and tables are of medium quality, and they are well-integrated into the text. The sections on materials analyses follow a rather traditional format, but in spite of this regimented approach, each section provides important data concerning regional archaeological research interests.

Schneider’s report is accompanied by eight appendices, including special studies by Jenkins (ceramics), Sutton and Yohe (vertebrate faunal remains), King (beads), and Bouey (obsidian). Each study is well-written and presents interesting data.

In the conclusions, the author suggests that the site was occupied mainly during the Saratoga Springs Period (A.D. 500-1200) and was used primarily to exploit local lithic resources and secondarily for hunting bighorn sheep. Although the author presents other conclusions (e.g., trade, ethnic boundaries, and other issues), they must be considered speculative at this time.

"The Archaeology of the Afton Canyon Site," is a fine contribution to Mojave Desert prehistory. The author accomplished her intentions and completed the project objectives with limited resources.

Archaeology of James Creek Shelter, Robert G. Elston and Elizabeth E. Budy, eds. University of Utah Anthropological Papers No. 115. 1990, xiv + 321 pp., 110 figs., 85 tables, 7 appendices, $22.50 (paper).

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The James Creek Shelter report edited by Robert G. Elston and Elizabeth E. Budy is a Cultural Resource Management (CRM) compliance document prepared on behalf of a mining company prior to development of an open pit gold mine. James Creek Shelter is a stream-cut feature located on a tributary of Maggie Creek, a major stream feeding the Humboldt River in northeastern Nevada. Prehistoric occupation of the site occurred between about 3,000 and 240 B.P. When initially recorded, the floor of the shelter was devoid of artifacts; a single flake was observed on the apron of the shelter and a biface fragment was noted downstream in the drainage. The site could easily have been dismissed at this point due to the lack of obvious surface indications of prehistoric use. Possible carbon staining on one wall, location above a waterway, and a geomorphic content for the shelter indicating rapid deposition and burial of surficial cultural materials were critical factors in justifying site testing. This assessment was correct, as demonstrated by about three meters of fill containing 21 hearths, 13 occupation surfaces, 239 projectile points, 50 bone artifacts, five pieces of basketry, nearly 4,000 identifiable mammal bones, and miscellaneous artifacts.

The research design for the James Creek Shelter investigation incorporates a number of current research themes in Great Basin archaeology. These included inquiries into the following research domains: culture history, geoarchaeology, paleoenvironments, and settlement/subsistence. Much of the strength for this report is related to the late Keith L. Katzer’s and Elizabeth E. Budy’s handling of geoarchaeological studies. These data are particularly germane in understanding and interpreting site chronology, paleoenvironments, local paleohydrology, and site taphonomy.

There are some notable results from the faunal and floral studies conducted by Donald K. Grayson (mammalian fauna), Robert S. Thompson (plant macrofossils), and David B. Madsen (palynology). The James Creek Shelter site yielded some 47 bones identified as, or attributed to, Bison bison. This represents the largest,
non-Fremont, sample of bison remains from a single Great Basin site. Twenty-six percent of the James Creek bison remains exhibit cut marks or impact scars. Grayson also discusses the potential for raptor contributions to the small mammal assemblage and the potential role of carnivore introduction of bison bone. Among the identified plant remains, there are several taxa that may be useful in determining the season(s) of site utilization and are ethnographically documented food items. These include two unidentified Umbelliferae, *Chenopodium* sp., *Oryzopsis hymenoides* (Indian rice grass), *Elymus cf. cinereus* (Great Basin wild rye), and *Opuntia* sp. (cactus). Cactus was mentioned by Steward (1938:156) as a winter comestible gathered by the Western Shoshone in the drainage of the north fork of the Humboldt River. Relatively higher concentrations of pollen from *chenopodiaceae/Amaranthus* and grasses were recovered from metates than from the site background, thus supporting the presence of these taxa at the site as foodstuffs. Great Basin wild rye was also used as a floor covering on occupation surfaces. Perhaps conspicuously missing from this discussion of comestibles was the occurrence of fish and shellfish associated with nearby water courses, including James Creek. A hint that aquatic resources may be present is provided by Dave N. Schmitt’s description of two pointed bone artifacts identified as fishing gorges and the occurrence of beaver in the faunal assemblage.

The shelter also yielded some perishables including textiles (analyzed by Catherine S. Fowler) and wooden artifacts (analyzed by Kenneth E. Juell). Analysis of the five coiled basket fragments indicates that the makers utilized construction techniques similar to those associated with eastern Great Basin sites and the Western Shoshone. A single *Olivella* sp. shell bead is described by Juell (Appendix E); an illustration of the artifact would have been useful. It is classified as a style (type E1; Bennyhoff and Fredrickson 1967) believed to be associated with Central California’s “Early Phase 2 of the Late Horizon.” This appendix was apparently written prior to the Bennyhoff and Hughes’ (1987) study. A single potsherd from the site was described by Madsen (Appendix B) as most closely resembling the Knolls variety of Great Salt Lake Gray, a Fremont ware.

Lithic studies dominate the material culture presentation and include: projectile point typology (Michael P. Drews), debitage analysis (Charles D. Zeier and Elston), lithic reduction technology (Donald L. Zerga and Elston), flaked stone use-analysis (Francine M. Havercroft and Elston), ground stone analysis (Juell), and obsidian sourcing (Richard E. Hughes). The projectile point sequence is in agreement with previous chronologies for the region. Projectile point type distribution includes: a Gatecliff split-stem point from the base of the deposits; lower levels dominated by Elko series points; middle levels dominated by “Rosegate” series points; and upper levels dominated by Desert series points. There is, however, some overlap between each of the dominant point types. Elston (chapters 14 and 15) outlines a “cost-benefit” model to help explain variability in tool stone frequencies for a site. This examines a variety of factors related to tool stone quality and procurement to determine the ultimate “cost” of its utilization by a prehistoric culture. Application of this model may ultimately provide linkage between the lithic data and regional settlement/culture history models.

The findings from the James Creek report establish a valuable data base for material culture studies, paleoenvironmental reconstructions, and cultural chronologies for the north-central Great Basin that will be referenced for years to come. This report continues Robert Elston’s commendable practice of publishing worthy CRM results. Taking a CRM compliance report the extra distance to create a well-edited manuscript suitable for submission to a reviewed series was, un-
doubtedly, largely at the expense of the company (Intermountain Research). This project, however, apparently applied for and received Nevada State Historic Preservation Office grant monies to help offset some of the additional costs. Through these efforts, the results of the James Creek Shelter investigation are available for wide readership and will prove most useful to it.

REFERENCES


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These two reports present the results of archaeological investigations at an important site located along the lower course of Calleguas Creek near its outlet into Mugu Lagoon. Test excavations were undertaken at CA-VEN-110 in 1985 for the Los Angeles District of the Corps of Engineers. This site, listed on the National Register of Historic Places (NRHP), has been subjected to severe impacts because of levee construction and stream channelization along the lower course of Calleguas Creek. The purpose of the excavations was to evaluate the remaining deposits at CA-VEN-110 to determine if the site still met criteria for inclusion into the NRHP.

The unique situation of CA-VEN-110, stranded by the stream channel of Calleguas Creek and subjected to alternating episodes of sedimentation and erosion, led to a complex problem of archaeological investigation. Because remaining site deposits were buried by one to two meters of accumulated silt and mud, a series of 19 backhoe trenches was excavated to remove overburden and evaluate stratigraphy. At seven locations, units (mostly 1 x 1 m.) were hand excavated when midden was encountered, and all deposits were water-screened through 1/8-in. screen. Most sorting of screen residuals was undertaken in the field.

The authors' explication of site formation processes is generally good and helps to clarify a confusing situation, but a few oversights mar an otherwise useful report. Information given in the table regarding the number and thicknesses of midden lenses encountered in the units does not appear at all to match the schematic figure on the previous page. Maps in Figure 3.10 that reconstruct midden contours also create some confusion because they lack a north arrow and are oriented in reverse of previously given maps. No statement is given regarding where