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Author

Janetski, Joel C

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REVIEWS

Buzz-Cut Dune and Fremont Foraging at the Margin of Horticulture

David B. Madsen and Dave N. Schmitt
Anthropological Paper No. 124, University of Utah
Press. 162 pages, 36 black and white photographs, 45
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Reviewed by Joel C. Janetski

Department of Anthropology,
Rm 820 SWKT,
Brigham Young University,
Provo, Utah 84602-1229

Fremont “forager” research was stimulated by the work of Steve Simms (1986) at Topaz Slough in Utah’s west desert. Topaz Slough was characterized as a temporary Fremont occupation and seemed evidence of an adaptation quite different from the more often investigated Fremont village sites. As a consequence of Simms’ findings, which built on the work of Madsen (1982), the term ‘Fremont foragers’ has become something of a buzz phrase in Fremont studies. Despite the clear interest in Fremont strategic variability and the fact that many west desert open sites with Fremont occupations are known (e.g., p. 26 of this report), few have been excavated, and reports of that work have tended to be brief (see Simms 1986 and Smith 1994 for examples). The present monograph, reporting the excavation of a “Fremont village” on a large dune on the extreme southwest margin of the Great Salt Lake Desert, is the first detailed site report of an extensively excavated Fremont forager site. This review briefly describes the contents of the monograph by chapter and comments on the contributions of the work.

The Introduction states the reasons for the Buzz-Cut Dune excavations. The site was discovered during an effort to blade the top off a large dune to improve the line-of-sight between communication towers at Dugway Proving Ground. This activity exposed several possible structures, some of which contained Fremont diagnostics. In order to salvage the clearly significant site information,

Dugway Proving Ground personnel entered into an agreement with the Utah Geological Survey and the Desert Research Institute at the University of Nevada to excavate the site. The site was initially recorded in September 2000; the excavation commenced several months later in the spring of 2001.

Following this brief history, the authors provide detailed insights into the past and present environments of the region between the Wasatch Front on the east and the Deep Creek Mountains to the west. Madsen and Schmitt have been working at open and sheltered sites in the west desert for several years, much to the benefit of the archaeological community (see for example, Madsen 2000; Schmitt and Madsen 2005). Their deep experience here is evident as they cover regional geology, geomorphology, past and present climates, and economic flora and fauna. These details provide an excellent contextual backdrop for the Buzz-Cut Dune data.

The contextualization of the site in the natural world is complemented in Chapter 1 with an overview of the Prehistoric Fremont and a history of Fremont studies. The latter includes attention to theoretical shifts, culminating in a detailed presentation of the behavioral perspective as outlined some time ago by Madsen and Simms (1998). I found the specific history of previous work on the “western fringe” of the Fremont particularly useful and appropriate for this monograph.

Chapter 2 presents research questions as well as the strategies designed to provide their answers. The authors make it clear that (as suggested by the monograph title) their ultimate interest is exploring ways of understanding Fremont mobility strategies using Buzz-Cut Dune data. Field methods as well as laboratory procedures are clearly stated. Included in this chapter are the results of a survey of lands within 3.2 km. of Buzz-Cut Dune, which demonstrated the intensity of use during various time periods. The surveyors found more sites with Fremont components ($n = 11$) than from other time periods (Archaic = 0; Late Prehistoric = 1), suggesting rather intensive use during the farming era.

The regional cultural and environmental history is presented in Chapter 3, based largely on work at Homestead Cave and Camels Back Cave, although

pollen records and lake level studies also contributed to these reconstructions. Charles Oviatt's discussion of dune geomorphology in general and Buzz-Cut Dune specifically is a useful and important contribution. This chapter culminates with the presentation of radiocarbon dates for Buzz-Cut and some adjacent sites as well as a discussion of regional chronology. The dates and the stratigraphy make it clear that the site was visited sporadically beginning in the mid-Holocene, with use accelerating after about 1,500 B.P. This chapter ends with a review of regional chronology that is supported by Appendix A, which is a listing of available radiocarbon dates for the Bonneville Basin at the time of publication.

Chapter 4 describes archaeological features and artifact scatters present on the surface and those discovered during the excavations. The authors note that between the time the site was documented and the time of excavation wind erosion had altered the site surface, including the shape of the possible structures. This erosion, plus some discrepancies in the early and later maps, caused the researchers some difficulties. These discrepancies are described in the various structure plan maps and take a few minutes for a first-time reader to digest.

Dominating the material remains at the site was fire cracked rock (FCR), which was apparently present in great quantities. Numerous features, mostly hearths and stained sediments, were present across the dune, and these were mapped and are described in the text. The features of most interest were the five "houses" documented on the dune top. The excavation of these features in a sandy, eroded, and disturbed context was clearly difficult. The authors are understandably cautious in interpreting these stains as houses, given the dramatic difference in the initial maps and the remnant stains dealt with at the time of excavation. In fact, they conclude that "House 1" was probably not a structure (p. 60), although it is referred to as "House 1" throughout much of the discussion and in subsequent analyses. The fact that four of the ephemeral structures were determined to be Fremont in age, while "House 1" represents a protohistoric Native American occupation with historic artifacts, is of importance. The chapter is nicely detailed and the illustrations (photos and plan maps) are of high quality, although there are some minor editing issues.

Chapter 5, by Matthew Root, Richard Hughes, and Christopher Hall, presents highly detailed analyses of the chipped stone tools and flaking debris. The definitions of flake types and descriptions of all tools are excellent. I also found the raw materials and functional analyses insightful and important in gaining understanding of site function and shifts in forager catchments. The primary activities revealed by the chipped stone analysis were hunting and the maintenance of related gear, including wood or bone tools.

The authors make some useful observations in the discussion of projectile point morphology. They note that when using Thomas' (1981) key, some side-notched points are typed as Desert Side-notched, a point diagnostic of the post-Fremont period in the eastern Great Basin. Typing the same point following Holmer and Weder (1980) resulted in the specimen being typed as Uintah Side-notched, a Fremont type. I agree with the authors that the classification of side-notched points without a basal notch as Desert Side-notch may be misleading as—at least in the eastern Great Basin—this would suggest a post-Fremont occupation. Small side-notched points without basal notches are common at later Fremont sites throughout the eastern Great Basin, especially in the central and northern areas, and the dates from House 3 hearths support that temporal placement. As the analysts note (citing Madsen and Simms 1998), the high and low notch distinction employed by Holmer and Weder may not be useful, but the basal notch is characteristic of the post-Fremont period.

Analyses of the remaining artifacts are discussed in Chapter 6. Two data sets, ceramics and ground stone, are treated with considerable detail, as they are seen to contribute in unique ways to understanding mobility. It is clear in the ceramic discussion that the authors are intimate with various models that suggest how ceramics may or may not provide insight into mobility strategies. This analysis and the subsequent discussion is useful in identifying the strengths and weaknesses of using ceramics as a means of understanding mobility strategies.

The ground stone analysis points to the importance of identifying source materials and portability characteristics of these often very heavy tools. As I mention below, this analysis is innovative and user-friendly for future researchers. I refer here to the proposed thick-thin

dichotomy in metates, with the former more likely to be used by farmer/foragers operating from a central place, while thin metates are more likely to be selected by foragers circulating from camp to camp. Although one might wonder why anyone would tote a 12 kg. metate to a remote site, the authors put that concern to rest by pointing to the probability of redundant use of certain sites by farmer/foragers, and the weighing of metate reliability versus portability by those choosing tool types.

Faunal bone was present but scarce at the site. The assemblage, mostly from the surface, was dominated by hares and other small mammals. A few deer-sized fragments came from one of the Fremont structures. The macrobotanical data point to a very specific target by the Buzz-Cut occupants: pickleweed.

The Summary and Interpretation chapter confronts the research questions head on, especially the question of sorting site use by Fremont farmer/foragers and Fremont foragers. Not surprisingly, this proved difficult. The authors rightly note that, although the archaeological patterning may suggest similarity in site activities and season of site visit through time, the problem is one of equifinality: similar patterns may have been left by occupants with differing strategies—either by farmers who foraged briefly at the site and returned to their village location, or by foragers for whom this was just another residential camp. All of the analyses were focused on how data might illuminate mobility, but the results were mixed. Thin, more portable metates, suggesting the users were mobile foragers, were found in association with thin, highly invested ceramics, which were predicted to be left by occupants from a residential base or farming group. The authors note that the potential for trade in both durable goods and consumables makes teasing apart farmer/forager and forager occupations at specific sites even more difficult. The probability of such interactions has been explored previously by McDonald (1994) and Janetski (2002).

The array of fine-grained analyses allowed a nuanced discussion of mobility, as well as of other important issues such as catchment shifts through time based on toolstone sourcing. In addition, the analysis of materials suggested the site visitors were most likely based in the Deep Creek Mountains to the west, or at a minimum included that region in their scheduled movements. I found the ground-stone discussion particularly innovative

and insightful. Here the authors explain why Fremont foragers from farming bases who visited the site in more logistical fashion would have preferred thicker, more reliable metates, while Fremont foragers for whom the site was a residential camp chose thin, portable grinders (p. 121).

Other issues I found important concern the site's culture history and function. The identification of a "Proto-Fremont" occupation prior to ~1,000 years ago, followed by the appearance of a more "classic" Fremont marked by typical Fremont gray-ware ceramics, is particularly interesting. As the authors suggest (p. 130), this may be evidence of an expansion of foraging trips into these more marginal areas by Fremont people as populations grew along the Wasatch Front, or perhaps increased interaction among various groups across the region. The continued use of the site for similar purposes following the Fremont period demonstrates a continuity in the exploitation patterns of this resource area.

Functionally, there seems to be something of a disjuncture between the presence of numerous projectile points, suggesting that hunting was important, and the very sparse faunal remains recovered. The authors don't address this directly, although they note that perhaps men hunted rabbits while the women were in the pickleweed patch. This apparent discrepancy may be explained in part by preservation issues—points preserve well while faunal bone may not—or by the transport of prey carcasses elsewhere.

I had some quibbles with points made in the text. Sections of the introductory chapters are admittedly borrowed from previous reports, but doing so seems to date them somewhat. For example, the overview of the Fremont retains the notion that the Fremont farming strategy was a consequence of a diffusion of ideas from the Southwest that were adopted by indigenous Archaic foragers. Ongoing research on early agricultural sites (Wilde and Newman 1989; Talbot and Richens 1996; Greubel 1998; Janetski 2003), as well as emerging genetic data (e.g., Carlyle et al. 2000), suggests that the process was more complicated and likely involved some migration as well as diffusion. I also note that the authors point to a cultural hiatus in the Great Salt Lake Basin between 1,500 B.P. and 1,700 B.P. (p. 40, 130) despite dates from Bonneville Estates (Rhode et al. 2005) and now from Mosquito Willie (Janetski 2006) that fall into this

interval. Calling this period a hiatus may be overstating the situation, although populations appear to have been lower during that era.

The overview also perpetuates the error of including Promontory Culture in a discussion of Fremont strategy variability, as was suggested years ago by Aikens (1966). This is misleading. Promontory has clearly been shown to post-date the Fremont period (Simms and Heath 1990; Janetski 1994). Furthermore, Steward (1937:121) found no evidence of Puebloan (read Fremont) occupation in the Promontory caves, and residue from a Promontory sherd from Promontory Cave 1 dates these distinctive wares to post-Fremont times (Smith 2004).

A stylistic issue involves the use of feature numbers rather than interpretive terms where possible. This presents some awkwardness throughout the data chapters. As I compared dates from hearths and houses with the data coming from those features, I found myself continually turning back to Table 4.1 to remind myself which was which. This problem was compounded by the fact that the Descriptions in Table 4.1 were not the same as those used in the text. For example, Feature 15 was used synonymously with House 3 in the text, although in Table 4.1 it is described as a stained living surface. Why not make all of these references consistent for the benefit of the reader? This seemed a challenge for the authors as well, as they were continually using both designators, House 1 (Feature 17), House 2 (Feature 13), etc., which makes for more cumbersome prose. Some tables (e.g., Table 5.12), however, used interpretive terms rather than feature numbers, although inconsistently. Table 3.1 could have been rendered more reader friendly by providing the larger contexts for the charcoal sample provenience; for example, F47 Hearth in House 3. There are some minor problems with figure editing (e.g., Figure 4.33 grid designations).

The above comments are minor concerns and do not detract from the valuable contribution made by this volume. As stated at the onset, it is the first in-depth report of excavations of an open Fremont occupation in the west desert. Hopefully, others will follow. The authors demonstrate an in-depth knowledge of the issues and provide objective discussions of complex research questions. The suggestion that issues of mobility are best confronted with a regional perspective is on target. I recommend this report highly to Fremont scholars and

to the professional community generally. I have already required a number of students to obtain a copy of the report to assist and inform them in research projects.

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Camels Back Cave

Dave N. Schmitt and David B. Madsen

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Reviewed by Brooke S. Arkush

Department of Anthropology and Sociology,
Weber State University, Ogden, UT 84408-1208

Throughout much of the Holocene era, the southern Great Salt Lake Desert was a challenging landscape for human foragers, with its broadly dispersed biotic communities and relatively few fresh water sources. The onset of warmer and drier conditions at approximately 8,300 B.P. resulted in a substantial shift in aboriginal settlement practices, from one that seems to have revolved around seasonal residential bases along the Old River Bed (which held a river connecting the Sevier and Great Salt Lake sub-basins) and in/around the paleomarshes of terminal Lake Bonneville, to a pattern involving high mobility in which people tended to focus on dune fields, shallow caves, and rock shelters for short-term camps. The archaeological record of Camels Back Cave (site 42To392) reflects this latter pattern; it most often served as a place where people consumed food, repaired gear, stayed for a few days, and then moved on to settlement hubs or higher-density resource patches.

Camels Back Cave is a small north-facing cavern situated in an isolated limestone ridge on the U.S. Army's Dugway Proving Ground; it was investigated by personnel associated with the Utah Geological Survey, Utah Division of State History, and the U.S. Department of Defense. Test excavations conducted there in 1993 revealed the presence of highly stratified, minimally disturbed deposits dating back to Early Archaic times. It was then intensively excavated from 1996 to 1998 in order to accomplish two primary research goals: (1) investigate the structure of human activities that transpired there by exposing contiguous portions of living surfaces within the cave and recording their contents in great detail, and (2) construct a high-resolution chronology of Holocene human use and occupation in the Camels Back Cave region.

Most excavation work occurred within a 2 x 4-meter block located in the southwest part of the cavern, which exposed 33 distinct stratigraphic horizons extending to

