



Prehistoric Camp Site Unearthed at Lake Matcharak



Photo by Jillian Ritchie

Archaeologists work on site at Lake Matcharak, excavating, mapping artifacts with a total-station survey tool, and screening dirt.

For nearly 2 weeks in early July, 2014, four NPS archaeologists and two volunteers worked at the archaeological site on the Matcharak Peninsula of Lake Matcharak, located along the upper Noatak River in Gates of the Arctic National Preserve. The goal of the trip was to finish excavations begun there in 2013. The trip marked the fourth visit to the site, where NPS archaeologists have uncovered many thousands of bone and stone tool artifacts that can tell us more about human culture in the Brooks Range. NPS archaeologist Joe Keeney, who is also an anthropology graduate student at the University of Alaska Fairbanks, is analyzing these materials for his master's thesis.

Artifacts discovered point to Northern Archaic Tradition

Radiocarbon dating results demonstrate that people inhabited the peninsula at Lake Matcharak primarily between 4,000 and 6,000 years ago, although pre-historic people also were present there as early as 7,500 years ago

and as recently as 600 years ago. The stone tools found at the site provide clues to the activities that took place there or nearby. Stone points notched on their sides were hafted into projectile or spear tips. Small, elongate stone



blades known as “microblades” would have been inset into a point fashioned from bone, antler, or wood. Razor-sharp stone flakes were used for slicing meat or skin. Preliminary analysis of stone tools and debris suggest that people at Lake Matcharak were manufacturing and repairing tools for hunting and processing animals. The presence of microblade technology and the distinct, side-notched points reflect the Northern Archaic tradition, a cultural manifestation in Alaska and northwest Canada that persisted during the middle of the Holocene epoch (approximately 7,000-3,000 years ago). The advent of Northern Archaic technology is thought to be associated with the environmental changes that occurred during the mid-Holocene.



Photo by Jay Jeppesen

The crew: Volunteer Tim Williams, NPS archaeologists Chris Houlette and Jillian Richie, volunteer Tayesia Nick, and NPS archaeologists Joe Keeney and Adam Freeburg visited the Matcharak Peninsula archaeology site at Lake Matcharak in the summer of 2014. Keeney, who is also a University of Alaska Fairbanks graduate student in anthropology, is analyzing the bone and stone tool artifacts from the Matcharak Peninsula site as part of his master's thesis.

Rarely-preserved organic material reveal diet details and more



Photo by Tayesia Nick

This caribou humerus was one of the many bone fragments recovered at the Matcharak Peninsula site in 2014. Organic materials (e.g. bone and wood) from this time period are rare; however, these artifacts have been exceptionally well-preserved by permafrost, making the site unique for the large amount of identifiable animal remains.

Prior to the discoveries at the Matcharak Peninsula site, organic artifacts dating to the mid-Holocene have been extremely rare and few in number. As a result, little has been known about Northern Archaic subsistence practices beyond what could be gleaned from the stone tools that did not decay over time. This site lies in permafrost, which has preserved organic materials such as bone and wood by keeping them frozen for most or all of the year. Preliminary results from bone artifact data demonstrate that people were eating caribou and Dall's sheep as well as birds such as ducks, grouse, and ptarmigan and fish such as trout, burbot, pike, and whitefish. The many fragmented caribou and sheep bones suggest that people were cracking bones open to extract nutritious and fatty marrow, a delicacy as well as a necessity in the limited landscape

of the Brooks Range. Although no signs of houses have been found so far, the evidence of repeated occupations, game processing, and fire pits or “hearths” point to this site having been used as a campsite.

The time period associated with the bone artifacts make this a very unique and special site for Alaskan prehistory. Such a large number of well-preserved bone artifacts make this the largest known collection of faunal remains from this time period, attributable to their being rapidly covered in dirt and frozen in permafrost. Analysis of these artifacts is shedding more light on the life ways of prehistoric Arctic hunter-gatherers and the land in which they lived.

For more information on the archaeological research at the Matcharak Peninsula site in Gates of the Arctic, please contact archaeologist Joe Keeney at (907) 455-0634, or email him at joseph_keeney@nps.gov.

