

Proposed Title

Paleoethnobotany in Interior Alaska

Abstract

Vegetation and plant resources can impact forager mobility and subsistence strategies. However, misconceptions about the preservation of organics in subarctic archaeological contexts and underestimations of the importance of plant resources to foraging societies limit paleoethnobotanical research in high-latitude environments. This research draws on concepts from optimal foraging and risk mitigation theory to explore research questions relating to site seasonality, plant resource use, land use, and deposition and taphonomy. The model developed in this thesis establishes expectations of seasonal archaeobotanical assemblage characteristics for Late Pleistocene and Holocene sites in interior Alaska. The expectations are considered in light of plant macroremains found in anthropogenic features from Components 1 and 3 (approximately 13,300 and 11,500 cal BP, respectively) at the Upward Sun River site in the Tanana River basin, central Alaska.

Site-specific methods included bulk sampling feature matrix in the field, subsampling in the laboratory, and wet-sieving matrix to collect organic remains for analysis. Measures of density, diversity, and ubiquity tied together the regional model expectations and the results from the Upward Sun River site. The dominance of common bearberry in the Component 1 archaeobotanical assemblage meets the expectations of a late summer or fall occupation in interior Alaska. This suggests that site occupants may have focused on mitigating the risk of starvation in winter months by focusing foraging efforts on seasonally abundant and predictable resources that could be stored for future use. The variability in results from the Component 3 features could indicate longer-term occupations that extended from the summer into early fall, with site occupants opportunistically foraging for locally available resources and targeting predictable plant resources such as low-bush cranberry or blueberry.

This thesis contributes to previous research at the Upward Sun River site and suggests that Late Pleistocene and Early Holocene foragers had a broad diet breadth that included large and small mammals, fish, waterfowl, and plant resources. This research illustrates the long-standing use of culturally and economically important plant resources in interior Alaska and draws attention to aspects of human behavior that are difficult to address with lithic or faunal datasets alone, such as domestic behavior and the gendered division of labor.