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A Cache of Mesquite Beans from the Mecca Hills, Salton Basin, California

JAMES D. SWENSON

During the winter of 1972, a ceramic olla or storage jar containing a cache of honey mesquite (*Prosopis glandulosa* var. *torreyana*) beans was recovered from a small wind- and water-eroded rockshelter (CA-RIV-519) in the Colorado Desert. The site lies within the ethnographic territory of the Desert Cahuilla (Barrows 1900: 25; Kroeber 1925: 694; Strong 1929: 37; Bean 1978: 575). This report describes the rockshelter and the vessel and its contents, and provides a short discussion of the cultural context in which the cache occurred.

THE SITE

The Mecca Hills flank the northern margin of the floor of the Salton Basin in southeastern California. Numerous steep-sided canyons and washes drain southwesterly out of the hills onto the floor of the Salton Basin. CA-RIV-519 is a small, north-facing rockshelter formed by wind and water erosion in the south wall of an unnamed canyon located between Thermal and Painted canyons (Fig. 1). The rockshelter is situated 6.4 km. from the mouth of the canyon at an elevation of 128 m. above sea level. Although within the range of the Creosote Bush Scrub plant

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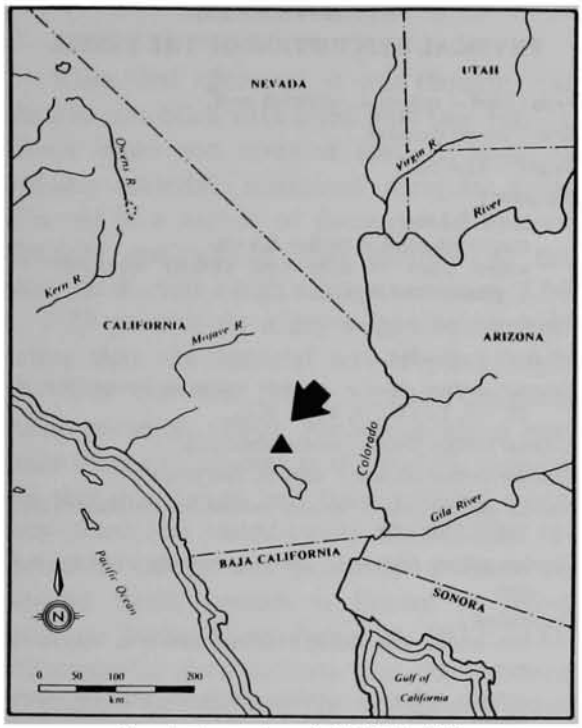

Fig. 1. Location of CA-RIV-519.

community (Munz and Keck 1949: 104), the area currently presents a very desolate appearance and edible plant resources are scarce. Average annual precipitation is probably less than 8.5 cm. (cf. Felton 1965: 95).

The shelter is 2.75 m. wide, less than 1.0 m. deep, and measures 1.2 m. from floor to ceiling. At some point following caching of the olla in the rockshelter, a small erosional channel cut back the dripline of the shelter. This allowed water and rocks to drop directly onto the olla during each rainstorm, and caused the damage indicated in Fig. 2, which shows the cache as found.

At the time of discovery, it was apparent that if relic collectors did not try to remove it first, the next rainstorm would in all probability cause further damage to, or even completely destroy, the olla. The decision was made to remove it and its contents in as intact a condition as possible. Under the direction of Philip J. Wilke, the olla was removed and

Fig. 2. *In situ* view of the cache. Scale with 10-cm. increments.

packaged for transport to the archaeology laboratory at the University of California, Riverside.[1] Material excavated from the shelter floor was passed through 1/8-in. mesh. However, no additional cultural material was recovered. The olla and its contents were the only cultural remains present in the shelter.

THE VESSEL

The single vessel (Fig. 3) is a large, spherical, buff-ware olla with a restricted neck, made of sedimentary clay mixed with a small amount of fine- to medium-grained sand. Its physical characteristics are given in Table 1. The olla is about two-thirds intact and exhibits extensive scaling (caused by crystallization of salts in the fired clay) on its inner and outer surfaces. Spherical, restricted-neck ollas of various sizes were one of the basic ceramic vessel forms produced in aboriginal southern California (Kroeber 1908: 56; Rogers 1936: 52; Van Camp 1979: 54), and *tesnit*, or "good quality clay" (Hooper 1920: 85), was regularly procured by the Desert Cahuilla from abundant deposits of sedimentary clay in the Mecca Hills (Bean and Vane 1978: 6-23, 6-25; Free 1914: 22-23).

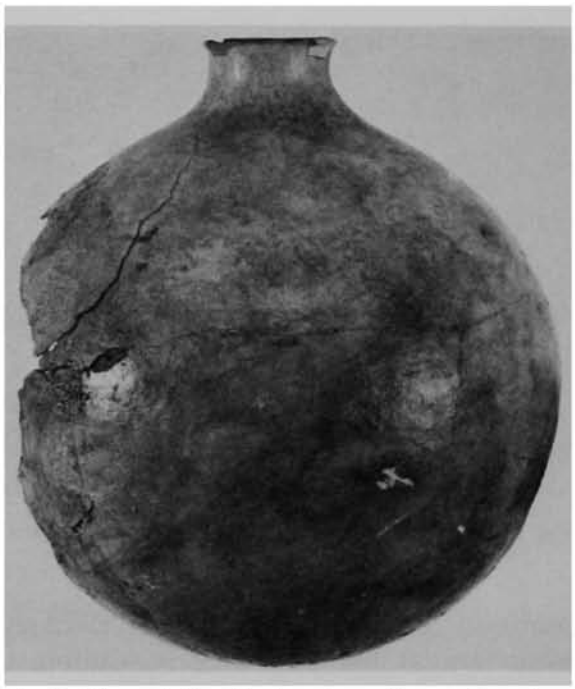

Fig. 3. View of the olla showing scaling and breakage on the left side (height, 43 cm.).

Similar food caches have been reported from several locations at the bases of the mountains surrounding the Salton Basin.[2] An olla containing seeds of panic grass (*Panicum urvilleanum*) was reportedly found near present-day Palm Springs by hikers in 1969 (Bean and Saubel 1972: 99). Michels (1964: 93) reported that several intact ceramic vessels had been removed by "local amateurs" from Snow Creek Rockshelter (CA-RIV-210). A complete wide-mouthed jar with a bowl lid containing a small amount of, yet unidentified, organic residue was recently discovered in a rock crevice near a historic Cahuilla village site at the mouth of Andreas Canyon (Cultural Systems Research, Inc. 1983). A large, restricted-neck olla containing various seeds was found at Cottonwood Spring in Joshua Tree National Monument cached with a burden basket, an iron pan, and three "spirit sticks" (King 1976: 36-42), and a similar, but smaller, olla containing a few cultivated squash (*Cucurbita pepo*) seeds was recovered from a site located on the shoreline of the most recent stand of Lake Cahuilla near the base of the Fish Creek Mountains approximately 65 cm. south of the Mecca Hills (Wilke, Whitaker, and Hattori 1977: 56-57).

A spherical olla the size of that described herein has a capacity of slightly more than one bushel if filled to the neck. What makes this one particularly interesting is that, despite the fact that a portion of its side had broken away, the olla was still nearly full of rotted mesquite beans.

Table 1

PHYSICAL DESCRIPTION OF THE VESSEL

Vessel form – spherical, restricted neck.

Base – evenly rounded.

Height – 43.0 cm.

Diameter –
rim – 9.3 cm.
narrowest point in neck – 6.4 cm.
widest point of body (not directly measurable) – greater than 39.0 cm.

Rim form – recurved.

Lip form – rounded.

Exterior surface color – variable yellowish brown (Munsell 5Y 7/3, 7.5YR 7/4, 10YR 8/2).

Exterior surface finish – evenly smoothed.

Exterior surface texture – smooth, fine grained.

Interior surface color – variable reddish brown (Munsell 5YR 7/3, 7.5YR 6/2).

Interior surface texture – unevenly smooth, extensive scaling.

Decoration –
rim incised with radial, parallel lines 6 mm. long and 3 mm. apart.
exterior of neck exhibits vertically oriented finger marks.

Construction – paddle and anvil.

Firing – uncontrolled oxidizing (firing clouds present).

Sherd Characteristics

Fracture – crumbly to scaly.

Hardness – 3 (Mohs' scale).

Thickness – 3.5 to 5.5 mm.

Core color – reddish yellow (Munsell 5YR 7/8).

Paste texture – fine-grained with widely dispersed fine to medium (0.51 mm. to 1.02 mm.) particles of quartz and biotite mica.

THE CONTENTS

When first observed, it was thought that the olla was filled with dried mud (see Fig. 2). Closer inspection revealed that the mud, or soil-like material, contained mesquite seeds (Fig. 4) in a matrix of decomposed beans.[3] Kjeldahl analysis of four samples of the material showed a high nitrogen content (3.00 to 3.23 percent on a dry-weight basis), indicating that the material was of plant origin and was not soil (Ross Virginia, personal communication 1980). Numerous insect passages were also evident in the matrix, suggesting that the beans had been infested when they were still nutritionally viable. The responsible insect was probably a form of bruchid beetle, which is known to infest mesquite beans (Kingsolver et al. 1977: 113). Ethnographic data indicate that the presence of bruchid beetles was not considered detrimental to the use of infested mesquite beans as food (cf. Bell and Castetter 1937: 22-23).

Radiocarbon analysis of samples of the seeds produced dates of 200 ± 100 radiocarbon years B.P. for an acid-treated fraction (UCR-654A) and less than 150 radiocarbon years (uncorrected) B.P. for a base- and acid-treated fraction (UCR-654B). These figures suggest that the olla with its store of mesquite beans was cached in the rockshelter sometime in the early historic period.

The use of mesquite as a food resource in southeastern California and the Southwest during early historic times is well documented (Barrows 1900: 55; Kroeber 1908: 40; Strong 1929: 38; Díaz 1930: 280; Bell and Castetter 1937; Steward 1938: 82; Bean and Saubel 1963, 1972: 107-112). Although direct archaeological evidence is scant (cf. Wilke 1978: 75), the 4500 B.P. age of a macrofossil sample from Death Valley (Mehringer 1977: 134), and the presence of mesquite pollen in 9000-year-old coprolites from Seminole Canyon in Texas (Newman 1984) suggest the prehistoric availability of this food resource for the last several thousand years. Moreover, the close relationship of mesquite to certain Cahuilla cultural patterns (e.g., the locating of villages within mesquite groves, clan ownership of groves, and the naming of seasons after stages of development of the bean [Bean and Saubel 1972: 115-117]), suggests considerable antiquity for the use of mesquite as a dietary staple in southern California deserts.

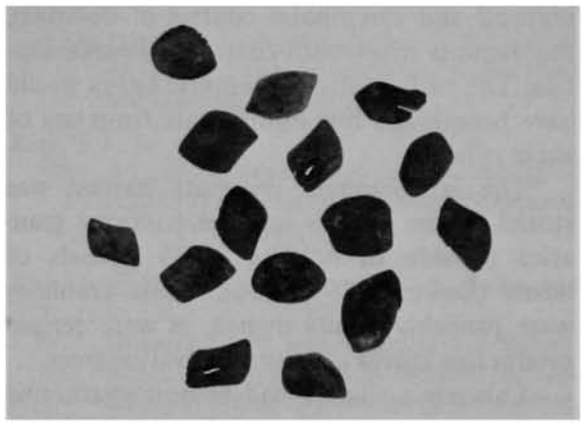

Fig. 4. Sample of mesquite (*Prosopis glandulosa* var. *torreyana*) seeds found in the jar. Actual size.

DISCUSSION

After the desiccation of freshwater Lake Cahuilla (ancestral Salton Sea) and subsequent establishment of low-desert plant communities in the Salton Basin in the sixteenth century (see Wilke [1978] for a discussion of Lake Cahuilla), Desert Cahuilla life centered around permanently occupied villages situated in large mesquite groves at places where groundwater was close enough to the surface to be tapped by walk-in wells (Blake 1856: 98, 435; Bean 1972: 74). Twelve such villages were recorded near the margins of the former lakebed during U. S. Land Office surveys in 1855-1856 (Wilke and Lawton 1975: Fig. 6). Strong (1929: 53-54) described five villages located near the base of the Mecca Hills around 1851, four of which were associated with subdivisions of one clan under the direct

political and ceremonial control of Cabezon, the famous nineteenth-century Cahuilla captain. The cached olla of mesquite beans would have been just a few hours' walk from any of these villages.

The late summer mesquite harvest was stored in the villages in large basketry granaries capable of holding 10-15 bushels of beans (Bowers 1891: 226). These granaries were probably family owned, as were certain productive groves and even individual trees.

Cabezon's villages had resource gathering territories on the southwest slope of the Little San Bernardino Mountains. These territories provided diverse and abundant floral and faunal resources at various times of the year from three plant communities: Creosote Bush Scrub, Joshua Tree Woodland, and Pinyon-Juniper Woodland (Wilke 1978: 123). Although Barrows (1900: 53, 69) suggested that the diversity and year-round productivity of their natural environment precluded the necessity for hoarding large amounts of food, caching of emergency food supplies was a regular practice among nineteenth-century Cahuilla (Bean 1972: 39; Bean and Saubel 1972: 111), and probably has considerable antiquity as a survival tactic in such a potentially harsh environment as the Colorado Desert. A number of such family-owned caches scattered throughout nearby foothills could have served as insurance against lean times.

ACKNOWLEDGEMENTS

The site was reported to the University by James D. and Martha McLean. Radiocarbon age determinations were made through the good offices of R. E. Taylor, University of California, Riverside. R. A. Hicks prepared Figs. 3 and 4. Special thanks are due Philip J. Wilke.

NOTES

1. The olla and its contents are currently housed under Accession No. 28 at the Department of Anthropology, University of California, Riverside.

2. Over the years, hundreds of cached *ollas* have been found in the Colorado Desert – many probably contained seeds. Unfortunately, most of these *ollas* are now part of private collections that lack accurate provenience data and that are not reported in the literature.

3. It is important to distinguish between mesquite beans or pods and the seeds. The mesquite is a member of the pea family (Fabaceae) and produces pods similar to string beans or pea pods, each of which contain a number of small, oval seeds. Unlike pea pods which are basically hollow, mesquite pods are a relatively solid mass of material. When dried and ground into meal for immediate or future consumption, it was the pulpy material that was sought, while the hard seeds were reportedly often discarded. However, when green the entire pod, i.e., bean, could be chewed and swallowed, seeds and all, without any preparation.

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Two Painted Stone Artifacts from Shasta County, California

ELAINE SUNDAHL

Two stone artifacts displaying vestiges of "painted" designs were collected by Shasta - Trinity National Forest personnel in 1977. That year, the second of a two-year drought in California, the waters of Shasta Lake receded to their lowest level since the reservoir was initially filled in the 1940s and a concerted effort was made to inventory and evaluate archaeological resources thus exposed. Eleven sites recorded prior to reservoir construction were revisited and some 54 new sites were recorded, including the two containing the decorated stones. These artifacts were collected and are currently housed at the Shasta College Archaeology Laboratory in Redding.

Shasta Lake is located in the southeastern portion of the Klamath Mountains geologic province. Both painted-stone sites, CA-SHA-31 and CA-SHA-954, are located in the pool area below the normal drawdown level of the lake (Fig. 1). The CA-SHA-31 site lies on a terrace adjoining the west bank of the now inundated McCloud River at an elevation of 840 ft. above sea level and more than 200 ft. below the maximum lake level. Although numerous large terraces border the McCloud, most of the surrounding country is steep and dominated by coniferous vegetation. CA-SHA-954 is located approximately 13.7 km. (8.5 mi.) farther south at an elevation of 980 ft., less than 100 ft. below the maximum lake level. Situated on a small flat adjoining the east bank of Jones Valley Creek, the site lies

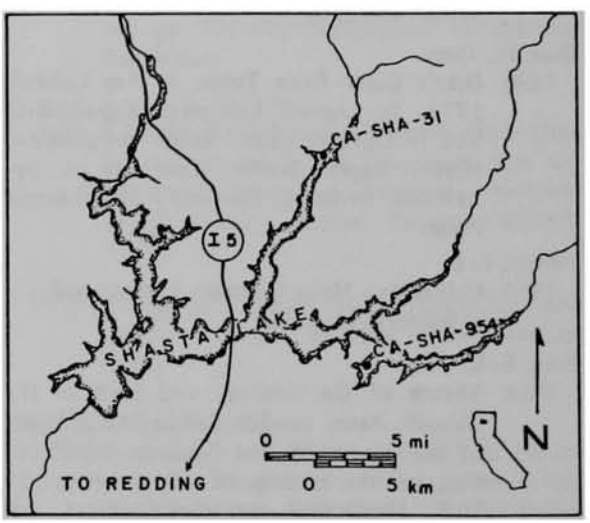

Fig. 1. Location of painted stone sites, Shasta County, California.

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