United States Department of the Interior

NATIONAL PARK SERVICE
BERING LAND BRIDGE NATIONAL PRESERVE
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Bering Land Bridge National Preserve (BELA) 2010 Project Update

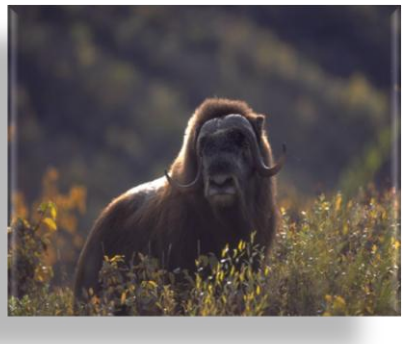
Early Humans on the Bering Land Bridge

- This project conducted geological and archaeological surveys and tests in the vicinity of Serpentine Hot Springs this past summer (July-Aug, 2009). The project documented one site in particular, the archaeological site that yielded the fluted point (spear point) that was discovered in 2005. The goal of the project was to determine how old the fluted points at the site are, and how well-preserved the site might be.
- Last summer, there was a crew of 6 people headed by Ted Goebel from Texas A&M University, Center for the Study of the First Americans. They found additional fluted points at the site, including one in their small excavation. This spearpoint was associated with an ancient fire hearth, animal bones, and other stone tools. Preliminary dating studies suggest that the fire hearth dates to about 12,000 years ago, meaning that this is the oldest archaeological site found on the Seward Peninsula. The animal bones are not well-preserved, but they do appear to be an ungulate or hoofed animal, likely musk ox, caribou, or perhaps even bison. Given the presence of stone tools and animal bones in a buried and datable setting, this project is providing important information about the technology and subsistence activities of the early human occupants of the Bering Land Bridge during the late Ice Age.
- During summer 2010, dependent on funding, Dr. Goebel plans on returning to the fluted point site at Serpentine with a crew of about six to eight archaeologists and geologists, to further investigate the site. He plans on visiting Shishmaref and Deering to consult with communities there in March 2010, to present his team's finding so far and to present their plans for the upcoming summer's project.
- In 2009 this research was funded by the Center for the Study of the First Americans and the NPS Shared Beringia Heritage Program. They have requested funds for the 2010 project from the National Science Foundation and National Geographic Society, but these proposals are currently being reviewed. They likely will be flying into Serpentine in a 206 from Quartz Creek/Nome.

Carbon Cycling and Methane Emissions in Frozen Lakes

This project began in 2008 by Dr. Katie Walter from the University Of Alaska Fairbanks Institute Of Northern Engineering, International Arctic Research Center to study carbon cycling and methane emissions in frozen lakes near the Kitluck River. Crews will not be returning back to the area this year. A final report is being completed.

Comparisons of Population Dynamics and Ecology of Muskoxen in and adjacent to Bering Land Bridge National Preserve and Cape Krusenstern National Monument



- Field research for this project will began in 2009 and will end 2012. This project compares and contrast muskoxen populations, calf births, adult female survival, sex/age structure, health and growth information between muskoxen of the northern Seward Peninsula and Cape Thompson populations. The project is run by Layne Adams of the USGS and Joel Berger of the Wildlife Conservation Society and NPS staff biologists Marci Johnson, Brad Shults, and Jim Lawler.
- The studies on the northern Seward Peninsula will focus on areas east of Shishmaref including the Serpentine, Goodhope and Cripple River drainages.
- Musk oxen were radio collared, fecal samples are being analyzed and populations are being mapped.
- Currently, there are 17 radio-collared adult females within the preserve, ranging from Cape Espenberg to Ear Mountain. We have had 5 collared animals die: at least 4 due to probable bear predation.
- Preliminary data from the 2009 captures show that the animals to the north in Cape Krusenstern are almost 70 pounds lighter, on average, and have much poorer dentition (teeth). We will be capturing additional animals in late March (after the harvest season closes). In early April, Joel Berger will be returning to the area by snow mobile to collect fecal samples and photographs for estimating body mass. Layne Adams would appreciate receiving jaws from harvested muskoxen, particularly with the front incisors intact.
- A final report, consisting and up to three manuscripts for publication in scientific journals, will be provided by March 2013.

Human Response to Climate Change at Cape Espenberg

- The project conducted preliminary archaeological excavations in the vicinity of Cape Espenberg last summer (July and August, 2009). This is a three-year project (2009 – 2011). It will develop a detailed history of settlement at Cape Espenberg from AD 800 to 1400 in the context of local and regional climate record.
- Last summer there was a crew of 8 people, headed by Dr. Owen Mason and Dr. John Hoffecker from the Institute of Arctic and Alpine Research at the University of Colorado-Boulder. This summer, there will be a crew of between 9 and 25 people (averaging about 17 persons) from June - to August 2010, including researchers and students from the University of Alaska-Fairbanks and University of California-Davis. This research is being funded by the National Science Foundation (NSF).
- The crew may stage out of Shishmaref so that materials and supplies can be flown by 206 aircraft onto the beach. In addition to house feature excavations, the crew will be extracting subsurface cores for

paleoecological (study of prehistoric environments) research. The samples will be used to analyze the past climate (paleoclimates) and vegetation (plant) history. Mr. Mason and Mr. Hoffecker will be traveling to Shishmaref, Kotzebue, and Deering for consultation in late March 2010.

Arctic Network Inventory and Monitoring Program (ARCN) (http://science.nature.nps.gov/im/units/arcn/index.cfm)

There will be 4 projects in 2010 for the ARCN Program. Ecologists and biologists with the NPS will conduct several tests of vegetation and soils, muskoxen studies, climate monitoring to determine long term trends in vegetation for use in climate change research at various locations within BELA.

Project Lead & Type of Project	Dates	Location
Emily Holt & Peter Neitlich- Lichen Inventory, Collection and Findings	July	Various locations on Nome road system and Preserve
Pam Sousannes-Climate Station Environmental Assessment	Nov-Mar	5 possible location in the Preserve to monitor weather
Peter Neitlich- Reindeer Grazing Exclosure Environmental Assessment	Begin in Jan	Various explosure sites in the Preserve
Muskoxen Project (described on page 1)	Ongoing	Various location in the Preserve

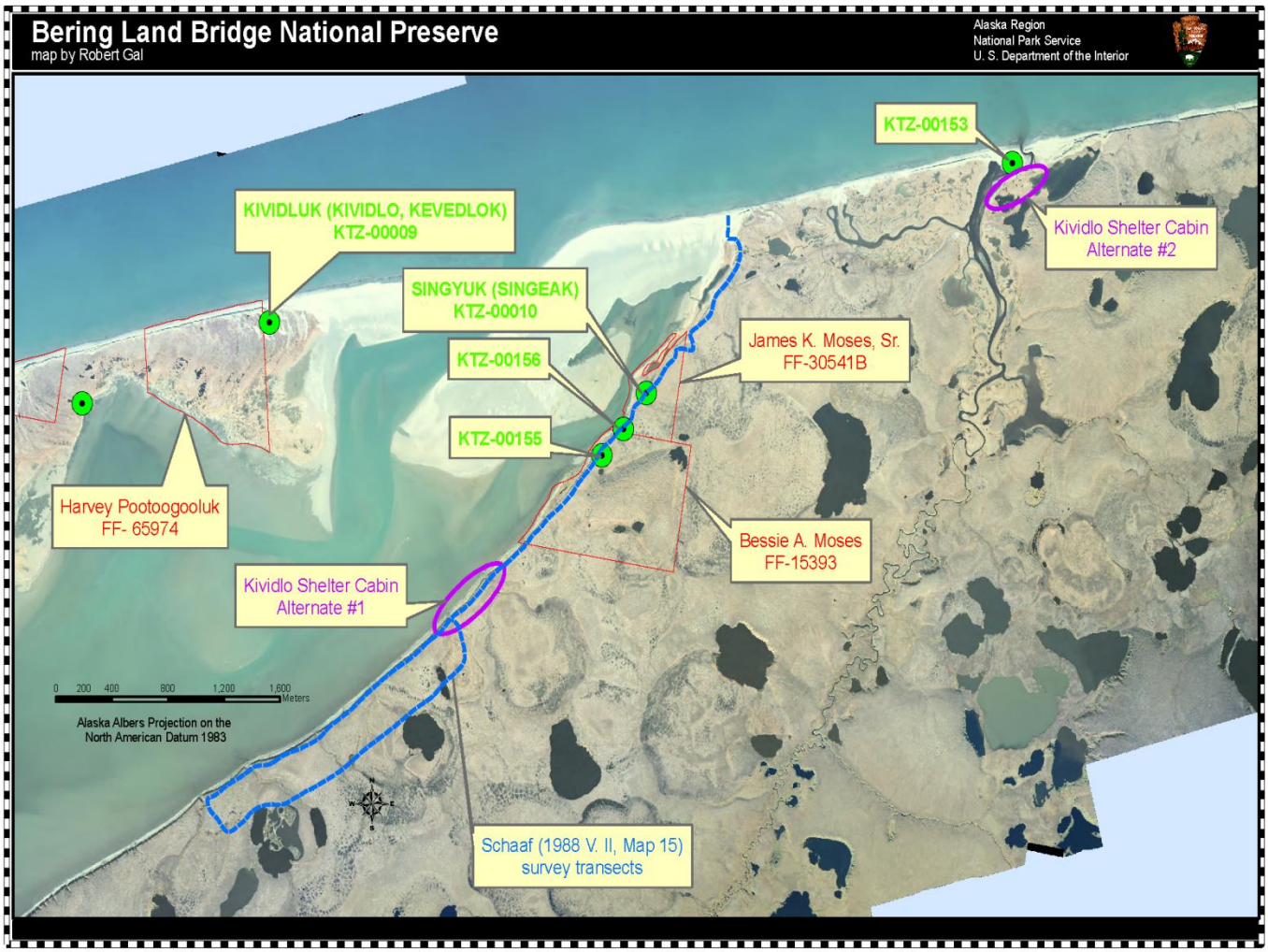
Serpentine Hot Springs Vegetative Study

There will be continued work with the vegetation by NPS staff botanitst, Linda Hasselbach, in the vicinity of Serpentine Hot Springs. She will continue to document the unique habitat, plant communities, rare plants and inventory medicinal plants in July 2010. This project focuses on the geothermal area of the springs.

Serpentine Hot Spring Site Management Plan

The Serpentine Hot Springs Site Management Plan has begun with project scoping with NPS staff in Nome. A series of public meetings will be done in Shishmaref, Wales, Deering, Nome and Kotzebue beginning in the fall of 2010. The site management plan is expected to take 3 years to complete. This project will provide needed direction for managing the Serpentine area. The plan will identify desired future conditions and develop management indicators and standards to protect park resources and provide opportunities for high quality use and experiences by local community residents and visitors. The plan will assess the current facilities at Serpentine and the means/methods used to access the site.

Kividlo Emergency Shelter Cabin Clean-up and Coastal Cabin Rebuild



BELA staff shipped 2 conex vans of construction materials for the rebuilding of the Kividlo Emergency Shelter Cabin and acquired a lease with the Alaska Department of Transportation and Public Facilities (AKDOT&PF) for property next to the airport. Last year, BELA had two meetings with the Native Village of Shishmaref, Shishmaref Native Corp and the Shishmaref Emergency Services on the new location of the cabin at the

Cowpack Lagoon, the building logistics and rebuilding of the cabin. BELA employees are working on a possible cooperative agreement for this work with the IRA and have applied for NPS construction funding. Tentative start date on the removal of the old cabin is the summer of 2010, and construction on the new cabin July 2011. An archaeological assessment was completed in July of 2009 and there is a draft Environmental Assessment (EA) that must be completed before construction begins.

Goodhope Cabin Rehabilitation Project

- The Goodhope River Reindeer Cabin is a historic structure built in 1940 that was used until the late 1970's as a base of operations for reindeer-herding activities within present day Preserve. Located on the northern Seward Peninsula, the cabin is a 295 square foot wood frame structure that is situated along the Goodhope River adjacent to a winter trail between the native villages of Deering and Shishmaref. The cabin has not been maintained since the establishment of BELA in 1980. A combination of extreme arctic weather and repeated abuse by brown bears has led to a steady deterioration of the structure.
- This project will stabilize the structure by replacing sill logs; removing and replacing damaged roofing material; replacing tongue and groove pine siding; reapplying tar paper on the building exterior; repairing plywood interior walls; replacing windows and a front door; and rebuilding a small deck. An oil burning stove will be installed to prevent resource damage to a nearby historic corral that has been utilized as a firewood source in the past.
- The completed project will consist of a restored reindeer herding cabin (circa 1940) that preserves a component from an important historic era on the Seward Peninsula.
- The cabin will be a safe shelter for winter travelers between Deering and Shishmaref, as well as for hunters and other visitors to BELA. The cabin will also serve as a well-situated base of operations for search and rescue operations within the northern Seward Peninsula. Demolition of the adjacent cabin will remove a public safety hazard and the addition of an outhouse will allow for the sanitary disposal of human waste.

Shared Beringian Heritage Program and International Protected Area Designation

The Shared Beringian Heritage Program recognizes and celebrates the exchange of natural resources and cultural heritage shared by Russia and the United States on both sides of the Bering Strait. The program seeks local resident and international participation in the preservation and understanding of natural and cultural resources and protected lands as well as working to sustain the cultural vitality of Native peoples in the region.

The goals of the Program are to:

- Foster a climate of mutual understanding and cooperation between the United States and Russia, and the indigenous people of the Beringian region in environmental protection, conservation of flora and fauna, and historic preservation and interpretation;
- Support the subsistence opportunities within Beringia and recognition of unique and traditional activities by indigenous people of the region.
- Promote the study, interpretation, and enjoyment of the natural and cultural resources of international significance, including the impacts of climate change upon these resources.
- Support cultural exchange between indigenous people on both sides of the Bering Strait.

The National Park Service is working on a communications plan to seek comment, suggestions and direction about the recent U.S. State Departments efforts to work on a shared protection area between some of the Russian Parks and the existing NPS units of Bering Land Bridge National Preserve, Cape Krusenstern National Monument, Noatak National Preserve and Kobuk National Park. The NPS wants your input on what a shared protection area should be and what it will mean to the people of our region. Bering Land Bridge staff will be conducting meetings in Nome, Shishmaref, Deering and Wales beginning in February 2010 on this important project. We want your input!

The program has funded many cultural and resource based projects, here is an overview of the projects funded by the Program in 2009:

• Partner: North Slope Borough, Dept. of Wildlife Mgmt.
Title: **Health Evaluation of Walrus**
Contact: Cheryl Rosa (907) 852-0350 Cheryl.Rosa@north-slope.org
This community based project will proactively monitor walrus as the Arctic environment is altered. A multi-disciplinary assessment will be conducted of body conditions and health related parameters for an important arctic subsistence species. The data collected will advance the knowledge of arctic pinniped biology and will include comprehensive data management plans that will serve as templates for future health assessment and monitoring of the species.

• Partner: Texas A&M University
Title: **Early Humans in Bering Land Bridge NP**
Contact: Ted Goebel (979) 862-4544 goebel@tamu.edu
Archaeologists have long looked to Beringia for clues about the origins of the first Americans. To date, Beringia has not revealed a clear archaeological ancestor that resembles and pre-dates Clovis, the earliest unequivocal complex of sites, dated to about 13,000 years ago with its signature lanceolate-shaped, fluted spear points. A newly discovered site located near Serpentine Hot Springs in Bering Land Bridge National Preserve may provide the evidence needed to solve the Alaskan fluted-point problem.

• Partner: University of Alaska Museum
Title: **Relationship of Beringian Plants**
Contact: Stefanie Ickert-Bond (907) 474-6277 ffsi1@uaf.edu
This field project will integrate biogeographic and phylogenetic data to unravel the evolutionary relationships among Beringian plants as well as further document, with specimens, the rich flora of this region. This work springs from our long interest in the origin and evolution of the flora of Alaska.

• Partner: The Northern Forum
Title: **Brown Bear Working Group**
Contact: Natalie Novik (907) 561-3280 nnovik@northernforum.org
This project will support the 7th Brown Bear Workshop in the Sakha Republic in the Russian Far East. Topics to be discussed include bear management in industrialized areas, assess genetic studies of brown bear populations around the Pacific Rim and develop cooperation between specialists for brown bear watching, poaching control and public bear education.

• Partner: Smithsonian Institution
Title: **Preserving Our Knowledge**
Contact: Igor Krupnik (202) 633-1901 krupnik@si.edu
This will be a joint Beringian focused heritage program to document endangered environmental and subsistence terminologies in five communities in Alaska and Russia: New Chaplino, Sireniki, Wales, Gambell and Shaktoolik. Cultural and language specialists will collect indigenous terms and will produce illustrated thematic lexicons in St. Lawrence Island/Siberian Yupik and in Inupiaq.

• Partner: University of Alaska - Fairbanks
Title: **Kivetoruk Moses, Inupiaq Artist**
Contact: David Mollett (907) 452-6169 ffdlm@uaf.edu
Beringia funding will support field work to gather firsthand accounts from people who knew or had a connection to Moses and his work. The final product will be a book containing a biography, artistic analysis and collection of high quality reproductions of Moses' work.

• Partner: Alutiiq Museum
Title: **Sugpiaq Kunstkamera Catalog**
Contact: Sven Haakanson, Jr. (907) 486-7004 sven@alutiiqmuseum.org

For two centuries, European museums have cared for ethnographic collections from Alaska. These collections hold some of the last traditionally made Alaska Native objects and are an unparalleled store of ancestral knowledge. The Alutiiq and Kunstkamera museums will collaborate on the development of an annotated catalog of Sugpiaq holdings.

• Partner: The Island Institute
Title: **Encounters Radio Broadcast**
Contact: Lisa Busch (907) 747-6481 lisabusch@gci.net
The Island Institute plans to expand *Encounters: Radio Experiences in the North* to cover more of the circumpolar north by producing two 29 minute segments in the Central Beringia region. *Encounters* is a regular weekly nationally distributed public radio program about the human traditions of the northern polar region. The program presents scientific information and indigenous knowledge about the natural environment in a widely distributed and easily accessible audio format.

For More Information or Questions about these Projects, please telephone, email or write:

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