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Archaeological Investigations at the Breakfast Canyon Rockshelters, Death Valley National Monument, Inyo County, California: Shoshone Food Storage and Horticulture in the Southwestern Great Basin. Robert M. Yohe II and Sharynn-Marie Valdez, with contributions by Linda S. Cummings, M. Kathleen Davis, Thomas L. Jackson, Margaret E. Newman, and Kathryn Puseman. Museum of Anthropology, California State University Bakersfield, Occasional Papers in Anthropology No. 6, 1996, ix + 91 pp., 51 figs., 13 tables, bibliography, 3 appendices, \$8.00 (paper).

Reviewed by:

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This volume is a report of limited testing conducted at two small rockshelters near Furnace Creek Ranch in Death Valley National Monument, California. The shelters, easily accessible to inquisitive monument visitors and disturbed by recent erosion in a nearby ephemeral drainage, contained grass-lined storage features with preserved wild plant foods and a few cultigens. The shelters and features were easily dated by the abundance of historical artifacts, and by two radiocarbon dates on grass from the features. Aside from a few minor quibbles, this monograph is a welcome addition to a sparse literature on the late prehistoric and postcontact archaeology of the Death Valley area.

The monograph is well-organized and section headings are appropriate. The report is organized into a number of sections, beginning with a review of environmental information, such as the climate, flora, and fauna of Death Valley. This is followed by a brief synopsis of the archaeological background of the eastern Mojave Desert. A subsequent section describes the ethnographic background, largely from Steward (1938) but supplemented with more recent information. Naturally, results of the testing at the

Breakfast Canyon shelters take up the bulk of the monograph, beginning with an overview of the site and testing methods, followed by descriptions of artifacts and features from the two rockshelters. Descriptions of "ecofacts," human coprolites, and dating methods and results are provided in separate sections. The report concludes with interpretations of the site and a final discussion, followed by references and three appendices: Appendix A is a report of x-ray fluorescence and obsidian hydration; Appendix B describes immunological analyses of two flaked stone artifacts and two coprolites; and Appendix C identifies the botanical remains from the shelters.

Only a small portion of each of the shelters was excavated; in the case of Shelter A, this was about 3.0 m.², and for Shelter B this was 1.0 m.² A notable feature of this site was the identification of storage features in each shelter, each containing a variety of preserved macrobotanical remains, including wild plants and a few cultigens. The grass-lined feature in Test Unit 1 in Shelter B contained the only cultigens; the most common domesticates were squashes and melons, especially citron (Table 10, p. 58). Comparison of the relative importance of indigenous flora and cultigens is not easy in the tables, however. The cultigens are enumerated by numbers of identified specimens, whereas the mesquite and pinon seeds are listed by weight (Tables 11 and 12, p. 60). Fewer than 20 seeds of cultigens were recovered from the shelters, meaning the botanical assemblage is overwhelmingly dominated by wild foods, especially mesquite and pine.

A subsequent discussion suggests that the cultigens were grown by Shoshone who lived nearby, and that the seeds found in the features were stored for the following year's planting. Indeed, such a practice may simply be an extension of Late Prehistoric Period behaviors (e.g., Fowler 1996:97). The authors note in another part of the report that in the 1880s, a ranch called

"Greenland" was established at the mouth of Furnace Creek to support the Harmony Borax mines and the large number of people employed there, and where 30 acres were devoted to agricultural purposes. Melons, vegetables, and fruits, among other produce, were grown. This fact suggests, at least to the casual reader, that another origin for cultigens is possible, and leads to a consideration of just how difficult it might be to identify who actually grew the crops. Certainly they could have been grown in Shoshone plots, but might just as easily have been grown at this ranch and given to or bought by local Shoshone. Many Southern Paiute, for a variety of reasons, were dependent on wage labor for much of their subsistence, either in the form of cash or food from ranchers and farmers (Knack 1996).

The use of these shelters seems well constrained to the Late Prehistoric Period or to the period between the late nineteenth century and the mid-twentieth century. A variety of historical artifacts, such as glass beads, tin cans, spoons, etc., clearly shows that the shelters were used somewhat after area resources were being exploited by Euroamericans. This conclusion is supported by the two radiocarbon dates from the site. Feature 1 in Shelter A consisted of an upper component associated with historical artifacts and a radiocarbon age of 10 ± 70 RCYBP, and a lower component, which is a rock-lined pit without historical artifacts associated with a radiocarbon age of 180 ± 60 years RCYBP. Each sample consisted of about 40 g. of grasses (p. 63). After correction for $\delta^{13}\text{C}$ fractionation, the first or uppermost sample result should be read as $100\% \pm 0.9\%$ of modern (A.D. 1950), yielding a calibrated age estimate of about A.D. 1870-1961; the second date corrects to 340 ± 60 B.P.

The $\delta^{13}\text{C}$ ratios for the two samples show that markedly different materials or mixtures of materials were dated. The value of -15.4 ‰ for the $\delta^{13}\text{C}$ ratio of the lower sample is more indi-

cative of a C4 tropical grass, while the $\delta^{13}\text{C}$ ratio of -25.9 ‰ in the upper sample is typical of woody shrubs such as creosote or sagebrush.

The use of the term "prehistoric" for the objects found in the site which were not made by Euroamericans seems a bit awkward. Except for a grinding stone fragment associated with a radiocarbon date of 340 ± 60 B.P., many of the apparent "prehistoric" artifacts (even possibly curated or antique arrow points) could have been used during postcontact time.

One curious omission is the absence of any discussion of nearby sites. Ethnographic accounts were consulted which showed a village site at *Timbisha*, but surely other sites have been located nearby which might be associated with the use of these shelters. The Furnace Creek fan area where this site is located was surveyed by Hunt (1960), who reported at least 150 sites found, which include numerous open-air, grass-lined storage pit features much like that reported by the authors. Hunt (1960:167) noted that "some of these sites were used into historic times, judging by the presence of glass beads and white contact objects." Several of the pits were lined with alkali sacaton grass or desert holly, and contained mesquite beans and pods, and occasional pine nut hulls.

Another useful addition to the report might have been information collected from local Native American elders about their recollections of the site and environments. I suspect the Park Service has a policy of ongoing consultation with interested Native American groups; it is entirely possible that an invitation by the Park Service to visit the site during testing might have provoked comments about site function. Two Native Americans from the *Timbisha* band are acknowledged in the report, but their contributions are not mentioned.

Three brief appendices are included in the report. These include obsidian sourcing and hydration, faunal and botanical analysis, and immunological studies. Commenting on results of

the immunological studies presented in Appendix B, the authors note that the finding of protein residues of deer on the projectile point may have resulted from hunting, butchering, or be due to the use of sinew for hafting (p. 46). A number of studies conducted over the past few years has been unable to convincingly demonstrate that protein residue analyses of ancient specimens are reliable (Downs and Lowenstein 1995; Feidel 1996). The identification of deer and yucca in this context, while not implausible, should perhaps be considered merely a working hypothesis until further studies are conducted.

Few stylistic or production errors were noted in the monograph. Catalog numbers are sometimes inconsistent between appendices, the main body of the report, and in figure captions. For example, Appendix B states that catalog number 1-023 was tested for protein residues; but this artifact is listed as catalog number 1-002 in Figure 38. The report also suffers from poor reproduction of many of the photographs, some of which are so dark as to be virtually indecipherable. Many of the line drawings fared much better, however, and the artist is to be commended for the detailed renditions of historical and prehistoric artifacts from the site. The tape binding of the volume will not last long, and was no doubt chosen to keep costs to a very affordable \$8.00.

This slim volume documents an important facet of late prehistoric and contact period archaeology from Death Valley. It is good to see results of contract archaeology being published; such "grey literature" deserves to be read by a wider audience than it has been in the past.

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Prior to 1990, very little published information about the native cultures of the San Francisco and Monterey Bay regions was available to