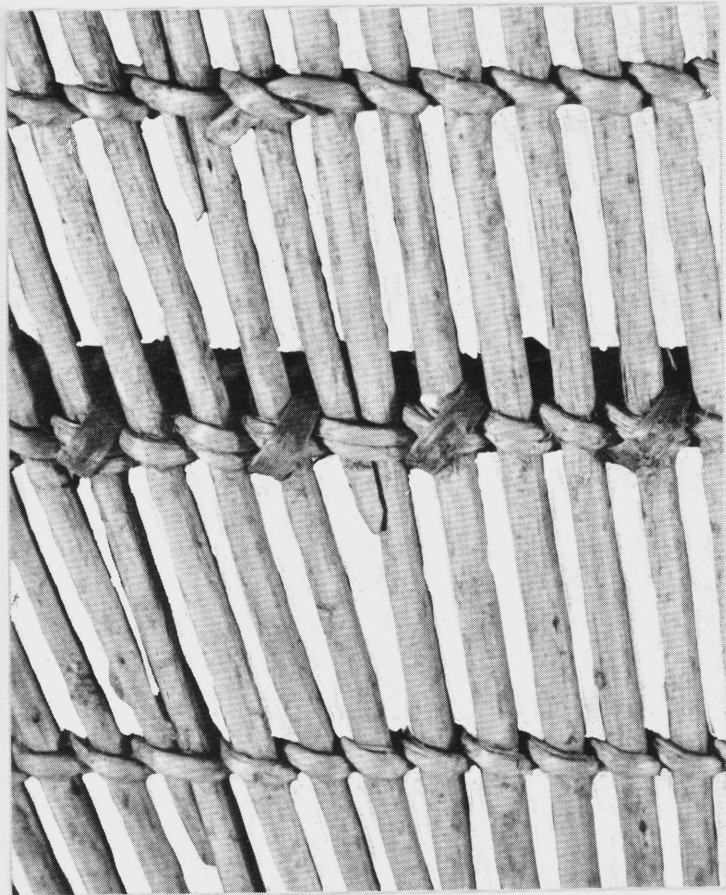


Plate 1b - Close-up view of portion
of LMA 1-39560, showing weft helix
slant of main construction weave
and lashing of inner support hoop
plus warp insertions.