CHUMASH FEATURES AT CA-SBA-73N: MANAGING AND MITIGATING UNDER FIRE

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In a 1980 CRM evaluation, after only limited subsurface testing at the Chumash village site of CA-SBA-73 in Tecolote Canyon, UCSB archaeologists stratified the site into areas of high, medium, and low sensitivity. These sensitivity zones, codified into future planning decisions by the County of Santa Barbara and California Coastal Commission, prohibited development in high sensitivity areas, but allowed construction in medium and low sensitivity areas after data recovery work. Years later, data recovery excavations and monitoring of construction grading uncovered at least 17 cultural features in the "medium sensitivity" area, raising questions about the original classification system. In this paper, we summarize the nature of these features and discuss some of the problems encountered in implementing the cultural resource conditions that were placed on the construction of the Bacara Resort and Spa.

The practice of archaeology and cultural resource management in California has changed dramatically over the years. It has shifted from a predominantly academic pursuit, centered in universities and museums, to a semi-regulated industry conducted primarily through private corporations and public agencies. Thirty years ago Native American involvement in California archaeology was minimal, while tribal monitors are now common participants in excavations around the state. Monitoring of mechanical excavations during construction by Native Americans and archaeologists has also become an increasingly important tool in managing cultural resources and mitigating impacts to archaeological sites. Halting or delaying construction due to archaeological discoveries made during monitoring operations can place extreme pressures on cultural resource workers, as architects, engineers, construction companies, property owners, and agency representatives try to limit delays and costs.

During the 1980s, plans to develop a coastal property at the mouth of Tecolote Canyon on the western Santa Barbara Coast collided with the fact that three major Chumash villages and several smaller or more specialized sites were located on the property. After surface reconnaissance and limited subsurface testing by archaeologists from the University of California at Santa Barbara (UCSB), areas within all the archaeological sites on the property were ranked as being of high, medium, or low sensitivity (Kornfeld et al. 1980). These rankings were formalized in conditions placed on the proposed development by the County of Santa Barbara and the California Coastal Commission, subject to modifications resulting from further testing, data recovery, or monitoring discoveries (Erlandson 1986). Under pressure from the local Chumash and the archaeological community, the developer of a large hotel complex was required to preserve high sensitivity areas as open space or beneath protective fill. Low and moderate sensitivity areas were open to development following data recovery excavations. In this paper, we describe some of the stone features found during these recovery efforts, then discuss some of the lessons we learned in the process. First, however, we provide some background information to contextualize the discoveries.

BACKGROUND INFORMATION

SBA-73 is a large village site located at the mouth of Tecolote Canyon, several kilometers west of the Goleta Slough (Figure 1). Situated on the west bank of Tecolote Creek, the site has been excavated repeatedly and extensively, probably beginning with the work of Stephen Bowers in 1877 (Benson 1997; see Erlandson et al. 2005), followed by F. W. Putnam in 1908 (King 1980) and D. B. Rogers (1929) in the 1920s. Bowers, Putnam, and Rogers all focused on excavating cemeteries, but Rogers trenched extensively in other site areas. After a hiatus of over 50 years, further investigations of the site were conducted by archaeological teams from UCSB, WESTEC/ERCE, and Hutash Consultants (Figure 2). Respecting the wishes of the modern Chumash community, recent excavations have tried to avoid cemetery areas, focusing instead on understanding the structure, age, contents, and environmental context of the site.

By the 1970s, when the first relatively modern archaeological work was conducted at SBA-73, the site had been heavily modified by industrial development and other ground-disturbing activities. These activities caused considerable damage to many site areas, but subsurface testing showed that large parts of the site remained intact and highly significant. The 1979 UCSB study was dedicated to defining the boundaries, significance, and age of the site relative to a proposed housing development. In the southern site area, five units, an auger hole, and a backhoe trench were excavated, while six units and two backhoe trenches were excavated in the northern area (Kornfeld et al. 1980). In 1981, UCSB archaeologists excavated seven test pits near the northern margin of SBA-73, work prompted by construction of an ARCO pipeline (Moore et al. 1982). In 1987, UCSB archaeologists excavated 60 shovel test pits (STPs) and three 1.0 x .5 m test units along the western site margin trying to better define the site boundaries relative to a proposed hotel development. This work confirmed the presence of low-density shell midden deposits across a relatively broad area, but some of these materials were later found to be redeposited, probably during demolition of oil facilities built in the 1930s as part of the Ellwood Oil

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Figure 1: Location of Tecolote Canyon and the Santa Barbara Channel area.

Field (Erlandson et al. 2005). In 1988, archaeologists from UCSB and WESTEC dug 11 1 x 1 m test units in northern SBA-73N (Erlandson and Cooley 1988), followed in 1989 by ERCE archaeologists who excavated 48 units along the western margins of the site, mostly in the northern and central areas. During this work, several cultural features were identified, including a rock cairn burial feature at SBA-73N that required the modification of development plans in the area. Finally, in the 1990s, archaeologists from Hutash Consultants and the University of Oregon conducted limited excavations and extensive construction monitoring along the western margins of SBA-73N (Figure 3). This work documented and salvaged numerous cultural features, including several large burned rock concentrations that probably represented hearths, rock ovens, and other cooking facilities. The context and implications of these features are the primary topic of this paper.

SITE STRUCTURE, STRATIGRAPHY AND CHRONOLOGY

Rogers (1929) published a relatively detailed account of the general organization of SBA-73, estimating the size of the site at over 210 m north-south and about 90 m east-west. He thought this entire area was a single village occupied by the Canaliño, but divided the site into northern and southern sections, with a northern residential area confined largely to a slightly elevated knoll about 90 m long and 45 m wide. Just south of the knoll, he found two cemeteries, one of which had been excavated previously—probably by Bowers and Putnam. Rogers found few artifacts with the burials, but King's (1980) analysis of these suggested that the two cemeteries probably were used between A.D. 300 and 900. No ^{14}C dates are available for materials from these cemeteries, but two dates of about A.D. 800 for nearby midden deposits are consistent with King's chronology (Table 1). South of the cemeteries Rogers (1929:197-198) found a cleared elliptical area roughly 45 m long and 15 m wide, surrounded by piled stones, with a compacted surface he believed was once a dance floor. Just south of the dance floor, he identified the ruins of a temescal near the creek and still further south lay some of the densest concentrations of domestic debris Rogers found at SBA-73. Eight calibrated ^{14}C dates from these residential deposits suggest that the southern site area was occupied between about A.D. 450 and 1550, with most dates falling after about A.D. 1000.

None of the features from SBA-73 were directly dated because bioturbation heavily affected their contents, dispersing organic materials that may once have been associated with them and mixing in

Table 1: Radiocarbon Dates from CA-SBA-73 (from Erlandson et al. 2005). Notes: dates were calibrated with Calib 4.3 (Stuiver and Reimer 1993) with a ÄR of 225 ± 35 years. $^{13}C/^{12}C$ ratios were determined by the ^{14}C labs or 430 years was added.

Site Area	Lab #	Dated Material	Provenience	Uncorrected 14C Date	Adjusted 13C/12C Age	Calendar Age Range (cal B.P., 1)
SBA-73N	Beta-196354	Venus clam	Unit 11: 80-100 cm	1420 ± 40	1840 ± 40	1240 (1180) 1130
	Beta-196898	Venus clam	Unit 11: 20-40 cm	1470 ±70	1890 ± 70	1290 (1240) 1160
	Beta-8938	Marine shell	N200/E365: 40-50 cm	2090 ± 70	2520 ± 70	1990 (1900) 1820
SBA-73S	Beta-196355	*Mytilus* bead	Unit 60: 60-80 cm	670 ± 40	1020 ± 40	480 (450) 410
	Beta-140984	*Olivella* bead	N20/E330: 60-70 cm	820 ± 40	1260 ± 40	650 (620) 550
	Beta-19723	Turban shell	Test Unit 2: 0-20 cm	1000 ± 60	1430 ± 60	820 (730) 670
	Beta-144256	Littleneck clam	Trench 98-25: 65 cm	1080 ± 60	1500 ± 70	910 (820) 730
	Beta-196356	Venus clam	Unit 60: 60-80 cm	1120 ± 40	1540 ± 40	920 (890) 800
	Beta-8939	Marine shell	N20/E330: 110-120	1210 ± 70	1640 ± 70	1040 (950) 900
	Beta-19724	Abalone shell	Test Unit 2: 20-40 cm	1320 ± 60	1750 ± 60	1160 (1060) 980
	Beta-144255	Venus clam	Trench 98-25: 40 cm	1610 ± 100	2040±100	1480 (1340) 1270

Figure 2: Map of UCSB, WESTEC, and Hutash excavations at SBA-73 and SBA-1674 (at lower left). At SBA-73N, the high sensitivity area was located east of the dirt road running north-south. Our intensive study of the "medium" sensitivity area at SBA-73N (see Figure 3) was just west of this road and north of road running from east to west.

unrelated midden materials from the surrounding soil matrix. Given the chronology for SBA-73, it seems likely that all the features date to the late Holocene, probably between about A.D. 500 and 1500. Because most features were found adjacent to residential deposits at SBA-73N, many may be related to the earlier site occupation, but dense midden deposits associated with the later occupations of SBA-73S are located just to the south. Because the features were found at variable depths within the A-horizon (see below), it is possible that they are associated with occupations from both site areas.

DESCRIPTION OF CULTURAL FEATURES

Fourteen features were identified during controlled grading along the western margin of SBA-73N (Table 2). These features varied considerably in size and contents, but nearly all were marked by discrete clusters or concentrations of cobbles, many of which were burned or shattered. In most cases, depth below the original ground surface could not be accurately estimated because of previous historical disturbance in the vicinity. Features 98-1 and 98-2, both found near the contact between the A and B soil horizons, were identified only after most overlying soil had been removed by grading. Subsequently, we altered our methods to strip the A-horizon soil from the side in 10-15 cm wide swaths. This enhanced the identification and preservation of cultural features, as concentrations of rock could be identified as their edges were exposed, followed by more careful hand excavation of the rest of the feature. Once a feature was identified we generally attempted to define its horizontal and vertical limits, internal structure and contents, and stratigraphic position. Some features were not completely exposed, however, and their original size and structure could not be completely

evaluated. Several smaller and more diffuse clusters of artifacts were also observed during grading. These may have been the remnants of dispersed cultural features, but they were difficult to differentiate from the background noise of scattered artifacts, burned rock, and midden debris distributed throughout the area.

As noted earlier, the 14 features lacked clearly associated concentrations of organic materials (charcoal, wood ash, shell, animal bone, etc.). This was due primarily to heavy mixing of the site soils by gophers, which disperses and homogenizes smaller site constituents while larger (>6-8 cm wide) stones and other objects migrate downward (Johnson 1989). At least four of the rock features were found at the base of the A-horizon, where they appear to have been transported downward to the contact with the dense, clay-rich B-horizon by animal burrowing (see Erlandson and Rockwell 1987). The other ten features appeared to be embedded wholly within the A-horizon—at least 20-25 cm below the ground surface—at varying distances from the A/B contact. Several of the features retained a discrete and tightly clustered structure; others were more dispersed and may have been mixed with isolated rocks or materials from nearby features.

The largest and most clearly defined features (98-8 and 98-10) were the remnants of what appear to be rock ovens or roasting pits. Both were found at the base of the A-horizon, with multiple layers of burned and cracked cobbles, and were over 1 m in diameter (see Figure 4). These are probably the remnants of earth pit ovens used to bake or roast plant or animal foods. Three and possibly four of the features (98-1, 6, 11, 14), tentatively classified as hearths, are generally smaller clusters of burned rock or other small stone concentrations. Some of the features appear to contain stones splashed with asphaltum and may be associated with asphaltum processing or application. One cluster of ground stone artifacts (98-5) contained several fragments of what appeared to be a single broken sandstone bowl, with a pestle fragment lying nearby. The bowl fragments in this ground stone feature were so tightly clustered that they may have been intentionally buried on the site periphery.

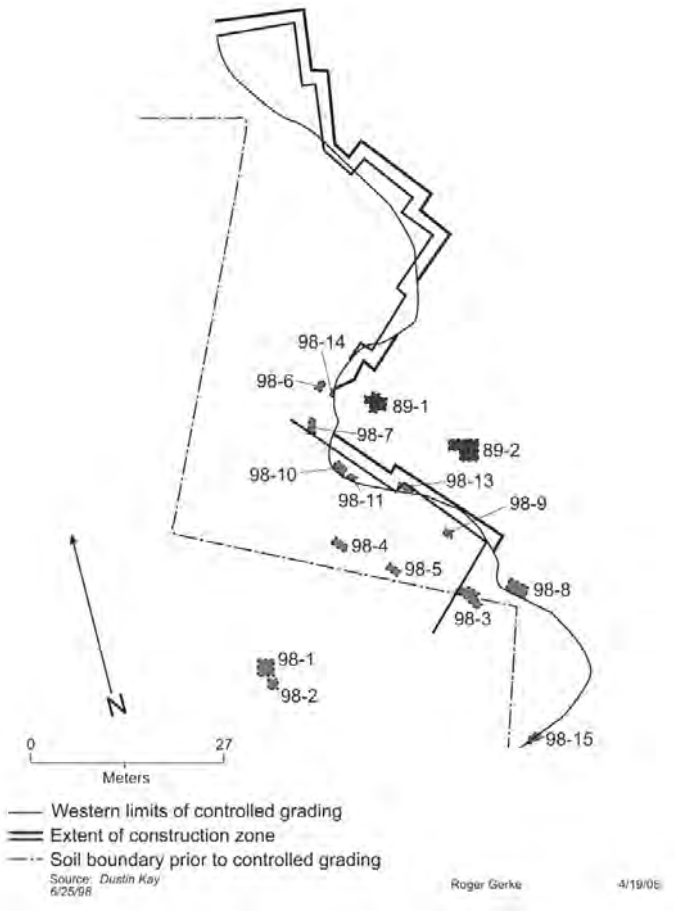
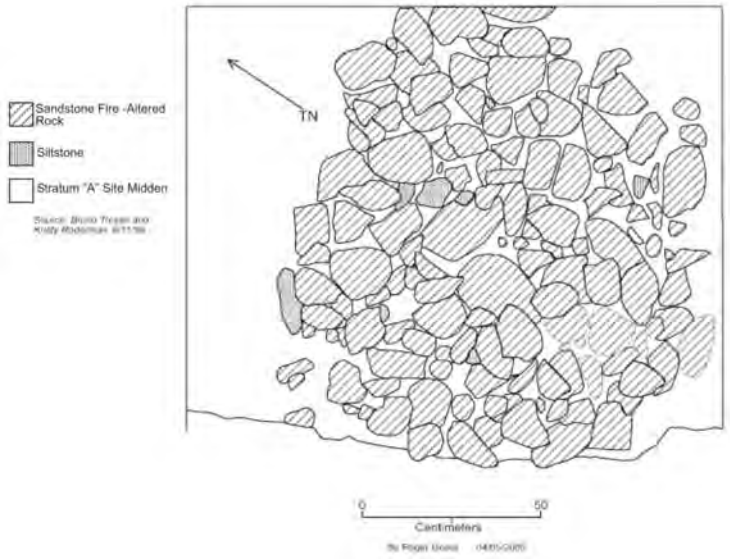


Figure 3: Location of features discovered during data recovery operations at SBA-73N.

Figure 4: Feature 98-10 at SBA-73N, a probable rock oven or roasting pit (drafted by Roger Gerke).



The other features generally consist of more amorphous clusters of burned and broken rock, some of them containing artifacts that might be functionally associated. The function of these poorly defined features is not well understood, and some may include materials from two or more features that overlap with one another.

CONCLUSIONS

Our monitoring work at SBA-73 was a crucial and highly sensitive component of the data recovery and site protection efforts for the Tecolote Canyon Archaeological Project. The work also provided valuable information on the distribution and nature of cultural features in Chumash village sites, showing that a supposedly peripheral or marginal area was the scene of considerable cultural activity. In our monitoring of grading at SBA-73, we also learned a number of lessons that may help archaeologists working elsewhere in California. One of these was that scheduling the

controlled grading at SBA-73N well in advance of the start of construction helped relieve some of the pressure during our archaeological salvage operations. Another was that grading archaeological soils from the side (in 10-15 cm thick slices) was a much more effective means of identifying and documenting cultural features than grading downward from the surface in broad swaths. This "side-grading" technique allowed us to identify features before they were heavily impacted by the bulldozer and allowed a more careful exposure and documentation. When a feature was found, we were usually able to redirect grading efforts to another area, minimizing the amount of down time for heavy equipment.

While most of the features we found were documented and removed, the increasing density and significance of features as we approached the central portions of the village site ultimately led us to call a halt to grading and request that construction plans be redesigned to preserve the remaining features. This decision, supported by both archaeologists and Native Americans on the project, nearly got the archaeological team fired. We were willing to lay our jobs on the line for the principles of cultural preservation, however, and were vindicated when the property owner himself ordered his architects and engineers to implement a costly redesign effort. What preserved our jobs that day, however, was not the power of cultural resource law or agency oversight. It was the strength of our relationships with the Native American community and their gratitude that we were unwilling to participate in the destruction of highly significant archaeological and cultural features.

Perhaps the most important lesson we learned at SBA-73 was that decisions about the levels of significance assigned to archaeological resources must be carefully considered and based on substantial evidence. At Tecolote, such decisions were generally made with limited information on the nature and density of surface and subsurface archaeological materials. Enshrined in the planning process of government agencies, those decisions had long-lasting and far-reaching effects. At SBA-73 and other sites in Tecolote Canyon, low-density deposits classified as "low sensitivity" often contained highly significant features, from hearths and rock ovens to isolated burial features and one entire cemetery. More extensive testing in advance of construction might have altered the archaeological sensitivity of low-density areas, reduced the stress of archaeological and Native American personnel during construction, and ultimately saved the developers considerable expense.

Finally, our work on the Tecolote Canyon Archaeological Project demonstrated some of the limitations of archaeological practice in cultural resources management contexts. We are often asked to draw finite boundaries around (or within) archaeological sites, boundaries that are used by architects, engineers, and agency personnel to guide development decisions. However, in site areas where a creek bank, a sea cliff, or some other natural feature does not sharply define the distribution of archaeological materials, such boundaries are often relatively arbitrary. At Tecolote, careful monitoring demonstrated what we all should know: in the past, human use of the landscape rarely conformed to such arbitrary boundaries.

Acknowledgments

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Table 2: Summary Descriptions of Rock Features Identified during Monitoring at CA-SBA-73. Notes: associated materials do not include flake tools, debitage, shells, or animal bones, which were found throughout the area. In many cases, feature size and numbers of rocks and other constituents are minimum values, based on partial exposure or recovery.

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