

RESEARCH NOTES

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Research Notes is intended to be a useful venue for making colleagues aware of ongoing or recent research and for disseminating brief notes of new ^{14}C dates or other interesting finds, particularly those that may not be otherwise published. We intend to include information on research anywhere in the circumpolar Arctic and sub-Arctic.

NORTHERN ALASKA

EMERGENCY EXCAVATION OF ERODING PRECONTACT HOUSE AT WALAKPA (UALIQPAA)

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A sod house was discovered eroding out of the shoreline at Walakpa (Ualiqpaa). The house was partially exposed

and appeared unstable (Fig. 1). It was located right next to Dennis Stanford's 1968 and 1969 excavations (Stanford 1976). Salvage work was carried out with a combination of UIC Professional Services (UICS and UMIAQ) personnel and community volunteers, with additional funding from the North Slope Borough.

We recovered two of Stanford's three site datums and were able to record locations within his site grid. All artifacts were point provenienced with the transit. Other



Figure 1. Eroding house viewed from the beach.

materials (e.g., bone fragments, chert flakes, woodworking debris, baleen strips) were excavated in small areas with provenience to within 50 cm horizontally and 5 cm vertically. We reached frozen ground near the back wall of the excavation on September 11. Excavation continued until the site froze.

It appears that there were a series of living surfaces at that location. The most recent appears to be the floor of a tent or similar structure (Fig. 2), rather than a winter sod house. There is clear evidence that at least one sod house was located there. There were a series of what appeared to be house floors. These were covered by layers of midden, suggesting that the house was repeatedly abandoned and then rebuilt. The house at one point seems to have had a meat storage pit or cache built in it, which was filled with midden.

The artifacts ranged from modern plastic eyeglass frame fragments in the sod layer to harpoon heads that are stylistically Late Birnirk/Early Thule (Fig. 3). We did not reach sterile, so it is possible that there is Choris material at the bottom.

Funding for radiocarbon dating has been obtained from the National Science Foundation via a RAPID grant and suitable samples have been submitted for radiocarbon dating.

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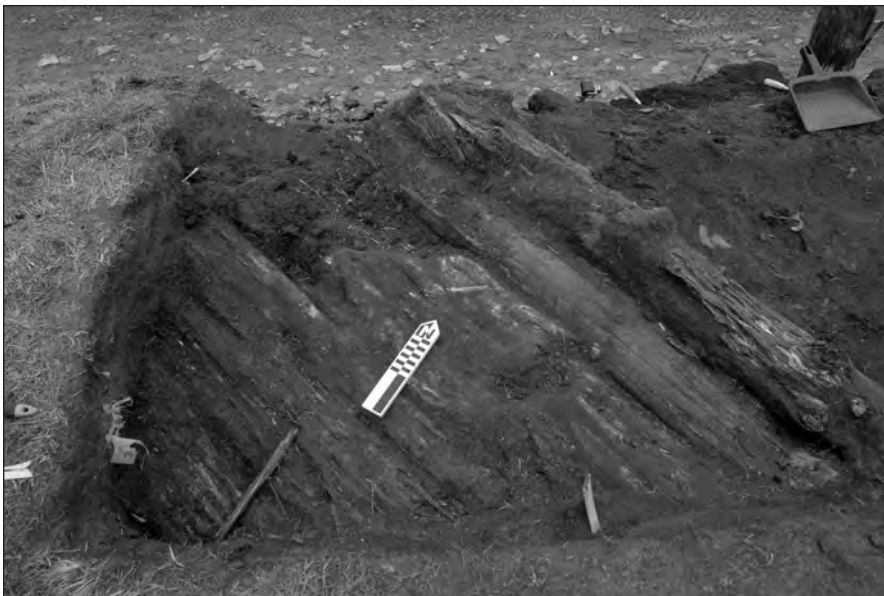


Figure 2. Part of probable tent floor.



Figure 3. Late Birnirk–Early Thule-style harpoon head.

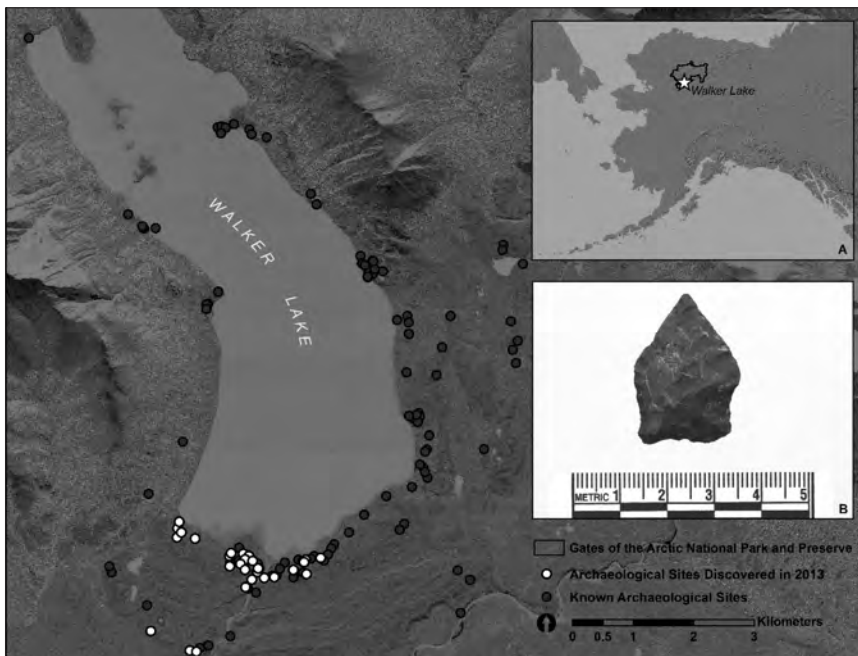
NORTHERN INTERIOR

ARCHAEOLOGICAL SURVEY AT WALKER LAKE IN GATES OF THE ARCTIC NATIONAL PARK AND PRESERVE IN 2013: RESEARCH NOTES

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Located at the headwaters of the Kobuk River in Gates of the Arctic National Park, Walker Lake was the focus for a National Park Service archaeological survey in July 2013. A crew of four archaeologists travelled to the southern shoreline of Walker Lake and evaluated the condition of known prehistoric sites, expanded survey coverage, and identified new archaeological sites. Past surveys in the area (Hall 1974; Kunz 1984; Rasic 2003) documented small lithic scatters indicative of short-term prehistoric hunting locations, and the results of the 2013 NPS survey follow this trend.

Fourteen known archaeological sites were revisited during the 2013 field season, and sixteen new sites were discovered. A typical site contains one or more flake scatters, small in both number of artifacts and extent, and is located within 500 m of the lake on the lake-facing side of one of the many elevated and well-drained landforms in the area (e.g., bedrock knolls, beach ridges, and glacial moraines).



Map of Walker Lake showing archaeological sites. Inset A: Geographic location of Walker Lake in Gates of the Arctic National Park and Preserve, Alaska. Inset B: Side-notched projectile point collected in 2013 from a site near Walker Lake.

Scatters consist primarily of non-diagnostic lithic debitage in a variety of materials, including chert and obsidian. Tools are scarce but present and include unifacial scrapers, expedient flake tools, microblades, biface preforms, and a single side-notched projectile point (figure inset B) relocated from Kunz's 1983 survey (Kunz 1984). The small, chert projectile point was the only temporally diagnostic artifact encountered on this survey, but previous work produced similar side-notched projectile points characteristic of the Northern Archaic tradition. Obsidian is common in assemblages from this area, which is unsurprising given the easy river routes to the Koyukuk River drainage and the major obsidian source area of Batza Tena found there. Geochemical analysis of existing museum collections from multiple sites in the vicinity of Walker Lake shows that Batza Tena (Group B) is the overwhelmingly dominant obsidian type ($n = 301$ specimens), although small amounts of Groups P ($n = 24$), G ($n = 6$), and N ($n = 1$) also occur.

The potential for intact stratified features exists at Walker Lake sites, but deeply buried cultural materials were not encountered in 2013. Of thirty-eight positive shovel test pits, thirty-six contained artifacts between 0–10 cm below surface, two had flakes below 10 cm below surface, and two revealed hearth features. At site XSP-046, AMS dating of charcoal from a hearth feature found

22 cm below surface yielded an age of 3,980 ^{14}C yrs BP (UGAMS-15164). At site XSP-009/XSP-249, the bioapatite fraction of a calcined mammal bone fragment yielded an age of 4,320 ^{14}C yrs BP (UGAMS-15163). Faunal remains were also documented at four other sites in 2013, although the specimens are fragmented and the taxa not readily identifiable. Faunal remains identified during past studies at Walker Lake, however, demonstrate caribou was one prey species targeted by hunters at this location (Kunz 1984).

Information gained during the 2013 field season is preliminary in nature, but when paired with the results of previous work, tentative conclusions can be offered. Given the presence of artifacts with Northern Archaic characteristics in nearby sites and an absence of cultural material representing other traditions (such as

partially coeval Denbigh Flint Complex), the archaeological sites dated in 2013 are most likely associated with the Northern Archaic tradition. Additionally, the ephemeral nature of sites at Walker Lake, along with artifact assemblages that include end scrapers and bone fragments, appears to reflect temporary hunting localities. The vast majority of evaluated sites are stable and in good condition, with only minimal impacts by human or natural disturbances.

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SOCIAL AND ECONOMIC DEVELOPMENT OF THE NETS'AII GWICH'IN OF ARCTIC VILLAGE, ALASKA

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Since 1999 I have been conducting field work among the Nets'aai Gwich'in of Arctic Village, Alaska. My research combines historical, sociological, and community planning methods and theoretical frameworks as a foundation for the evaluation and analysis of this evolving Alaska Native tribe. Additionally, I seek here to include traditional native knowledge which has, for all too long, been ignored in many academic circles. My most recent and significant support for the study (2011–2013) was a grant from the National Geographic Society Waitt Grants Program.

Through an analysis of the role of religious institutions, formal education, and government-provided services

on the one hand, and the ongoing practices of subsistence (hunting, fishing, gathering) in an era of climate change on the other, I have sought to understand how this community is negotiating, adapting, accommodating, and facilitating social and economic development within the global economy.

I am now writing a monograph that is centered largely upon village youth, for their changing interests, values, attitudes, and behaviors clearly signify the emergence of an ever-evolving twenty-first-century Alaska Native. The monograph is tentatively titled *Living on Thin Ice: The Social and Economic Development of the Nets'aai Gwich'in of Arctic Village, Alaska*.

INTERIOR

TOCHAK MCGRATH DISCOVERY: PRECONTACT HUMAN REMAINS IN THE UPPER KUSKOKWIM RIVER REGION OF INTERIOR ALASKA

Robert A. Sattler, Tanana Chiefs Conference; Thomas E. Gillispie, Tanana Chiefs Conference; Vicki Otte, MTNT, Limited; Betty Magnuson, McGrath Native Village Council; Ray Collins, Tochak McGrath Museum; and Kristi Harper, NRCS Alaska Tribal Liaison, USDA/NRCS

In October 2012, the discovery of human remains in the western Interior Alaska village of McGrath rapidly evolved into a community research endeavor. Construction relating to an emergency erosion project turned up the skeletal remains of three individuals on land owned by MTNT, Ltd. near the center of McGrath. MTNT is a consortium of for-profit village corporations created by the Alaska Native Claims Settlement Act (ANCSA) that includes McGrath, Telida, Nikolai, and Takotna. All four villages are located in the upper Kuskokwim River drainage and share an Athabascan cultural heritage (Collins 2004; Hosley 1981). The remains, representing two adult males and a small child, were placed in the in the custody of the local tribal entity, the Native Village of McGrath, and consultations began among affected tribal, state, and federal entities.

The upper Kuskokwim Native leadership invited archaeologists affiliated with their ANCSA regional non-profit corporation, Tanana Chiefs Conference (TCC), to assist. TCC helped bring the project into compliance with the National Historic Preservation Act and facilitated consultations with the Native leadership over custody and

research opportunities. Through additional consultations, which included the National Resources Conservation Service and the Alaska State Historic Preservation Office, agreements were negotiated to preserve the discovery site while allowing the construction project to continue. The consultations with Alaska Native leadership over custody and research opportunities led to a separate agreement authorizing the transfer of the human remains to TCC for scientific analyses for a period of five years.

Following the consultations, MTNT-affiliated tribal members crafted a wood container to carry their ancestors during transport to the TCC central office in Fairbanks. Following a community celebration in McGrath, the remains were flown to Fairbanks, with a brief stop in the traditional village of Nikolai where elders greeted the aircraft at the village runway and blessed the remains. In Fairbanks, the cooperating agencies and Native entities convened a formal press conference announcing the discovery. The press conference included a blessing by an Alaska Native Episcopal leader, which consecrated the ancient remains (*Fairbanks Daily News-Miner* 2012).

The initial phase of scientific inquiry consisted of radiocarbon dating and osteological data collection, including skeletal representation, biological age estimates, dental features, and an assessment of pathological markers. A second research phase included further radiocarbon dating, ancient DNA testing, radiological examination, and stable isotope analyses. Preliminary results are available for these studies and more are expected. During the summer of 2013, systematic archaeological testing in and around the McGrath discovery locale yielded stratigraphic evidence of a younger component with a hearth feature, lithics, worked bone fragments, and nonhuman faunal remains. This phased approach has provided the time necessary to accommodate informed tribal consultation, community presentations, and popular media outreach. One outcome of the collaboration between the tribal and research communities has been the emergence of a voluntary modern DNA research project with implications for historical population reconstruction and improved clinical health outcomes for tribal members in the TCC region.

The joint scientific and medical team established to advance this community research project include Joel Irish, Jamie Clark, Dan Johnson, Keir Fowler, George Bird, Richard Scott, Geoff Hayes, Dennis O'Rourke, Jennifer Raff, Holly McKinney, and Carrin Halfman. Volunteered services include those provided by Fairbanks

Memorial Hospital and Radiology Consultants. The 2013 excavation team included Bob Sattler, Angela Younie, Michael Grooms, and Christine Fik. Tribal leaders involved in consultations include members of the McGrath Native Council; board members of MTNT, Ltd.; and tribal chiefs of the TCC Upper Kuskokwim Advisory Board. Tom Gillispie drafted the initial site report and negotiated the management documents. KSKO general manager Mike Lane convened two live radio broadcasts in McGrath to share results with Upper Kuskokwim residents. Last, the greatest compliment is to Jim VanRaden, the employee of North Star Paving and Construction who honored a civic duty to report this remarkable discovery to the Native leadership, providing an opportunity to make all of this possible. Funding for this research comes from the Natural Resources Conservation Service, the National Science Foundation (grant #1216401), and Tanana Chiefs Conference Natural and Cultural Resources Department.

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HEALY LAKE VILLAGE: NEW DATA AND ANALYSIS FROM THE CHINDADN TYPE SITE

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The Healy Lake Working Group (HLWG), headed by John P. Cook, the original excavator of the Healy Lake Village site, is a research team organized to consolidate,

analyze, digitize, and publish the field data collected during excavations from 1966–1972 (Cook 1969, 1989, 1996). Located in central Alaska’s middle Tanana River valley, the Healy Lake Village site was among the first archaeological sites in Eastern Beringia to be radiocarbon dated to the late Pleistocene and is the type site for the Chindadn Complex, dated to 13,370–9,090 cal BP (Cook 1975, 1996). Diagnostic artifacts include triangular and teardrop-shaped points, microblades and burins, blade tools, and end scrapers. However, cryoturbation, radiocarbon laboratory errors, and Cook’s use of arbitrary two-inch excavation levels as temporal units for analysis have all been suggested as sources of interpretive error and potential foundations for the rejection of the Chindadn Complex as an interpretive entity (Erlandson et al. 1991).

In preparing the original Healy Lake Village excavation records for archival curation, we found previously unpublished field data directly relating to the Chindadn dating question. This documentation includes over 1,600 pages of notes, 300 photographs, fifty large-scale stratigraphic drawings, and scaled floor plans of excavation levels, and covers 3,500 square feet of excavation. Of particular importance are three-point provenience data for all artifacts collected in situ, combined with curated radiocarbon samples, including splits of many of the previously dated samples with original submission letters and lab reports. Numbering in the tens of thousands, the curated field specimens include the entire faunal assemblage, as yet unanalyzed, as well as the full collection of lithic artifacts. The assemblage has been scattered across several repositories since the original excavation, but is now housed together at the University of Alaska Museum of the North. This body of primary field data is sufficient to support new analysis of the Chindadn levels with greatly improved spatial and temporal control.

The HLWG is pursuing a detailed reexamination of smaller subdivisions of the site where Chindadn type artifacts are associated with cultural wood charcoal. Prior to dating new samples, we performed an exploratory analysis of the original site date list, using the probability density function technique. This method creates a high-resolution model of the date list as a probability distribution, without tying specific dates to specific excavation levels. Our results strongly suggest that the population of Healy Lake Village site radiocarbon ages contains internal temporal structure. Specifically, Cook’s 1996 date list contains three distinct peaks in probability, centered

on about 9,500, 12,000, and 13,400 cal BP (Gillispie et al. 2013). This preliminary analysis leads us to hypothesize that the Chindadn Complex as originally defined at the Healy Lake Village site may encompass three components. To test this hypothesis, the HLWG is constructing a new Chindadn chronological framework that does not depend entirely on the site-wide arbitrary level system and will focus on stratigraphic associations between artifacts and dated materials within individual units. A redating program using modern AMS techniques is currently underway (Gillispie et al. 2013) and will be complemented by three-dimensional modeling of artifact proveniences, lithic and faunal analysis, and comparative information from new excavations at the nearby Linda’s Point site (Younie et al. 2013).

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ALEUTIANS

COLLABORATIVE RESEARCH: GEOLOGICAL HAZARDS, CLIMATE CHANGE, AND HUMAN/ECOSYSTEMS RESILIENCE IN THE ISLANDS OF THE FOUR MOUNTAINS, ALASKA

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The National Science Foundation, Office of Polar Programs, Arctic Social Sciences has awarded funding to conduct archaeological, paleobiological, and geological research in the Islands of the Four Mountains, Aleutian Islands, Alaska. Assessing the degree to which geological hazards in the Aleutian archipelago disrupted prehistoric human and ecological systems has important lessons for current inhabitants of the northern Pacific Rim. The Islands of Four Mountains region embodies environmental instabilities that, in the last 10,000 years, include changing subarctic climate, volcanic eruptions, earthquakes, tsunamis, and sea-level fluctuations. Compared to adjacent regions to the east and west, strong ocean currents and smaller island size magnify ecologically driven resource extremes, perhaps creating a physical bottleneck and the cultural boundary that persisted into the early twentieth century. These islands provide an excellent opportunity to assess the development of prehistoric human adaptations to geological hazards and environmental change. That such research has not already occurred is understandable. The same volcanic activity, precipitous coastlines, high winds, and strong riptides that may have posed profound risks to prehistoric individuals hinder modern research expeditions. The Four Mountain prehistoric sites are little studied but are highly significant in light of new geologic data indicating volcanic activity during human migration and societal development in the Aleutian archipelago. A team of professional and student archaeologists, geologists, ecologists, and zoologists will conduct a comprehensive, interdisciplinary three-year investigation in the Islands of the Four Mountains. Extensive new radiocarbon, geological, paleoenvironmental, and cultural data expected from these sites will yield novel insights into the record of geological hazards, human coping mecha-

nisms, changing subsistence, and adaptations during the prehistoric and European contact periods.

The Islands of the Four Mountains are located in an ecologically and economically important region of the world—the North Pacific and Bering Sea. Humans on two continents rely on fish from its marine ecosystem and, given the sensitivity of airplanes to volcanic ash and of coastal cities to tsunamis, its geologic hazards potentially affect all nations of the northern Pacific Rim. Comprehensive research on long-term human-environmental interactions in the Bering Sea region, set against a backdrop of accelerated global change, is vital to understanding the dynamics of Aleutian biological and human systems and effectively addressing the social, political, and economic issues that arise from changes in those system dynamics today. The island group lies in a zone of high catastrophic potential in that one of its volcanoes, Mt. Cleveland, has erupted explosively more than twenty times in the last decade (as recently as May 2013) and during the time of prehistoric human habitation. The Aleutian Plate boundary is the site of four earthquakes having a magnitude greater than 8 and dozens with magnitudes greater than 7, and these have generated tsunamis historically and prehistorically. Through partnerships with the Alaska Volcano Observatory, the Aleut Corporation, the Museum of the Aleutians, and the Keck Geology Consortium, this project will bring scientists, Native Americans, students, and policy makers together in education and collaboration.

ISLAND NETWORKS: SUBSISTENCE AND CIRCULATIONS IN THE ALEUTIAN ISLANDS

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As part of a three-year study on subsistence harvesting and social networks funded by the Alaska Office of Subsistence Management (OSM) of the U.S. Fish & Wildlife Service, Katherine Reedy (PI) and assistant Andrea Kayser made multiple research trips to the Aleutian Islands in 2013. This project aims to understand wild food harvests, uses, and distribution in the Aleutian Islands communities of Adak, Atka, Nikolski, and Unalaska, linking results to recent work in Akutan, False Pass, Nelson Lagoon, and Port Heiden (Reedy-Maschner and Maschner 2012). Current detailed information on all subsistence harvests is needed for management of these species within and adjacent to the Alaska Maritime National Wildlife Refuge.



Andrea Kayser completes a survey with Sergie Ermeloff in Nikolski, Alaska, July 2013.

Using household-level and community-level data, the study uses a comprehensive survey instrument to document subsistence harvest levels and methods, distribution practices and sharing patterns of foods and products, social dynamics that contribute to those practices, spatial data on harvesting and sharing, and household and community economics. The study also investigates factors affecting overall access to subsistence foods (regulatory, obtainability, socioeconomic, and logistical), costs incurred, and resources (equipment, crews, etc.) needed in order to harvest. Surveys gather ecological observation data in conjunction with species observations to potentially evaluate climatic impacts on subsistence species. The study also gathers information on recent changes to subsistence harvests so managers can better understand factors that have shaped current practices, for example lost or increased access, changing regulations, climatic influences, and socioeconomic opportunities or losses. Comprehensive ethnographic profiles accompany this work.

Initial visits to introduce the project and conduct key informant interviews were made to each community in the spring and summer of 2013. In July 2013, we surveyed the entire village of Nikolski (fifteen households) and in September 2013, we surveyed 90% of Adak's estimated forty-four households. Surveys of Atka and Unalaska will be completed in spring 2014, using methods in the large community of Unalaska to target active harvesters who are assumed to be embedded in large or small sharing networks and snowballing out to those individuals to whom they have ties. Social network data are not random or probability samples; this project is a departure from conventional survey data and demands complementary methods. This approach is effective for tracking specific segments of large populations. It will further allow us to follow capacities, opportunities, constraints, duties, and burdens of harvesters and sharers.

Each community is so varied in its history, composition, scale, and economy, yet they all engage with wild

foods at high levels. Preliminary findings suggest a vast interaction zone between communities in some of the most inconvenient and challenging circumstances. Whenever people, vessels, and airplanes move in and out of these communities, so too do wild foods, but at great costs and planning, requiring healthy social relationships and creativity. The study will contribute to an understanding of the strategies utilized to support everyday economic and food requirements and explore the ways in which remote, seemingly isolated communities are necessarily integrated into socioeconomic systems beyond themselves, even as they experience diminishing economic ties to Bering Sea and North Pacific fisheries.

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