

## DIRT ROADS, ANCIENT LANDSCAPES, AND EARLY SITES

JOAN E. BRANDOFF-KERR  
LOS PADRES NATIONAL FOREST (RETIRED)

DAN REEVES  
ROCK ART DOCUMENTATION GROUP, SANTA BARBARA, CALIFORNIA

*Early populations in the Santa Barbara region are conventionally thought to have been confined to the coastal zone. However, the rare discovery of a buried site dating to the mid-Holocene found in the mountainous interior two years ago challenges that perception. Further evidence of other early sites and ancient landscapes is now being revealed in the vicinity of the mid-Holocene site in the surface of an unimproved dirt road. Both of these sites exhibit marine shellfish remains, thus strong coastal connections, indicating that Early period settlement systems included landscapes of the interior. Just as importantly, these sites indicate how ancient landscapes are exposed and where we should look for evidence of early sites.*

Located on the inland side of the Santa Ynez Mountain range, which provides the mountainous backdrop to the Santa Barbara coastal plain, are two Early period sites in the vicinity of the ethnohistoric village of Najalayegua (CA-SBA-1309) (Figure 1). Both sites, (SBA-3950 and 0507-54-703, trinomial number pending) along with Najalayegua, exhibit marine shellfish remains. Preliminary findings from limited excavations at Najalayegua in 2008 and 2009 indicate a heavy reliance on coastal resources (Brandoff-Kerr 2009). The village provided the earliest converts from the interior to the Santa Barbara Mission in 1796, and one of the last converts in 1822 (Johnson 1984).

SBA-3950, known as the Shell Lens, was discovered in 2008 as a buried deposit of marine shell approximately 2.5 m below the ground surface. It has an absolute date of 6500 B.P., by conventional and Accelerated Mass Spectrometer radiocarbon dating on two separate shell samples. 0507-54-703 is a hearth feature, known as the Agua Caliente Hearth, being exposed on the surface of an unimproved dirt road nearby. Between the Hearth and the Shell Lens, in the road bed and west of the road is a site characterized by very fragmented marine shell and occasional chipped stone (0507-54-465, Agua Caliente Road site). The exposure of the Hearth and the Shell Lens demonstrates the processes that expose ancient landscapes.

Pleistocene terraces are down-cut by the Santa Ynez River. Overlying the Pleistocene terraces adjacent to the river are Holocene terraces. Changes in the water flows in the creeks that are tributary to the river and the river itself appear to have exposed portions of the Holocene terraces that contain archaeological deposits.

Environmental information makes it clear that changes in the landscape in the upper watershed of the river and the entire mountainous interior were rapid and more extreme than on the coast (West et al. 2007). As a consequence, early archaeological sites in the interior are more likely than sites on the coast to be covered by soil movement subsequent to the site's deposition. The presence of sites predating the Middle period and a time of relative landscape stability is rarely detected in the interior unless an agent of change, such as water flows, exposes them.

The lack of archaeological deposits with early dates from the interior has most often been attributed to the theory that early land use was directed by resource needs of an expanding population. Expansion of peoples from the rich coastal zone into the mountains came as the resources needs increased and changing technology provided the means to exploit and store more varied plant and animal resources. Concurrent with the expansion in technology of prehistoric peoples was the growing diversification of the local flora as the climate changed to a regime of wet winters/dry summers. The conifer forests of the



Figure 1. Vicinity map.

cooler, wetter climate gave way to the drier Madro-Tertiary flora eventually characterized by chaparral species. Fire response plant species developed along with landscape-changing wildfires that came in cyclical events (Mensing 1999). Conventional archaeological thought has been limited by little research and analysis focused on interior sites. In addition, landscape changes, over time, created significantly different conditions for archaeological discoveries than those of the coastal plain and Channel Islands.

The Shell Lens was exposed by heavy water flows that cut back the walls of an ephemeral drainage exposing a 0.5-m-thick layer of marine shell deposit. Figure 2 shows the deposit as seen from road. The deposit (shellfish species including clam, scallop, and mussel) is overlain by about 2.5 m of overburden. Figure 3 is a closer view of the deposit showing marine shell in an isolated level that also exhibits moss or mold in this springtime photograph. A significant amount of water moving through a water channel is an agent for exposure of earlier landscapes.

The area, as seen from above in Figure 4, shows that both sites occupy the toe of the first terrace adjacent to Agua Caliente Creek, tributary to the Santa Ynez River. Note the wide channel of the creek and the unimproved dirt road that follows the lower terrace.

An archaeological survey was conducted in Agua Caliente Canyon in 1974. Many sites were found, but not in this area. A post-wildfire survey conducted in 1993 identified cultural materials in the roadway (54-465), including fragmented shell and occasional flakes, where no materials had been





*Figure 2. Shell Lens aspect as seen from the road.*

observed almost 20 years earlier. The apparent sudden appearance of an archaeological deposit in the roadway was puzzling. (The Shell Lens was unknown until 2008.) The mystery was solved when we observed the road marker, seen in Figure 5. The cement bowl holding the road marking rod is clearly evident hanging on the side of the road cut. The position of the marker represents nearly 1 m of soil loss and vertical drop in the road surface since 1974, and mostly by 1993.

When the Shell Lens was located in 2008, closer monitoring was begun on and around the Road site. A couple of rocks protruding through the road surface nearby in 2008 manifested an apparent rock feature of several stones in 2010. In June 2010 the rocks are vaguely recognizable as a circular feature, as seen in Figure 6. Stains of red and black are barely visible. Two months later, in August 2010, there was an appreciable change in rock exposure as seen in Figure 7. To what is the rapid change in visibility and exposure attributed? The soft, erodible soils of the road bed and seasonally heavy traffic loads in summer certainly contributed to the change in two months that is seen in these photographs. However, water traveling down the road surface, encountering the hardened surface of the feature, channeled around it, contributing to exposure and soil loss on the rest of the site.

In August 2010, we exposed the rock configuration to determine if it was a cultural feature. After initial brushing of the surface, fire reddening and blackening at the feature locus was apparent (see Figure 8). Though very fragmented shell appears moderately across the road surface, reddening and blackening appear only at the rock feature.





*Figure 3. Closer aspect of the Shell Lens, with the face of the deposit visible as a green layer.*

We removed 2 to 5 cm of soil. Within this matrix we found more fragmented shell, chipped stone fragments and very small fragments of charcoal. The feature measures approximately 160 cm in diameter, as marked by the crossed tape measures in Figure 9. The prominent berm adjacent to the road bed, also visible in the figure, speaks to another agent of exposure: road maintenance with heavy equipment.

Flecks of charcoal and fire-reddened sandstone were found throughout the Hearth. Fire-hardened soil occurs in the center of the feature, as seen in Figure 10. Fiber cloth and shale have been placed over the Hearth as protection from further degradation, from contemporary use or natural forces.

### **CONCLUSIONS**

The absolute dating of the Shell Lens at 6500 B.P. and the apparent early age of the Hearth and Road sites indicates use of interior landscapes well before the Mid-Late transition, and land use was part of the settlement system of the populations residing on the coast. Fewer early sites are found in the interior, where the landscape experienced more rapid and extreme changes than landscapes at the coast. That doesn't mean that early sites don't exist in the interior, or that they won't come to light again. Unimproved dirt roads in the backcountry often follow terraces adjacent to rivers and creeks where Pleistocene and Holocene surfaces are, or can be, easily exposed by agents of change. In this case, water, vehicle traffic, and heavy equipment contributed to exposure of two early sites in the Santa Barbara backcountry. Finally, early populations on the coast apparently did not find a mountain range of more than 600 to 1200 m much of a barrier to access and use of the interior valleys.



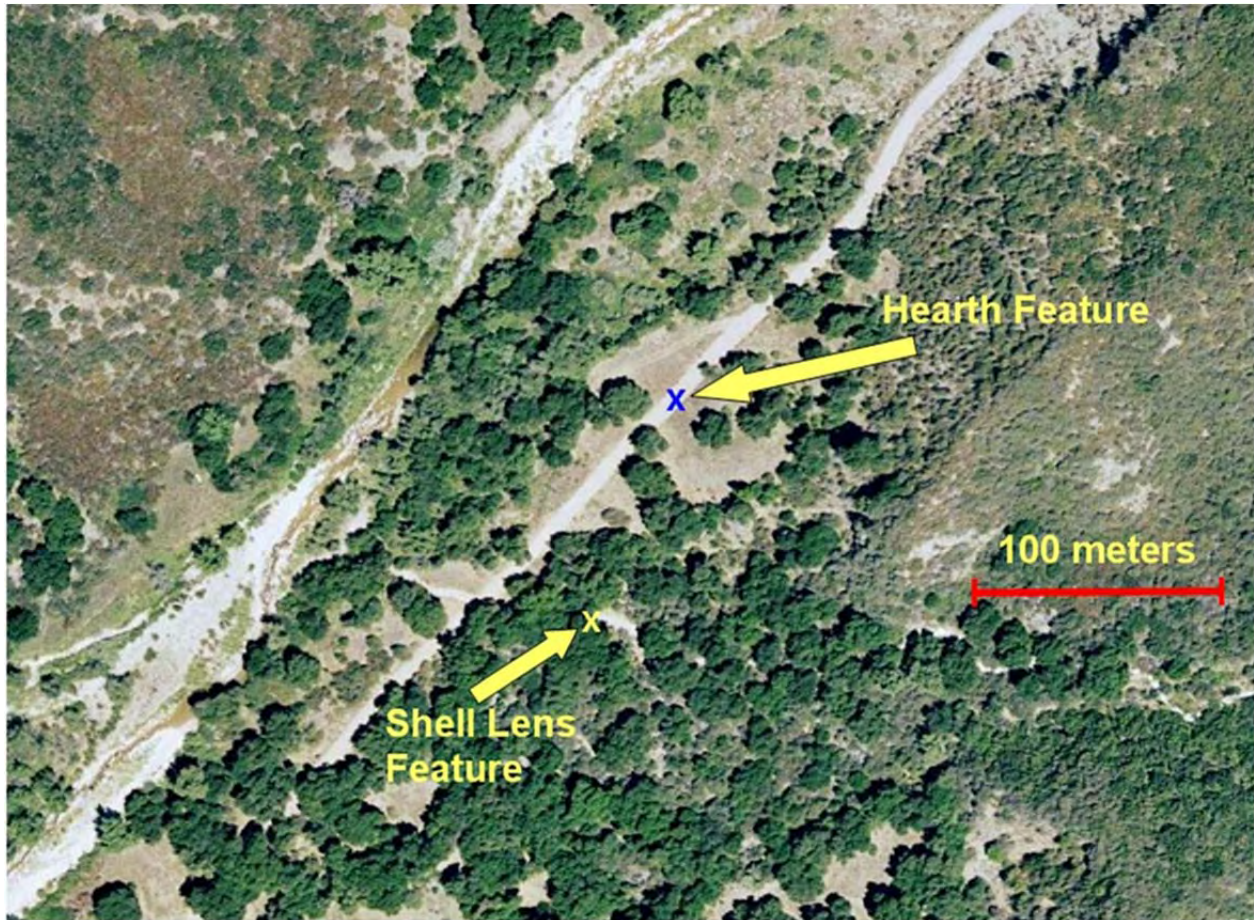


Figure 4. Shell Lens and Hearth locations on lower terrace adjacent to Agua Caliente Creek.

#### ACKNOWLEDGMENTS

The authors wish to acknowledge the continued contributions of Jon Piccioulo in the field, in preparation of graphics, and general support.

#### REFERENCES CITED

- Brandoff-Kerr, Joan E.  
2009 Preliminary Excavations at Najalayegua, SBA-1309. Manuscript on file at Los Padres National Forest, Heritage Center, Santa Barbara, California.  
2010 Archaeological Investigations in the Santa Barbara Backcountry. Paper presented at the 75th annual meetings of the Society for American Archaeology, St. Louis, Missouri.
- Johnson, John R.  
1984 *Indian History in the Santa Barbara Back Country*. Los Padres Notes No. 3 (Spring). Los Padres Interpretive Association, Santa Barbara, California.
- Mensing, Scott A., Joel Michaelson, and Roger Byrne  
1999 A 560-Year Record of Santa Ana Fires Reconstructed from Charcoal Deposited in the Santa Barbara Basin, California. *Quaternary Research* 51:295-305.

West, G. James, Wallace Woolfenden, James A. Wanket, and R. Scott Anderson  
2007 Late Pleistocene and Holocene Environments. In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 11-34, AltaMira Press, Lanham, Maryland.



*Figure 5. Road Marker on road cut face indicating road level in 1974.*





*Figure 6. Hearth feature in road bed as seen in June 2010 with some red and black staining.*



*Figure 7. Hearth feature in August 2010 with noticeably more rock exposed.*





*Figure 8. Hearth feature, August 2010, after initial brushing. Significantly more fire reddening and blackening is visible.*



*Figure 9. Hearth feature on road bed marked with crossed tape measures. Note the adjacent road berm resulting from road maintenance.*





Figure 10. Fire-hardened soil at the center of the Hearth feature.