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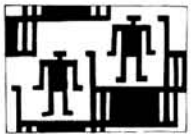

A Cache of Deer Snares from Owens Valley, California

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The recovery of a cache containing a bundle of nine deer snares is one result of a program of archaeological site survey in the 1940's and 1950's by the junior author and O. B. Riddell (Riddell and Riddell 1956: 28). In that time period, this two-person team recorded some 300 archaeological sites in the Owens Valley region and made a collection of some 13,000 specimens from these sites. (The specimens are now housed in the Lowie Museum of Anthropology, University of California, Berkeley.) The research plan followed by the Riddells was primarily limited to areal survey of the Owens Valley to obtain the location and artifactual inventory of the sites in an effort to preserve as much data as possible at a time when critical inroads by development and private collecting were destroying the data base. No outside funding for this expensive effort was solicited and, of course, none was obtained. Naturally, the program had its limitations, but its basic goals were met. Much of the data preserved by the program were timely, as many of the sites recorded have ceased to exist or have been so severely vandalized that representative collections of data and artifacts can no longer be obtained from them.

Whereas the major effort of the program was to record sites and make surface collections, some test excavations were made. Most notable were those at Iny-2 (Riddell 1951) and at Iny-382 (the Rose Spring site). The latter prompted a full-scale excavation (see F. Riddell *in* Lanning 1963). It was this last excavation which provided sufficient stratigraphic control to allow Lanning to prepare his chronology of projectile point types which, with minor modification, serves as a basis for subsequent ordering of archaeological chronologies through typological differentiation in the Great Basin (Lanning 1963).

The other controlled excavation as an element of this research plan was done at an earlier date than the one at Rose Spring. It was a test excavation of a protohistoric/historic Owens Valley Paiute winter village, the Cottonwood Creek site (Iny-2). The published report defines and describes for the first time Owens Valley Brown Ware as a distinct pottery ware. The work at Iny-2 further elucidates the last native cultural component of the Owens Valley region (Riddell 1951).

Other removal of subsurface cultural material was limited, but included the recovery of the deer snare cache from a rockshelter (Iny-46) near the confluence of an unnamed creek and Cottonwood Creek, near Rogers' pack station above Diaz Creek. The rockshelter is an exogene cave in a granitic mass (Fig. 1), the floor of which is covered to a depth of about 45 to 60 centimeters with granitic sand. The only cultural evidence in the sandy deposit was the cache itself. The sloping floor area, which

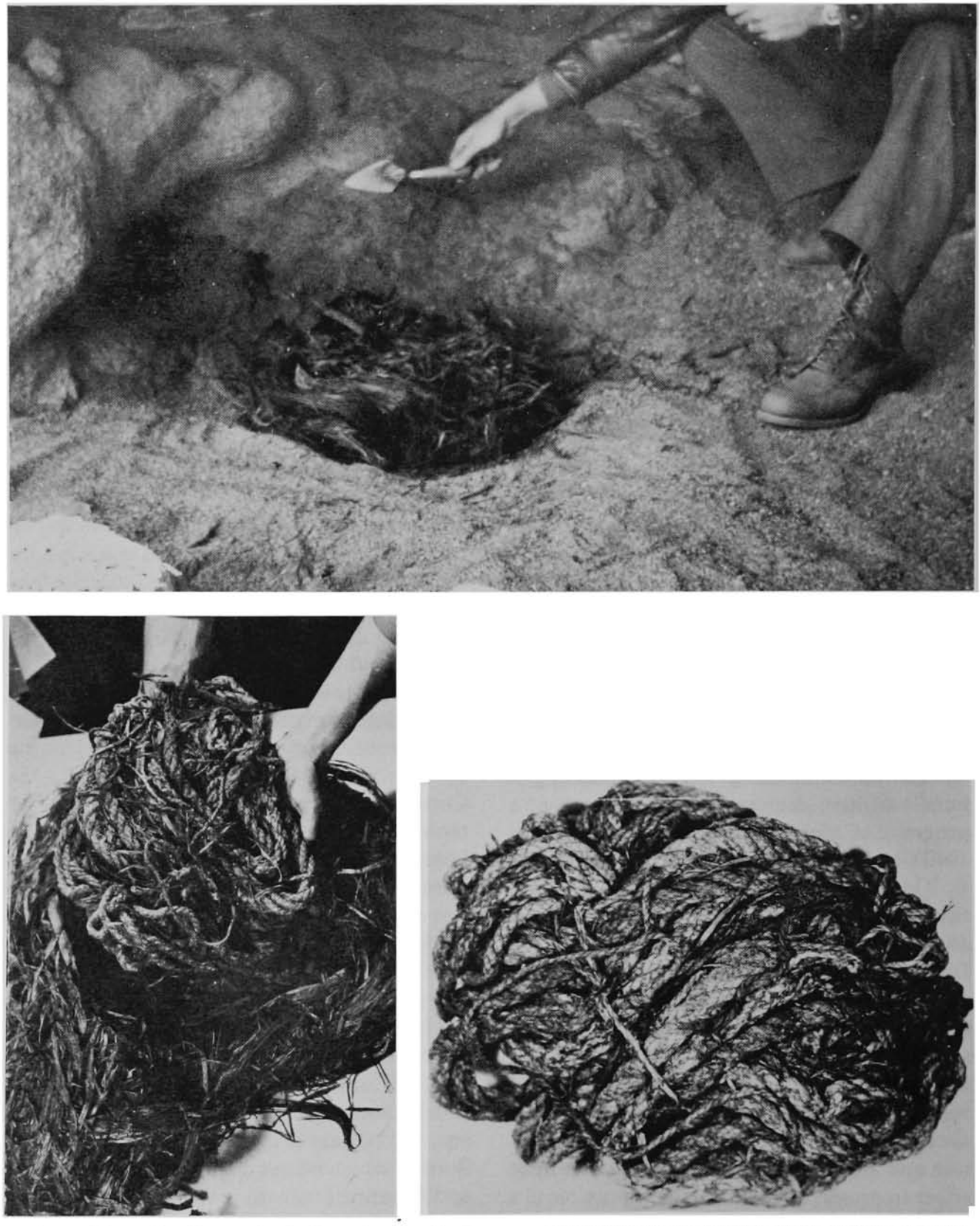


Fig. 1. The cache of snares *in situ* (upper); removing the snare bundle from the juniper bast (lower left); the bundle itself (lower right).

measured *ca.* 3 x 6 m., had a random scattering of angular granitic boulders which had fallen from the surrounding walls and from overhead.

The cache was discovered by the junior author while troweling through the sterile granitic sand at the upper end of the shelter close to the wall. It was encountered at a depth of about 20 cm. below the surface. It consisted of a subspherical mass of shredded juniper bast containing the ropes (snares) carefully bound into a smaller and compact mass.

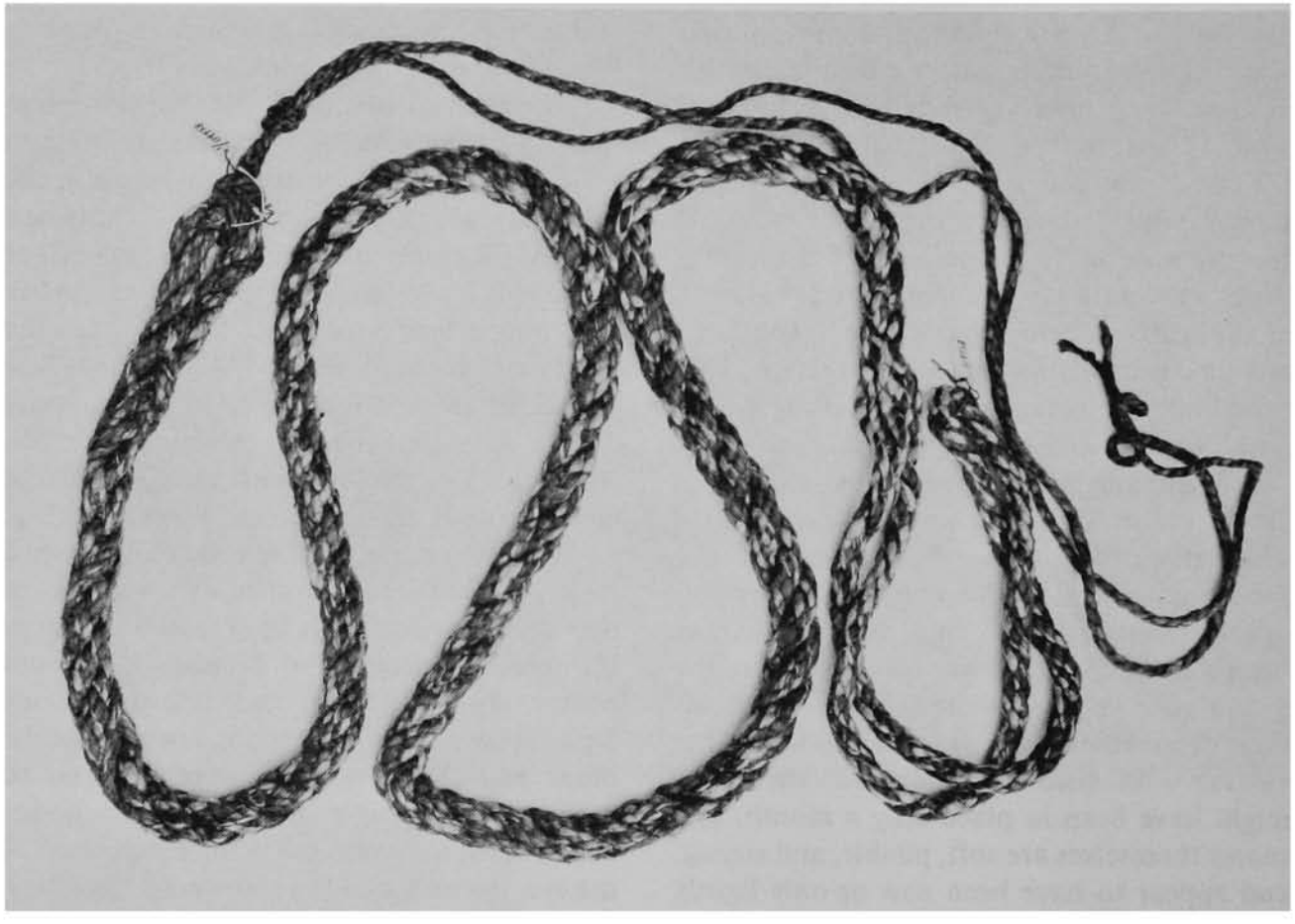
No attempt was made to remove the bundle of snares from the juniper bast nest in which it was encompassed. This was done in the laboratory of the Museum of Anthropology, University of California, Berkeley. At that time, a series of photos was taken to record the unwrapping of the bundle (Fig. 1). Preservation of the juniper bast wrapping, as well as the snares, is of such condition that the cache might have been in place only a month. The snares themselves are soft, pliable, and strong, and appear to have been new or only lightly used when cached. Being an isolated find, however, makes it impossible to state whether the cache was deposited in prehistoric, protohistoric, or historic times. No dating techniques have been considered because the circumstances of recovery and degree of preservation strongly suggest that the cache was made sometime in the middle or latter part of the last century. Further, the cache was very probably made by a hunter who lived at the winter village of *Hudu-matu* (Steward 1938: 52). This village is possibly represented by the nearby archaeological site designated Iny-2 (Riddell 1951:14).

METHOD OF CONSTRUCTION

Each of the nine snares is a carefully twisted rope with self loops at each end, one long and the other essentially an eye. To the eye is attached a length of twine of lesser diameter (Fig. 2*a*). Details of plying have been tabulated (Table 1), as have general measurements (Table 2). Fiber is *Apocynum cannabinum* L.

The construction of all the snares is essentially the same. As we read the ply table, it seems evident that construction began at the long loop which carries the basic three twists: twist of the single in one direction (either S- or Z-), plied (2-ply) in the opposite direction. Six of the nine snares have tripled plies for the third twist; three snares have quadrupled plies. The third twist is invariably in the opposite direction, making the rope technically a cable. At the base of the long loop, the 2-ply twines are regrouped and sufficient plies added (Fig. 3*a*) so that the body of the rope makes use of three 3-ply ropes for a fourth twist, again in the opposite direction. This final twist was probably made by hand, and because it was not completely rigid the rope was sewed with fine 2-ply twine (Table 2 plots the sewing). At the other end (Fig. 3*b*) plies were dropped to decrease the diameter of the rope that continues to form the eye, and at the completion of the eye, the ends of all twines were drawn back into the heavy rope before ending. The rope here is bulky and uneven and it is impossible to calculate the exact disposition of each twine. It is the smoothness of transition from the long loop into the main rope and the rough merging at the eye that determined that the initial construction began at the loop.

In reading Table 1 from left to right, the twist of the single and the second twist are constant throughout the construction of the individual snares as these are the basic twines. All other sections are essentially groupings and regroupings of these twines. Thus, reading the construction of 1-119958 (the snare illustrated in Figs. 2 and 3), the basic twine is 2-ply S-twist (singles Z-twist). Three lengths of this twine were folded at mid-length and were twisted together (Z-twist) in this center section to form the long loop (Fig. 3*a*). At the base of the long loop, the 2-ply twines (there are 6) were regrouped and another length of twine added



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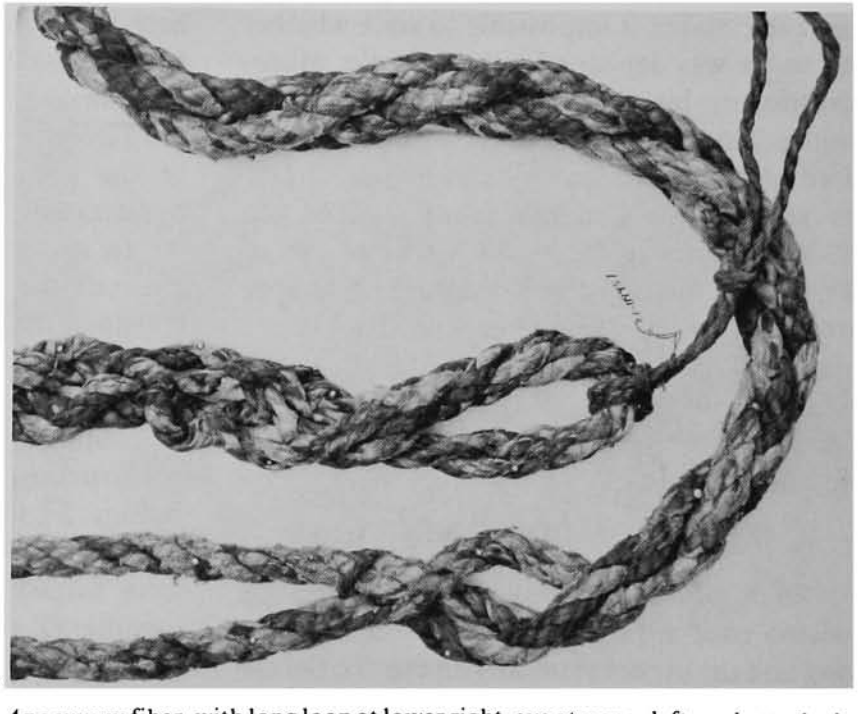

b

Fig. 2. *a*, snare (1-119958) of mottled *Apocynum* fiber, with long loop at lower right, eye at upper left, and attached fine twine; *b*, eye with attached twine, center; detail of base of long loop, lower.

Table 1
DETAILS OF CONSTRUCTION OF THE MULTI-PLIED ROPE SNARES

Catalog No.	Long Loop					Main Rope			Eye				Attached Line		
	Second twist			Third twist		Transition	Fourth twist		Transition	Third twist		Fourth twist		Second twist		
	Twist of single	Number of singles	Direction of twist	Number of plies	Direction of twist		Number of plies	Direction of twist		Number of plies	Direction of twist	Number of plies	Direction of twist	Number of plies	Direction of twist	Length of lines
1-119957	Z	2	S	3	Z	*	3	S	****	2	Z	3	S	2	S	83 cm.
Diameter in mm.		4		11			18			4-5		9		2		
1-119958	S	2	Z	3	S	**	3	Z	****	2	S	3	Z	2	S	70 cm.
Diameter in mm.		4		7			15			4-7		8		3		
1-119959	S	2	Z	3	S	**	3	Z	****	2	S	3	Z	2	Z	64 cm.
Diameter in mm.		4		8			16			8		13		4		
1-119960	S	2	Z	3	S	**	3	Z	****	2	S	3	Z	2	S	64 cm.
Diameter in mm.		4		7			14			6		10		3		
1-119961	Z	2	S	4	Z	***	3	S	****	2	Z	3	S	2	Z	61 cm.
Diameter in mm.		4		7			14			4		11		3		
1-119962	Z	2	S	4	Z	***	3	S	****	2	Z	3	S	2	Z	60 cm.
Diameter in mm.		3		6			12			5		10		4		
1-119963	S	2	Z	4	S	***	3	Z	****	2	S	3	Z	2	S	61 cm.
Diameter in mm.		4		8			15			6		9		2		
1-119964	S	2	Z	3	S	**	3	Z	****	2	S	3	Z	2	S	54 cm.
Diameter in mm.		5		9			14			7		9		3		
1-119965	S	2	Z	3	S	**	3	Z	****	2	S	3	Z	2	Z	43 cm.
Diameter in mm.		4		8			17			7		11		3		

* Diameter of plies cut to 8
** Diameter of plies cut
*** One ply dropped
**** Number of plies cut

to each group to be twisted (S-twist). The three groups were then twisted in the opposite direction (Z-twist) to make the heavy rope. The regrouping and the change of direction for the final twist holds the long loop intact. At the opposite end, the number of plies was cut at the base of the eye (Fig. 3*b*). Again the 2-ply basic twines were regrouped, and again the direction of the third twist remained constant (S-twist), while the final (fourth) twist is in the opposite direction. The fourth twist here is of short duration as the basic twine elements were dropped one by one in the twist of the heavy rope. This area was often reinforced by the sewing twine. Some of the ending twines were secured with a self overhand to prevent ravelling; others simply dwindled in quantity of fiber.

DESCRIPTION OF INDIVIDUAL SNARES

A brief description of individual snares follows.

Snare 1-119957: The rope is mottled brown and cream, though two of the plied twines seem to be wholly brown. All twists are to a hard degree except for the final which is medium. The sewing twine is 2-ply S-twist (one single is

Table 2
MEASUREMENTS OF SNARES
(Running Length in Centimeters)

Catalog No.	Long Loop	Area of Shift of Plies	Sewing Ties at (cm.)	Splice at Base of Eye	Total
1-119957	0-38	38-40	50, 58, 70, 80, 85, 95, 103, 110, 120, 128, 140, 154	163-167	173
1-119958	0-34	34-38	52, 67, 78, 89, 98, 104, 116, 127, 137, 145	149-161	168
1-119959	0-40	40-43	Continuously sewed to 56, 70, 76, 85 to 93, 106-113, 124-129	140-157	162
1-119960	0-40		Sewed continuously the whole length	181	187.5
1-119961	0-33	33-45	52, 72 to 78, 95 to 100, 135 to base of eye	154	159
1-119962	0-36	36-51	59, 82 to 86, 109-116, 139 to base of eye	163	171
1-119963	0-31	31-45	51, 74, 86, 98, 113, 127, 137, 145 to base of eye	154	160
1-119964	0-32	32-39	47 to 50, 56, 65, 73, 84, 93, 106, 115, 126	135-155	160
1-119965	0-29	29-57	Continuously	171	178

brown, the other cream) and the twine eventually is merged into the others as it goes into the eye base. The brown twine attached to the eye has a self overhand 4.2 cm. beyond the hitch to prevent its removal.

Snare 1-119958: (Figs. 2 and 3). Mottled brown and cream. All twists are hard except the final which is medium-hard. As with the preceding, the sewing twine becomes part of the eye twines (Fig. 3*b*). Some of the plies have been self-knotted and cut at the base of the eye. The brown twine attached to the eye with a larkshead has a self overhand below the hitch. The two ends extend for 70 cm.

Snare 1-119959: Mottled brown and cream. All twists are hard except for the final which is medium. This snare is more sewed than many of the others, making it harder to see the splicing, but it appears to be the same. Sewing twine is 2-ply Z-twist. The twine attached to the eye has a self overhand 6 cm. below the hitch.

Snare 1-119960: Mottled brown and cream, becoming almost pure dark brown near the eye as only a few of the component plies were cream colored. The sewing on the large rope was continuous; it has been broken in only a few areas. It was, in fact, sewed so tightly at the base of the large loop that it is almost impossible to see the regrouping of the twines. The fine (2 mm.) sewing twine is dark brown, 2-ply S-twist. It becomes a part of the twines that form the eye, then is served back into the rope, ending in a self knot. The tie cord is mottled brown and cream: each end is secured with a self overhand to prevent ravelling and there is a self overhand just below the hitch.

Snare 1-119961: Mottled brown and cream. At the base of the large loop, each side had five plies: one of these had been added 5 to 6 cm. within the loop to augment the rope section. One of the twines became the sewing twine. The rope is tightly spliced at the base of both loop and eye as well as being sewed. The

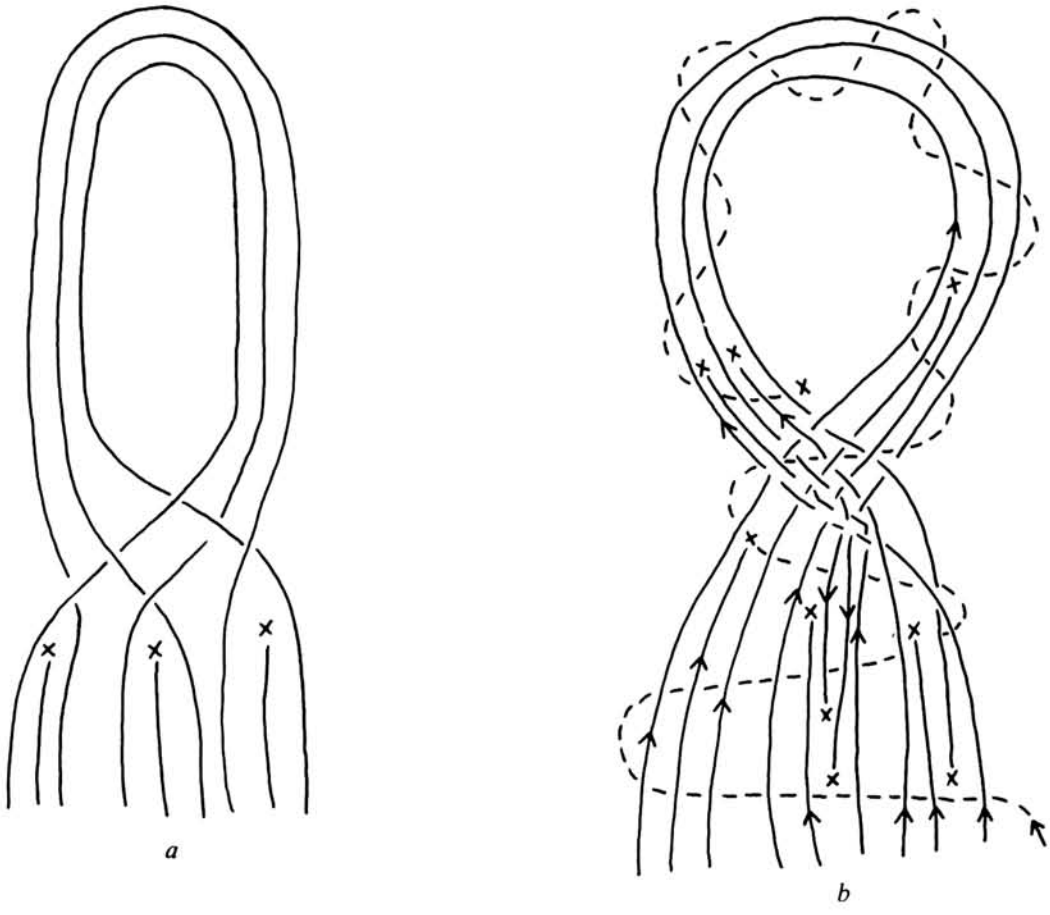

Fig. 3. Schematic view of splicing of the elements to form the long loop and the eye; *a*, long loop made on fold of three 2-ply twines and the supplemental twines inserted to augment the diameter of the main rope; *b*, eye with the ending of each of the 2-ply twine elements. x indicates the end of each element. The fine sewing twine terminates at the base of the eye.

tie cord is mottled but generally light in color.

Snare 1-119962: Mottled brown and cream. The sewing twine shows plainly as a part of the twines in the large loop as well as in the eye. The degree of twist of the large rope is medium to loose, perhaps because of the lack of sewing (see Table 2) which undoubtedly held the twist. The tie at the end is attached, as in the others.

Snare 1-119963: Mottled brown and cream. The rope maintains a loose to medium degree of twist. The sewing twine is 2-ply S-twist and is mottled. The attached tie at the eye is also mottled.

Snare 1-119964: The eye is so tightly sewed that the twine endings could not be followed. The attached line is plain brown and the snare itself is the least mottled of the series.

Snare 1-119965 and Specimen 1-119966 (the attached tie): Mottled brown and cream. The rope section is the tightest of all the snares. At the base of the large loop, a 2-ply S-twist twine, the same diameter as the other plied twines, has been passed through the plies, lacing the whole into a tight construction. The cord attached to the eye is mottled brown and cream.

DISCUSSION

With the exception of the breaks in the sewing twines, none of the snares shows a great deal of use. However, with the exception of the

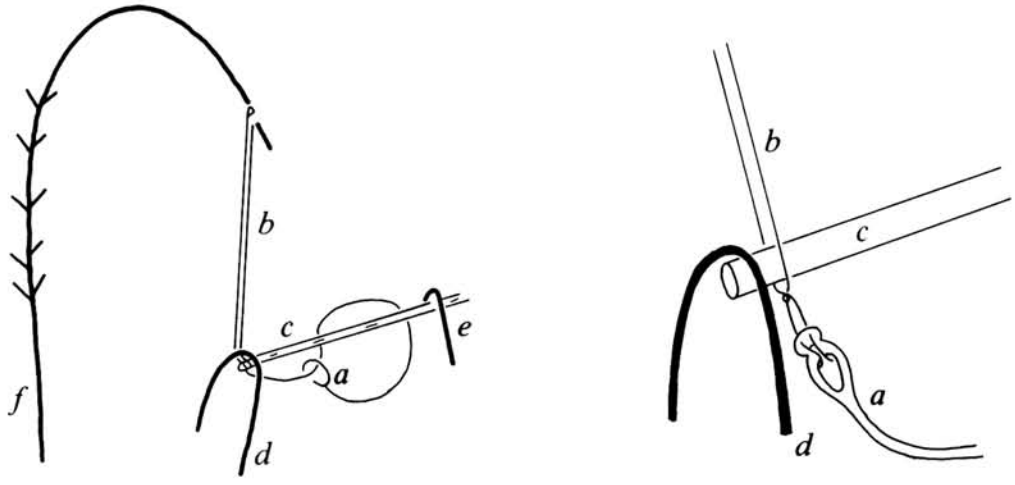

Fig. 4. Hypothetical reconstruction of the snare in use: figure at right is a detail of the attachment under the hoop, as described in the text.

attached cord, which was probably tied to the spring or tossing pole, there is no reason for them to show use.

Snares of this type for relatively large game (probably deer in this case) have a wide distribution. Without attempting a thorough search of literature, a random selection of ethnographies of areas where hunting played a part in the food quest produced several excellent illustrations of their use. Strangely, one of the best is a series of illustrations from Maya codices (Franco 1954). Franco quotes the description in Gann (1918:24-25) of the setting up of a snare for large game in the Maya area. Far to the north, there were many forms of snares attached to spring mechanisms (see for example Emmons 1911:77-79). Here, snares of twisted rawhide were fitted with an eye at one or both ends and secured to a "tossing pole." One of the eyes was used to form the noose. The trigger is a toggle, lightly secured.

As we reconstruct the snare set-up (Fig. 4), the length of the rope would be drawn through the long loop to form a noose (*a*) and laid on the ground in a trail. The fine lines (*b*) attached to the eye by a larkshead were separated so that they would encompass the end of the trigger mechanism, a small stick (*c*) which was held at that end under a hoop (*d*) fixed in the ground. The opposite end of the trigger was caught under a stake (*e*) in the ground by a slight hook at its upper end. The ends of the fine lines (*b*) were now used to hold down the spring pole (*f*). The whole snare area was lightly covered with leaves and debris and the mottled color of the ropes and line would aid in concealment. A quadruped running down the trail would hopefully hit the trigger, totally releasing it, and the noose tightening instantly (because of the release of the spring pole) around a leg would hold the animal until the hunter could dispatch it. The carefully formed eye might have been slipped around the trigger end, but it appears that it might have held too tightly to the stick and curtailed instant action. This may, however, have been its function. Experiments were not made.

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The Chuckwalla: A Death Valley Indian Food

WILLIAM J. WALLACE

A favored though probably infrequent fare of the Death Valley Indians was the flesh of the chuckwalla (*Sauromalus obesus*), California's largest lizard (Fig. 1). The capture of one of these creatures provided a good-sized meal, for a full-grown individual can attain a length of eighteen inches and a weight of two or three pounds. The big lizard's meat is sweet and delicate, presumably because it is a thoroughgoing vegetarian, feeding on fresh, moisture-rich flowers, fruits, buds, and leaves of a variety of desert plants. One early visitor likened it to "that of a frog's hind legs" (Spears 1892:79).

Since they are rock-dwellers, chuckwallas are rarely seen on the floor of Death Valley. They live mostly on the boulder-strewn alluvial fans that fringe the valley, but also range up into the rocky canyons and washes of the lower mountains to elevations of 5000 feet (Turner and Wauer 1963:124). At night, they retreat into deep rock crevices, slowly crawling out in the morning to warm themselves in the sun before beginning the day's foraging.

It was in the early morning, just after the big lizards emerged from the rocks and were still sluggish, that the Indians hunted them (Steward 1941:331). Catching them was a task of the women, small parties of whom, accompanied and assisted by children, diligently searched localities known to abound in chuckwallas. No doubt hunts were more frequent in the spring when the objects of the chase were fat and plentiful and their flesh most needed to augment fast-dwindling food supplies. When the spring opens, the creatures are too lean and gaunt from a winter's hibernation to provide much meat. But, being greedy eaters, they soon fatten themselves on fresh plant growth.

Often too, chuckwallas were captured incidentally. For instance, if a woman spotted one while out scouring the countryside for plant foods, she made every effort to add it to the family larder. The same applied, of course, to a man or boy hunting rabbits or other game.

Very little is known about native methods of taking chuckwallas. It seems quite likely that hunters sneaked up on individuals basking or feeding in the open and seized or clubbed them. Sometimes, they must have been chased and caught by hand. This would not have been an easy task because, though heavy-bodied and awkward looking, the creatures are clever at dodging and can run at surprising speed when pressed. Moreover, if grabbed, the chuckwalla defends itself by lashing its strong,