

*Future Considerations for Archaeology at Altitude*

**KEYWORDS:** Wind River Range, high altitude village, *Pinus albicaulis*, Climate Change

**ABSTRACT**

The Wind River Range spanning 100 miles of northwestern Wyoming has emerged as a current hot spot for high altitude and Late Prehistoric/Protohistoric archaeology in the past several years. Of great interest are ten villages at the alpine/sub-alpine ecotone found in the Wind River Range. Chronologically 6000 years of prehistory is represented at or around these village sites. The climax species at this ecotone is whitebark pine (*Pinus albicaulis*) which is being threatened throughout its range in western North America by pine bark beetles and blister rust. The result of the whitebark pine die-off is that treeline is lowering and the context for interpreting the alpine villages is disappearing. Alpine archaeology is an emerging niche in a long established field. A field that is danger of disappearing as the whitebark pine forests disappear.

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The Wind River Range spanning 100 miles of northwestern Wyoming has emerged as a current hot spot for high altitude and Late Prehistoric/Protohistoric archaeology in the past several years (Adams 2010; Koenig 2010). Because so much of the Wind River Range is a formal wilderness area, the inaccessibility, daunting logistics, and rigorous field conditions left these mountains largely unexplored by archaeologists. Recent work by the Wyoming Office of the State Archaeologist, University of Wyoming, Utah State University, and Davidson College has shown that the alpine zone possesses a rich archaeological record of high altitude subsistence, transitional Protohistoric sites, and direct evidence of climate change affecting subsistence.

During the last dozen field seasons in the Northern Wind River Range, we recorded over 300 prehistoric sites above 10,200 ft ranging from Folsom-aged through the late 19<sup>th</sup> century. Of great interest are ten villages at the alpine/sub-alpine ecotone. These villages are similar to Alta Toquima Village in Nevada and the White Mountain Villages in California (Bettinger 1991). These villages consist of a dozen or more prepared earthen lodge pads that supported cribbed and conical wooden structures or 'wickiups'. In addition to the larger villages, we recorded numerous isolated lodge clusters consisting of 1-5 lodge pads.

The two largest lodge villages thus far are the *High Rise Village* and *Burnt Wickiup* sites. Over sixty lodges have been recorded at the *High Rise Village*, and over thirty at the *Burnt Wickiup* site. These appear to be the largest alpine villages in North America. Preliminary radiocarbon dates suggest that Wyoming's lodge

villages are as old, or older than those in the Great Basin mountains, suggesting that intense use of the alpine zone is not a recent phenomenon. Carbon-14 dates from lodges at *High Rise* range from 4000 to 480 YBP. (Adams 2010). At the *Burnt Wickiup Site* two C14 dates put lodge occupations at the Late Archaic/ Late Prehistoric transition. Chronologically diagnostic artifacts found at the villages span the past 6000 years, but most of the projectile points can be linked to known Numic-speaking Indians.

By using metal detectors, we have identified wooden lodge structures that contain 19<sup>th</sup> century metal trade items. Unlike the older villages occupied by pedestrian hunter-gatherers, the newer villages appear to have been occupied by equestrian Indians. Among these villages is great potential for examining the change in material culture and subsistence from the 18<sup>th</sup> to the 19<sup>th</sup> centuries.

The alpine/sub-alpine ecotone that occurs between (3109 to 3292 m) in the Wind River Range is in danger. As a result of climate change. The climax species at this ecotone is whitebark pine (*Pinus albicaulis*) which is being threatened throughout its range in western North America by pine bark beetles and blister rust. The result of the whitebark pine die-off is that treeline is lowering and the context for interpreting the alpine villages is disappearing. Standing dead trees are forest fires waiting to happen. When the Wind River Range burns (and it will), the perishable wooden structures will also burn, removing an extraordinary layer of context for interpreting hunter-gatherer archaeology. Though forest fires have aided archaeologists in locating new sites, recent experimental archaeology proves

that they are detrimental to the context of artifacts. It is certain that many valuable Late Prehistoric sites in the Wind River Range will be permanently altered by forest fire in upcoming years. It is crucial that many of these sites be recorded before this happens.

Public involvement in Wind River archaeology is enthusiastic and productive. The town of Dubois, Wyoming has committed to being the home of high altitude archaeology in the greater Yellowstone ecosystem. Researchers and locals formed a community based archaeology program associated with the Dubois museum. Local volunteers have played a vital role in the discovery of numerous villages, and have led professional archaeologists to extraordinary sites.

Alpine archaeology is an emerging niche in a long established field. There is a tremendous amount of untapped research potential in the mountains of Wyoming that is applicable to hunter-gatherer and alpine adaptation on a global level. Every summer the mountains continue to surprise us with additional discoveries of the unknown and new perspectives on the known. As future research develops and innovative techniques are applied, the archaeology of high-altitudes will be an influential aspect in North American anthropology.

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