Archaeological Correlates and Evolution of Geophyte Procurement in the Northwestern Great Basin

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INTRODUCTION

The economic importance of geophytes north of the Humboldt River and along the northwestern rim of the Great Basin is such that this entire region has been broadly categorized as the “root complex” with respect to Great Basin ethnographic richness (Paxson). For such an important food staple, however, the archaeological manifestations of geophyte gathering, processing, storing, and consuming are not well understood.

The Ruby project corridor provides a unique opportunity to address the archaeology of geophyte use. How do specific tool types, assemblages, and even settlement patterns shift along this transect in response to an increasing subsistence focus on geophytes? Can we identify a toolkit and technology associated with geophyte procurement, and with the added dimension of time, can we chart the prehistoric evolution of geophyte use (O’Connell et al., 2008; Trammell et al., 2008)? The adjacent Long Valley is also been confirmed by recent scientific study (O’Connell and Bird, 2005; Bird et al., 2008; McComb and Bird, 2009).

Biological productivity of geophytes at Barrel Springs, particularly ephedra, has been broadly categorized as the “root complex” with respect to Great Basin Paleoindian subsistence focus on geophytes? Can we identify a toolkit and technology associated with geophyte procurement, and with the added dimension of time, can we chart the prehistoric evolution of geophyte use (O’Connell et al., 2008; Trammell et al., 2008)?

THE STUDY TRANSECT: BARREL SPRINGS AND LONG VALLEY

The Barrel (spring) uplands (5500–6500 feet in elevation) are part of a prominent volcanic plateau that rises above surrounding valleys and alluvial basins. The area is specifically identified as an important geophyte collection area by baited Kelly (1932) in her work with the Surprise Valley Paiute, as well as by members of the contemporary Fort Bidwell Paiute (Deuer, 2010). The adjacent Long Valley is situated at lower elevations and is not prime ephedra habitat. Settlement and assemblage structure in Long Valley provides a comparative base from which to view settlement and assemblage structure in Barrel Springs (IREM Project, 2002). A high percentage of formed flake tools found along the project corridor probably functioned as scrapers for working wood.

THE EVOLUTION OF A GEOPHYTE-BASED SETTLEMENT-SUBSISTENCE SYSTEM AT BARREL SPRINGS

• PRE 5,700 CAL B.P. With respect to diet breadth and the evolution of foraging systems that incorporated ephedra, we would expect that this resource was target ed by the earliest inhabitants of Barrel Springs. Without the benefit of long term storage or a stable residential pattern, these early inhabitants were probably relegated to a pattern of harvest and immediate consumption confined to a short time in May and June when ephedra was readily available.

• 5,700 to 1,000 CAL B.P. Starting around 5,700 years ago, perhaps reaching its highest levels during the Middle Archaic, commenced a transition to an energy-maximizing strategy that included storage. This would have substantially increased ephedra procurement, allowing surpluses to be banked for critical winter consumption. This时节ized winter base camps to stored resources, thereby in creasing overall sedentism, thus dramatically transforming subsistence settlement systems in this region of the Great Basin.

• POST 1,000 CAL B.P. Given the stability of the late Holocene geophyte procurement system described above (measured in millennia), it is surprising that the process of land-use intensity at Barrel Springs drop off near the Late Archaic Terminal Prehistoric transition. Two potentially related explanations come to mind, one being several climatic conditions, perhaps associated with the MCA, and the other being the arrival of Numic-speaking populations with new systems of land use.

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A FUNCTIONAL ANALYSIS OF FORMED FLAKE TOOLS

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Formed Flake Tools from Barrel Springs.