REVIEWS

Purisimeño Chumash Prehistory: Maritime Adaptations Along the Southern California Coast. Michael A. Glassow. San Diego: Harcourt Brace, 1996, xiv + 170 pp., 27 figs., 3 tables, $25.00 (paper).

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The Vandenberg Project is firmly established in the annals of California archaeology as a significant investigation that set a standard for coastal archaeological research. This book is a very readable synthesis of more than two decades of research by Michael Glassow at Vandenberg Air Force Base, located on the south-central coast of California. The project was initiated in the early 1970s in response to plans by the U. S. Air Force to construct facilities for the space shuttle—a techno pipedream of the 1970s that has since become a commonplace reality. Most of the fieldwork and analysis was carried out by the now-defunct Office of Public Archaeology, a cultural resource management (CRM) facility started by Glassow in the Department of Anthropology at the University of California, Santa Barbara. As represented by the Vandenberg work, this facility produced quality research in a CRM context at a difficult juncture in the history of California archaeology, as a newly emerging ecological paradigm was supplying the discipline with research questions that were at once fascinating and difficult to operationalize. At the same time, government agencies and researchers were trying to figure out how to work effectively with newly passed preservation laws. Many large-scale CRM projects of the 1970s are famous mostly for how little they accomplished. The Vandenberg project, however, is not one of these.

Glassow is clearly and consistently a cultural ecologist. As delineated in the closing chapters of the book, environment and population are the forces he feels were most influential on the archaeological record at Vandenberg. Glassow was one of a handful of scholars who was instrumental in implementing cultural ecology in a meaningful way in California in the 1970s. Previous important contributions were made in the 1960s (e.g., Warren 1964), but in the early 1970s, most of California archaeology was still firmly committed to cultural historical research—if only in some cases because so many cultural chronological issues remained unresolved.

The research described in this book represents Glassow's successful and determined attempts to investigate prehistoric human ecology on the south-central California coast. The book provides an excellent blueprint for cultural ecological research in a coastal setting within a CRM context. It begins with a brief history of the Vandenberg Shuttle project, in which Glassow explains that he was originally contracted in 1974 by the National Park Service to test 31 sites. In 1978, he completed data recovery at three of these sites that were within the impact area of the planned construction. This introduction is followed by background sections on ethnography and prehistory that are refreshingly brief and to the point. These are followed, in turn, by more detailed descriptions of the legal context of the undertaking. Glassow then devotes a chapter to the chronological framework of the project, in which he describes his preference for radiocarbon dates to establish temporal order of site components. The chronology chapter is followed by brief, but detailed and well-illustrated site reports.

Glassow's conclusions are presented in three chapters: Chapter 6 is devoted to reconstructions of population and environment, Chapter 7 evaluates subsistence changes relative to population

and environment, and Chapter 8 presents a retrospective in which Glassow looks back at his two decades of research and considers things he might have done differently had he had the opportunity to do the project over again. This last chapter, explicitly solicited by the editor of the series, adds an interesting human element to the scholarly investigations described in the first seven chapters.

Glassow's reliance on radiocarbon dates—particularly those obtained from marine shell—was an innovation for the time. Into the 1970s, California archaeology was traditionally reliant on notoriously complex seriation-based dating schemes. Glassow does not ignore these frameworks—he assigned components to King's (1982, 1990) phases—but he left their development and refinement to others. This was a profoundly new direction for a Californianist—one with both positive and negative repercussions. For Holocene archaeology worldwide, radiocarbon dating provides the most widely accepted temporal currency; however, well through the 1980s, Californianists retained a mistrust of the method, particularly dates obtained from shells. Glassow's work at Vandenberg and the work of his students (e.g., Erlandson 1994) has shown conclusively that this mistrust is undeserved. While shell-derived radiocarbon dates have an imprecision factor of perhaps 100 to 200 years due to problems in controlling completely for upwelling, there is little reason to question the 9,000 years of human prehistory defined by radiocarbon dating at Vandenberg.

One of Glassow's major regrets in looking back at his research involves his selection of radiocarbon samples, specifically his use of multiple-fragment shell samples. Owing to bioturbation, it can never be assumed that shell fragments immediately adjacent to one another were deposited at the same time. A date obtained from several shell fragments can potentially represent an "average" from multiple components rather than providing precise dating of a single component. While this may seem elementary in the year 2000, multiple-specimen samples were still being used to date shell deposits as recently as the 1990s in California. Glassow does the California archaeological community an important service by highlighting this issue.

The emphasis on cultural ecology and radiocarbon dating at Vandenberg also has a modest downside, however, in that traditional culture history (i.e., definition and refinement of artifact types and their chronologies) has ostensibly been eliminated as a research issue in this region. Certainly, completion of Chester King's monumental synthesis (1982, 1990) lessened the need to consider simple questions of types and time, and there can be little doubt that much of King's seriation-based sequence is accurate. Recent research in the San Francisco Bay area, including extensive radiocarbon dating of grave lots (e.g., Leventhal 1992; Holson et al. 2000) has shown that James Bennyhoff's (see Bennyhoff and Hughes 1987) sequences (after which King's were modeled) are also very accurate. Nonetheless, this recent work has also shown that there is room for refinement in the Bennyhoff sequences, and it is equally likely that the basic time/space/type framework of Santa Barbara prehistory can be improved.

A modest example is provided by the excavation results from CA-SBA-931, a site that produced evidence for the oldest occupation at Vandenberg (ca. 9,000 years B.P.). Ten radiocarbon dates obtained from a range of depths (0 to 160 cm.) from one particular locus (Area A) all fell between approximately 9,000 and 7,700 years B.P. Based on existing chronological schema, a large side-notched projectile point from Area A was assumed to date no older than ca. 5,000 years B.P., and was therefore thought to represent an intrusion of later materials into the older deposit—despite the lack of radiocarbon evidence for later occupation. An alternative interpretation is that existing schema are wrong, and that large side-notched points have greater antiquity than

generally assumed. Greenwood (1972) argued this position nearly 30 years ago based on findings from Diablo Canyon, 40 km. north of Vandenberg.

Certainly the discovery of a single typological specimen would never resolve this issue conclusively, but I think it unfortunate that the Santa Barbara sequence was seen as so intractable that its revision in this or other instances was not considered. Such criticism notwithstanding, the Vandenberg Project represents a significant, if not remarkable, contribution to California coastal archaeology and this monograph should be consulted by anyone investigating prehistoric maritime societies along the west coast of North America.

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Walking Where We Lived is a personal history of a Nim (North Fork Mono) family. It is the first published account of this Sierra Nevada tribal group written by one of its members. Gaylen Lee, in collaboration with his mother, Ruby Pomona, provides an insider's perspective on Western Mono culture organized around seasonal activities, childhood memories, and historical events. Very appropriately, the book begins and