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his Martin Ranch survey data with me, and Robert Mark and Evelyn Newman for allowing me the opportunity to visit SBN-12.

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## Perishable Artifacts from Cave No. 5, Providence Mountains, California

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A small group of perishable artifacts was collected by members of the Archaeological Survey Association of Southern California (ASA) from a cave or rockshelter near Mitchell Caverns in the Providence Mountains, eastern San Bernardino County, California, some time about 1962. The cave was designated "Cave No. 5" and the collection was stored at ASA offices, most recently at their offices in Redlands, California.<sup>1</sup> The collection was "rediscovered" by one of us and a brief description of the assemblage was presented (Yohe 1984). This report documents the artifacts and their associations.

#### THE SETTING

Cave No. 5 is located in the Providence Mountains in the immediate vicinity (thought to be within 1 km.) of Mitchell Caverns (Fig. 1), but its exact location is unknown today. The site probably is a small limestone cave, as are other known caves in the area, and is located at an elevation of between 1,600 and 2,000 m.

Mitchell Caverns is located on the eastern slope of the Providence Mountains, which rise steeply from the Clipper Valley. The area contains a variety of plant communities and a diversity of resources (see Pinto [1985:4-15] for a complete discussion of the local environment). A Creosote Bush Scrub plant community is present up to about 1,500 m. Plants typical of this community include creosote (*Larrea tridentata*), burro bush (*Ambrosia dumosa*), silver cholla

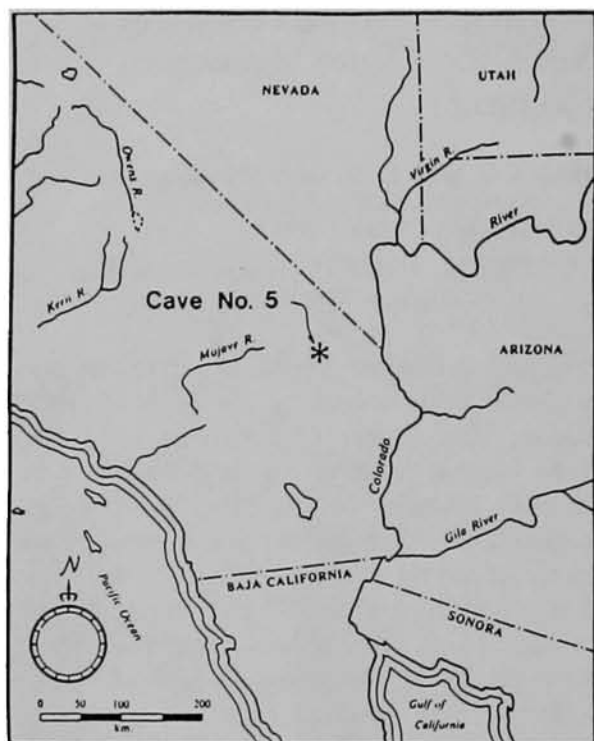


Fig. 1. Approximate location of Cave No. 5.

(*Opuntia echinocarpa*), and various grasses. Between about 1,000 and 1,500 m., a Joshua Tree Woodland includes Joshua trees (*Yucca brevifolia*), banana yucca (*Y. baccata*), and Mohave yucca (*Y. schidigera*). Pinyon (*Pinus monophylla*) and junipers (*Juniperus* spp.) inhabit the higher elevations (above 1,600 m.) to the west of Mitchell Caverns.

Associated fauna include woodrats (*Neotoma* spp.), ground squirrels (*Ammospermophilus leucurus*), various other rodents (*Peromyscus* and *Perognathus*), cottontail rabbit (*Sylvilagus audubonii*), black-tailed hare (jackrabbit, *Lepus californicus*), desert tortoise (*Gopherus agassizi*), and bighorn sheep (*Ovis canadensis*).

### THE ARTIFACTS

A total of eleven artifacts are in the ASA collection: seven basketry fragments; an interconnected mass of knotted yucca or agave fibers; two small fragments of knotted

yucca or agave fibers; and a piece of modified wood.

### Basketry

Seven fragments of twined basketry are present, representing at least two, and possibly three, baskets, probably winnowing trays. Three of the fragments appear to belong to the same basket (No. 1) as they exhibit the same construction details (Fig. 2). The largest of the three pieces measures 49.5 cm. by 19.3 cm. and contains the right-hand edge of the tray, bordered by a fairly large peeled twig (0.7 cm. in diameter). The other two pieces appear to be interior pieces, having no evident edges.

These pieces are open twined, S-stitched (over one, under one) averaging 10 warps per 5 cm. The warps are stitched (weft) approximately every 4 cm. As the width of the fragments broadened, presumably away from the base, additional warps were added. The warps consist of the peeled twigs of an unidentified woody plant resembling desert willow (*Chilopsis linearis*) with diameters between 0.2 and 0.3 cm. The wefts consist of small, unpeeled twigs of a similar plant.

A mend (possibly two) is evident on the center fragment illustrated in Figure 2 and appears to have been an effort to repair or reinforce a longitudinal split. The lower mend seems rather crude, as dry (broken angularly), unpeeled twigs of the same or similar plant were used. The upper mend consists of broad, split stems of a different plant. As the two stitches are of different plant materials, it is possible that they represent two episodes of repair or reinforcement. An auxiliary attachment is on the body of the largest piece (Fig. 2), suggesting that something had once been affixed to it on the outside (where the wrapping is broken and loose).

A second probable winnowing tray (No. 2) is represented by one interior fragment (Fig.

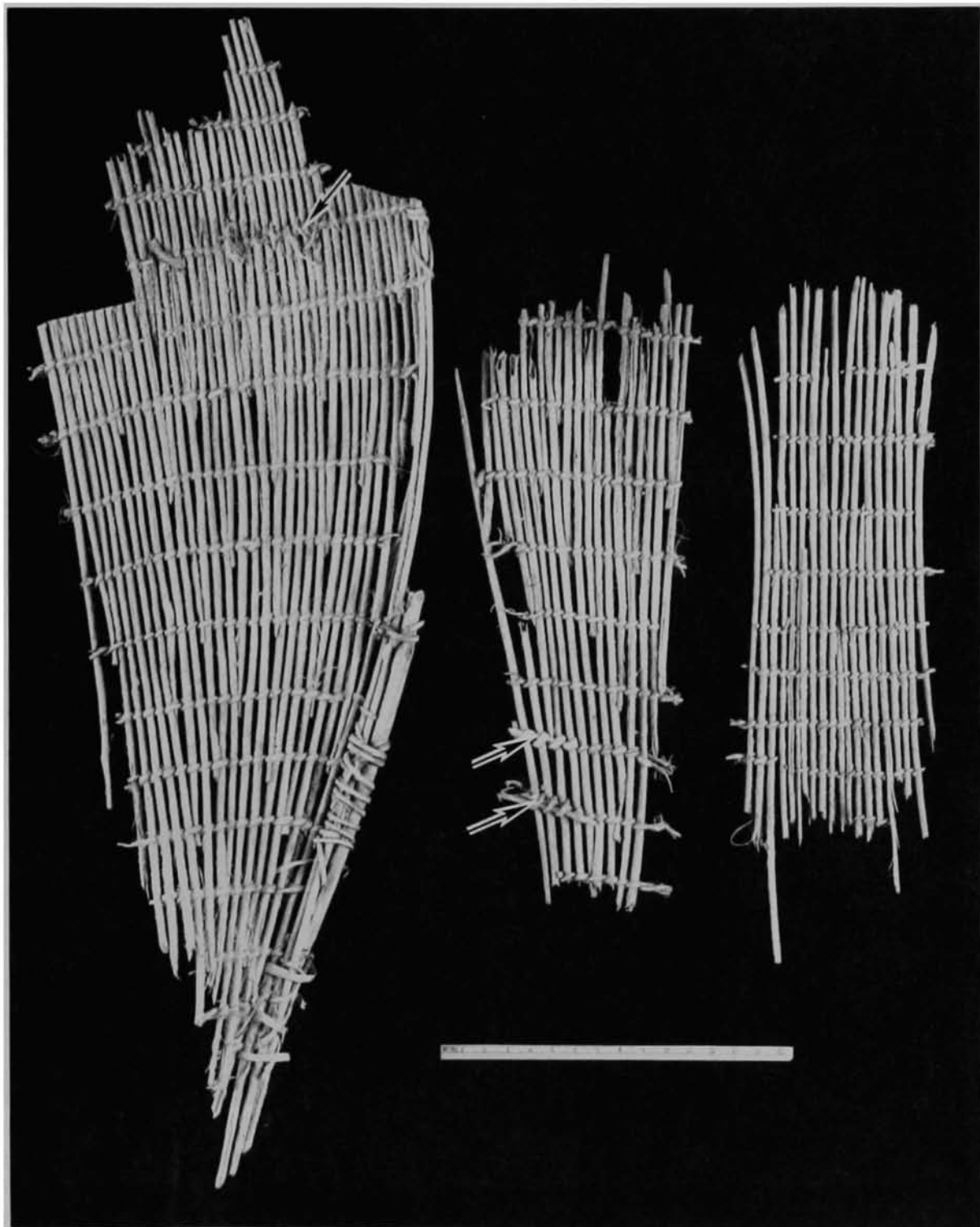


Fig. 2. Fragments of Basket No. 1. Arrows point to modifications or mends.

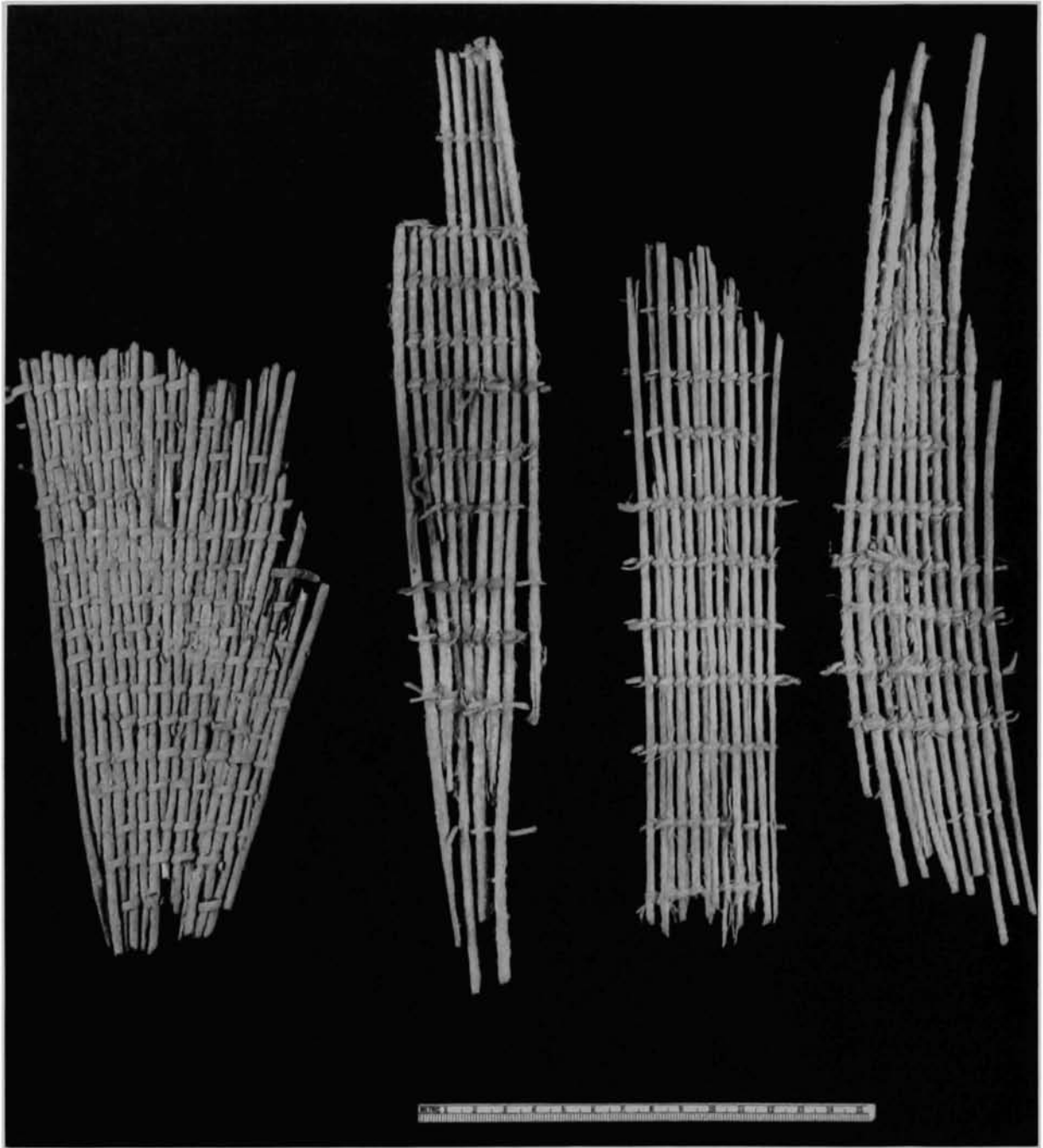


Fig. 3. Fragment of Basket No. 2 (left) and three fragments of a probable third basket.

3, left). The piece is closely twined, S-stitched (two under, two over) and averages 13 warps in 5 cm., additional warps having been added as the width of the piece expanded. It was stitched (weft) every 1.0 to

1.5 cm. The warp consists of the peeled twigs (about 0.3 cm. in diameter) of an unidentified woody plant (cf. desert willow, *Chilopsis linearis*). The weft consists of the peeled bark of a similar plant.



Fig. 4. *Yucca* (*Yucca* sp.) fibers and knots.

Three other interior twined basket fragments (Fig. 3) were found in the cave. All three are loosely twined, S-stitched (under one, over one) and average 10 warps in 5 cm. Unlike the first example (No. 1), however, the warps were stitched (weft) approximately every 2.0 to 2.5 cm. Thus, it appears that these fragments may represent a third winnowing tray. The warps consist of peeled twigs of a woody plant (cf. desert willow, *Chilopsis linearis*), between 0.3 and 0.15 cm. in diameter, and the weft consists of the small unpeeled twigs, about 0.1 cm. in diameter, of a similar plant. The weft material appears to be worn, with the fibrous interior of the bark being evident. It is not known whether this is the result of use in antiquity or of taphonomic processes.

No seeds were found adhering to any of the basket fragments although a number of very small stones were present in several of the open weaves. It is likely that these became imbedded in the weave after the



Fig. 5. Modified wood, probably an awl (length, 13.6 cm.)

pieces were abandoned but it is possible that soil or sand was processed through the baskets for some reason, such as the refinement of ceramic temper.

As all of the baskets are quite fragmentary, their original shapes are unknown. It is possible that they represent oval winnowing trays similar to the specimen reported from nearby Mitchell Caverns (Pinto 1985: Fig. 30) or they might have been triangular in shape.

#### Yucca Fiber

A mass of yucca (*Yucca* sp.) fibers, containing at least 20 granny knots (Fig. 4, left) was collected from the cave and measures 23.0 by 9.5 by 5.5 cm. Two separate knots of identical fibers (Fig. 4), each containing a single knot, were also collected. The pieces are mostly untwisted, although several exhibit a slight S-twist. It appears, judging from the presence of recognizable leaf parts, that this fiber material had only been partly (if mostly) processed and that the small bundles of fiber were tied into knots for later use. A number of similar artifacts were recovered from nearby Mitchell Caverns (Pinto 1985:96-104).

#### Modified Wood

A single piece of unidentified modified wood (Fig. 5) is in the collection. The piece is 13.7 cm. long with a diameter of 1.0 cm. One end of the stick has been sharpened to a point, clearly by people and not by rodent gnawing. The area around the tip is smoothed, perhaps through use, and suggests that the piece functioned as an awl. The presence of basketry is certainly congruent



with such an interpretation.

### DATING

A radiocarbon date of  $160 \pm 60$  radiocarbon years B.P. (UCR-2201) was obtained on the largest piece of basket No. 1. We believe that the entire known collection from the cave dates to this same time.

### CONCLUSIONS

The collection, and the site in which it was found, is interpreted as a cache, containing seed (or other resource) gathering equipment and partly processed fiber material. It is possible that a more complex assemblage (e.g., flaked and ground stone) was present at the cave but was not collected by the ASA. Given the recent radiocarbon date, the collection probably was left at the site by the Chemehuevi, as they claimed the area during the ethnographic period (Kroeber 1925; Laird 1976).

One of the more interesting aspects of the Cave No. 5 collection is the presence and dating of the apparent winnowing tray(s). Bettinger and Baumhoff (1982:496) suggested that the twined, paddle-shaped seed beaters and triangular winnowing trays were distinctive components of the basketry complex possessed by the speakers of the various Numic languages. Using a rather complex argument, they suggested that the seed beater/winnowing tray complex was an important technological innovation used by Numic groups as they expanded across the Great Basin.

Winnowing trays are known ethnographically throughout the Great Basin and parts of California. However, most archaeological examples of winnowing trays (triangular or otherwise) are mostly confined to southern California: at Twenty-nine Palms (Campbell 1931); Mitchell Caverns (Pinto 1985); sites in Death Valley (Lathrap and Meighan 1951; Meighan 1953; Wallace and Taylor 1955); and

Ray Cave in the Coso Range (Panlaqui 1974), although a fragmentary specimen is known from Gatecliff Shelter in central Nevada (Adovasio and Andrews 1983).

Only one of these examples, from Mitchell Caverns, had previously been chronometrically dated. A radiocarbon determination of  $480 \pm 100$  (Pinto 1985:107), was obtained on an oval-shaped tray. The example from Cave No. 5 appears to be later. Together, the two dates suggest the presence of winnowing trays in the eastern Mojave Desert prior to their general introduction into the remainder of the Great Basin.

### NOTE

1. Cave No. 5 never was formally recorded, and cannot be recorded at this time because the records of the precise location of the site are lost. Caves 1-4 were formally recorded (with CA-SBR numbers) and presumably Cave No. 5 was found during that same survey in 1962. One of the ASA members remembered that the site was located very near Mitchell Caverns (possibly within the State Park boundary) and that information, along with the known geographic proximity of Caves 1-4, provides the general location of the site. The collection is now stored at the University of California, Riverside, under accession number 128.

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