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Abstract

Obsidian was a prized tool stone heavily exploited in the Greater Yellowstone Ecosystem throughout the pre-contact period. Fifteen geochemically distinct sources in this area were utilized on a regular basis consistently through time. A large dataset of sourced obsidian artifacts currently exists but has rarely been applied to specific archaeological problems for Yellowstone National Park, Wyoming.

This thesis provides a comprehensive list of obsidian sources important to the archaeology of Yellowstone and analyzes spatial and temporal trends of obsidian source selection. This study examines diagnostic tools produced by people during the Archaic period, focusing on the McKean complex (~5500-3000 BP) and Pelican Lake phase (3000-1600 BP). The potential for a cultural preference for obsidian source selection is discussed by applying landscape theory and ethnographic evidence to the examination of archaeological data.

A pattern of obsidian source exploitation as seen at the Osprey Beach site (representing the Cody Complex) has led to the development of a proposed annual round, typically applied to the entire pre-contact period in the Park. This large annual round, however, is determined to be unlikely and unnecessary by this author. Alternative “local rounds” to this model are proposed and supported by the evidence.

A clear preference for the Obsidian Cliff source (a National Historic Landmark) located in the northern end of the Park is shown in these results. This preference can be interpreted in both economic and cultural terms. Otherwise, no *purely* cultural preference for an obsidian source is supported. The exploitation of certain obsidian sources did not change significantly between the McKean and Pelican Lake cultures. However, a significantly different pattern of exploitation is seen when analyzed by geographical area. The results of this research suggest a more localized pattern of obsidian exploitation than previously thought, impacting interpretations of seasonality and travel routes in the Yellowstone area.

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