Open sites in the Great Basin have rarely been excavated during the past several decades. Investigation of dry caves, with their great range of preservation and false promise of well stratified deposits, has given way to large-scale regional surveys. In summarizing the results of excavations in three sites from the floor of Surprise Valley on the northwestern periphery of the Great Basin, O'Connell makes available information and ideas which both complement and challenge the trends of Great Basin research.

O'Connell proposes a cultural historical sequence of five phases spanning the past 6500 years, based on stratification of materials and regional projectile point chronology, calibrated by a small but consistent series of radiocarbon dates. Despite his stated interests in man-land relationships, it is clear that a concern for establishing chronology or sequence guided the excavations. At two of the sites, small trenches through the deepest part of the midden comprised the bulk of the excavation. At the third site, King's Dog, expanded exposures were made to uncover the floor plans of structures encountered in trenching.

The most intriguing find was the discovery at King's Dog, in strata dated 6000-5000 B.P., of a series of superimposed floors in a bowl-shaped depression more than 20 feet in diameter. The pattern of postmolds, hearth, and ramp, as well as the size and shape of the depression which was revealed, leads O'Connell to interpret the structures as substantial semi-subterranean earth lodges. Noting their contrast with forms of domestic structures reported for the Great Basin, O'Connell sees resemblances to lodges used historically in the Columbia Plateau, and offers a reconstruction based on Spier's Klamath example. In subsequent phases, earth lodges are replaced by two forms of domestic structure typical in the Great Basin: wickiups, dome or cone-shaped superstructures of light poles covered with brush, grass, or mats; and unroofed brush windscreens.

A marked change in structures such as this is a temptation for both the cultural historian and those interested in processes of socio-economic change. In the faunal samples from his sites, there is a shift from ungulates as the dominant component in the earliest phase to a more diversified fauna where rabbits and waterfowl prevail. Based on the apparent correlation of change in architecture and subsistence, O'Connell postulates a change in the settlement-subsistence for the area about 4500 B.P. Prior to that date he suggests a more stable settlement-subsistence network resembling that of the ethnographic peoples of the Klamath and southern Columbia Plateau. It was replaced by a system in which upland or dry land plant communities contributed a greater portion of vegetal foods, and in which the population was more dispersed with less stable group composition.

O'Connell's approach, which sees "human behavior... as an adaptive response to opportunities and constraints posed by the natural environment" (p. 14), leads him to look to the climatic sequence for potential explanation of the change in subsistence and settlement. Since he suggests larger, more stable communities during the Altithermal, he is led to wonder if the Altithermal might have been wetter than the Medithermal in this area of the Great Basin, and finds some support in regional climatic sequences.

O'Connell discerned no significant change in the settlement-subsistence system for the final 4500 years of the prehistoric period. He
notes that his final phase, Bidwell, which should occupy the final 400-600 years of the prehistoric period, was not found on the sites he excavated but was evident elsewhere in the valley. He attributes this to the small sample of sites excavated. However, a similar situation prevailed in the Warner Valley, which adjoins Surprise Valley to the north. Here, too, Desert Side-notched points are not found on sites with deep deposits. Rather, they occur in other locations in association with rock architecture. I believe that O'Connell has overlooked another set of changes in settlement pattern, one that is at least as suggestive, if not as well documented, as the earlier one which draws his attention, and one that is crucial to understanding the relevance of models derived from ethnography for the study of adaptive processes in the Great Basin.

As is often the case when field investigation is limited and not explicitly designed to yield the data critical to the questions the investigator wants to explore, O'Connell's discussion and conclusions are speculative and suggestive, but not strongly substantiated. He suggests tests for the climatic explanation of change, but does not offer testable alternative explanations.

O'Connell proposes a synthesis that recognizes three regional settlement-subsistence systems within the Great Basin, but it seems unlikely that this typology will prove useful. Surely dependence on pine nuts in areas of the Great Basin where they occur in quantity resulted in a distinct settlement-subsistence system. However, Madsen and Berry (1975) have challenged the assertion that pine nuts could have been important prior to 3000 B.P., so there is a question as to the time depth of the Reese River strategy. He differentiates the Lower Humboldt and Surprise Valley types by the greater use of fish and marsh resources and larger, more stable settlements in the former. However, the Surprise Valley and Lower Humboldt Valley are perhaps better understood as two examples, chosen somewhat arbitrarily, from a range of variation which changed both spatially and temporally in the better watered valleys of the Great Basin.

REFERENCES

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Background to Prehistory of the Yuha Desert Region. Philip J. Wilke, ed. Ramona, California: Ballena Press Anthropological Papers No. 5. 1976. 109 pp. $4.95 (paper).

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Originally prepared as a background study for the Bureau of Land Management, the six papers making up this publication survey the geology, ethnography, ethnohistory, and archaeology of the Yuha Desert, a sandy, inhospitable tract occupying the southwestern portion of the arid Salton Sea Basin of California.

In the first paper, David L. Weide sketches the region's surface geology. Of special interest is the history of Lake Cahuilla which at times inundated the land. During the lake's stands the Yuha Desert offered much more favorable circumstances for human exploitation and settlement than it does today.

A summary of ethnographic material, prepared by James P. Barker, follows. In historic times the Yuha Desert lay between