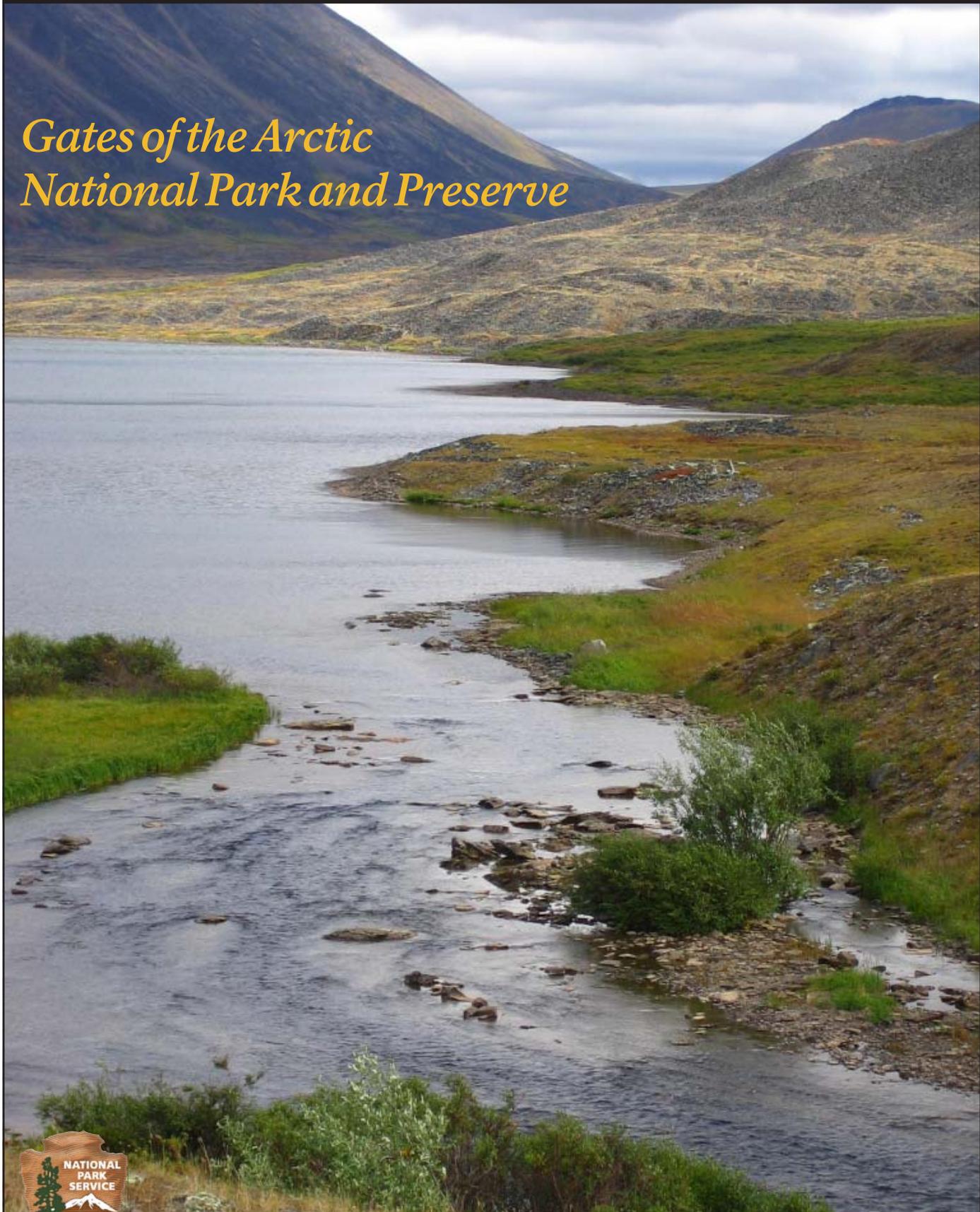


*Gates of the Arctic  
National Park and Preserve*





*“Everybody needs beauty as well as bread,  
places to play in and pray in, where nature may heal and cheer  
and give strength to body and soul alike.”*

*John Muir*

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## *Message from the Superintendent*

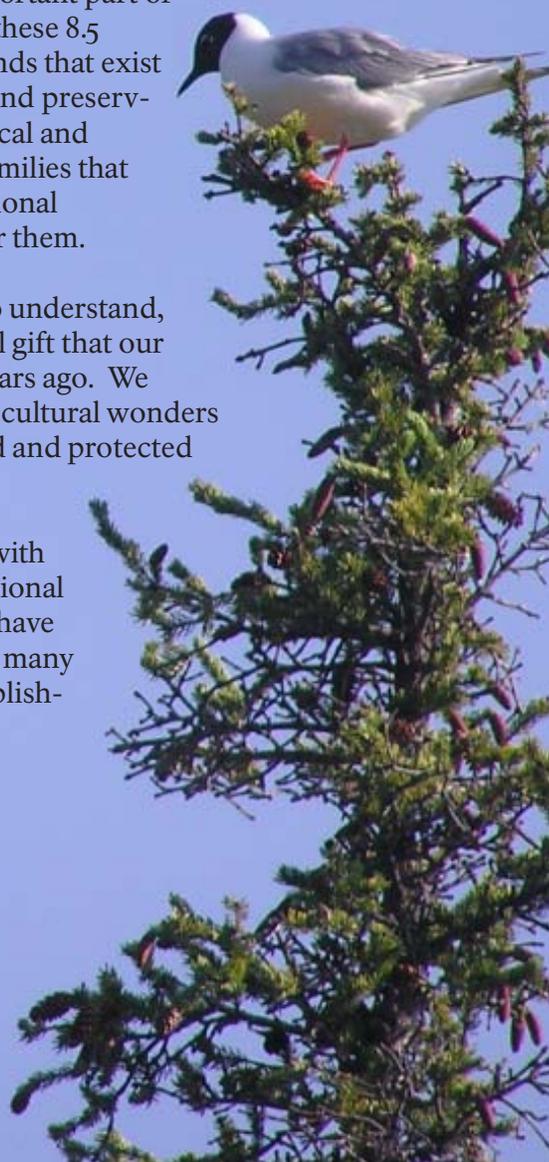
Twenty-five years ago this December the Alaska National Interest Lands Conservation Act (ANLICA) became law and established Gates of the Arctic National Park and Preserve and expanded or established twelve other national parklands in Alaska. This Congressional Act added 54 million acres of parklands to the system representing two-thirds of the acreage in the entire park system and three-fourths of our wilderness areas. This was perhaps the largest and most comprehensive piece of conservation legislation ever passed.

The first 25 years of management of Gates of the Arctic have been challenging and also rewarding for all involved. There are many reasons to be grateful. Through the years we have been able to build important friendships with local communities in and around the park that have proven to be critical for the continuation of customary and traditional activities, a very important part of the establishment of this park. The American public inherited these 8.5 million acres of parkland as some of the wildest and pristine lands that exist anywhere in the world, with the responsibility of maintaining and preserving the lands and natural ecosystems. The park is rich in historical and cultural history that often times are still fresh in the minds of families that continue to live from the land. Tremendous wilderness recreational opportunities continue to exist for visitors who seek to discover them.

This annual report highlights some of our efforts to continue to understand, protect and help the visitor enjoy and appreciate this wonderful gift that our leaders bequeathed to the American public and the world 25 years ago. We continue to focus our efforts on understanding the natural and cultural wonders found within the park so that they will continue to be preserved and protected for the enjoyment and appreciation of future generations.

I am especially thankful for the privilege of being able to work with what may be one of the finest and most talented staff in the National Park Service. They, along with our many friends and partners, have made 2005 another extremely successful year in accomplishing many of our goals. I hope you enjoy reviewing some of these accomplishments highlighted in this report.

Dave Mills  
Superintendent  
December 2005



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## *Purpose and Significance*

By establishing Gates of the Arctic National Park & Preserve in Alaska's Brooks Range, Congress reserved a vast and essentially untouched area of superlative natural beauty and exceptional scientific value – a maze of glaciated valleys and gaunt, rugged mountains covered with boreal forest and arctic tundra, cut by wild rivers and inhabited by far-ranging populations of caribou, Dall sheep, wolves, grizzly and black bears. Congress recognized that a special value of Gates of the Arctic is its wild, undeveloped character and the opportunities it affords for solitude, wilderness travel, and adventure. Gates of the Arctic encompasses several congressionally recognized elements including the national park, national preserve, wilderness, six wild rivers, and two national natural landmarks. The National Park Service is entrusted to manage this area to protect its physical resources and to maintain the intangible qualities of the wilderness and the opportunity it provides for people to learn and renew its values.



### **Purpose of Gates of the Arctic National Park and Preserve**

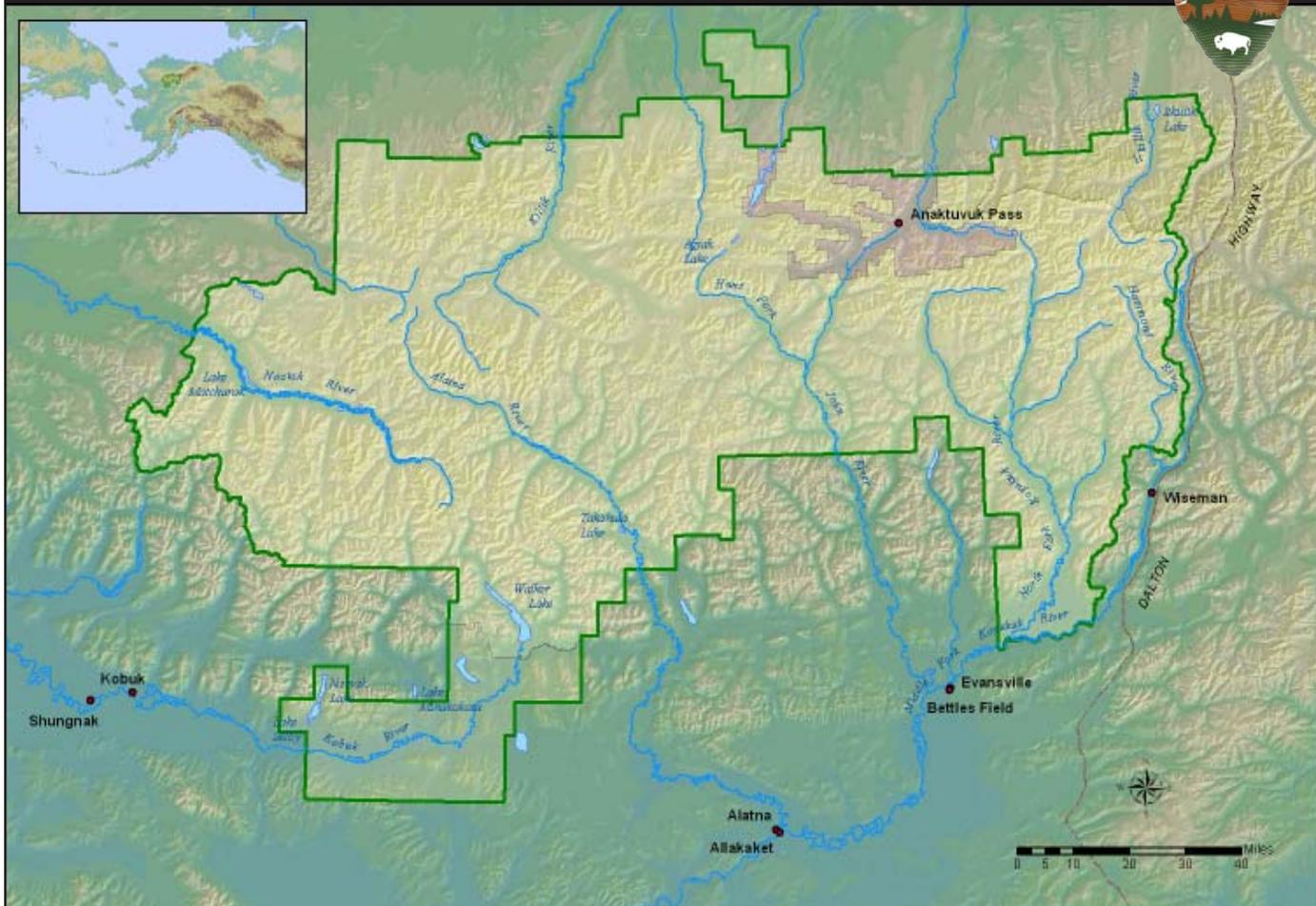
- ❖ Preserve the wild and undeveloped character and natural environmental integrity--including natural processes, habitat, and biodiversity--of the central Brooks Range;
- ❖ Provide opportunities for appropriate wilderness recreational activities and solitude; and
- ❖ Allow rural residents engaged in a subsistence way of life to continue to do so.

### **Significance of Gates of the Arctic National Park and Preserve**

- ❖ Gates of the Arctic is the central component of a 40-million-acre contiguous, undeveloped protected area, one of the largest protected areas in an increasingly developed world.
- ❖ Due to its vastness and undeveloped character, Gates of the Arctic provides outstanding recreational wilderness opportunities.
- ❖ Gates of the Arctic protects the core of the traditional homelands of the Nunamiut peoples.
- ❖ The area inspired Bob Marshall, who coined the term “Gates of the Arctic,” and was one of the earliest proponents of arctic preservation and one of the founders of the American wilderness system.
- ❖ Gates of the Arctic exemplifies an intact, high latitude arctic ecosystem with its corresponding natural processes, flora, and fauna.

# Gates of the Arctic National Park and Preserve

National Park Service  
U.S. Department of the Interior



Gates of the Arctic National Park and Preserve lies north of the Arctic Circle in the central Brooks Range of Alaska. Visitors to the Park typically access the area by air, and a few hike in from the Dalton Highway. Air charter operators based in Bettles fly visitors into the Park using float planes that land on many of the larger lakes and rivers.

Visitors to Gates of the Arctic are encouraged to check in at one of the Park's field offices in Bettles or Anaktuvuk Pass, or at the Visitors' Center in Coldfoot prior to their trip. Park Rangers offer orientations that brief visitors in safety issues and Leave No Trace camping techniques.

# Table of Contents

Message from the Superintendent.....3

Purpose and Significance of Gates of the Arctic National Park and Preserve.....4

Map of Gates of the Arctic National Park and Preserve.....5

Performance and Results .....7-21

*Preserve Resources*.....7-18

*Public Enjoyment and Visitor Experience*.....19

*Organizational Effectiveness*.....20-21

FY 2004 Financial Summary.....22

Preserve Organization.....23

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Poppies along the Alatna River, Gates of the Arctic National Park and Preserve, June 2005.



Cover photo: In the heart of Gates of the Arctic National Park and Preserve, in the central Brooks Range of Alaska, lies Agiak Lake, an area rich in both cultural and natural treasures.

Printed on  
Recycled Paper



## Preserve Resources

*Natural and cultural resources and associated values at Gates of the Arctic National Park and Preserve are protected, restored and maintained in good condition and managed within their broader ecosystem and cultural context.*

*Long-term Goal: Archeological Sites. By September 30, 2008, 10 (1%) of 907 of Gates of the Arctic's archeological sites listed on the current Archeological Sites Management System (ASMIS) without accurate information or condition assessments, are visited, and are in good condition, and the information is updated.*

**Annual Goal:** By September 30, 2005, 10 (1%) of 907 sites in Gates of the Arctic listed in ASMIS will be visited and the records updated.  
**GOAL EXCEEDED**

*Agiak Lake was used as a trap for migrating caribou, and contains an amazingly well preserved complex of hunting features such as drift fences, blinds, storage pits, and camp locations.*



Archaeologists map a series of rock cairns that make up a caribou drive line at Agiak Lake. Several extensive drive lines are found at Agiak Lake, composed of hundreds of such cairns. Caribou were likely steered into the lake where they were speared by hunters from kayaks.

### 2005 Agiak Lake Archaeological Survey and Mapping

By Aaron Wilson and Natasha Slobodina

From July 24 to August 10, 2005, a Gates of the Arctic National Park archaeology field crew documented archaeological features near Agiak Lake, located about 30 miles west of the village of Anaktuvuk Pass.

In the past, Agiak Lake was used as a trap for migrating caribou, and contains a dense and amazingly well preserved complex of hunting features such as drift fences, blinds, storage pits, and camp locations. Archaeologists mapped more than 800 such features and produced a detailed map of the

valley. One interesting site contained 41 tent rings—the largest single known concentration of prehistoric house remains in northern interior Alaska. Small scale excavations at this site indicate that the tent remains are much older than previously thought and may date to several thousand years old.

Aaron Wilson, a graduate student at the University of Alaska Anchorage, collected data for his MA thesis research during the course of the project.



A wooden bow fragment. Stone tools as well as a number of preserved wooden artifacts were found at the same site, which suggests an age of perhaps 200 years ago—a time when stone tools were still in use, but not so long ago that the organic artifacts have deteriorated. Not many of this age are known in the region, and organic artifacts are rarely preserved.

## Killik River Archaeological Inventory

By Jeff Rasic

Archaeologists conducted the first season of a 3-year reconnaissance inventory of cultural resource sites in the Killik, Nigu, and Noatak River basins. This year crews focused on the Killik River. The work was undertaken by Gates of the Arctic park staff in cooperation with the University of Alaska Museum and involved graduate and undergraduate students from the University of Alaska Anchorage and University of Alaska Fairbanks.

Initial findings and achievements include:

- ❖ Discovery of 181 new sites, which brings the total number of known sites in the park to 1,204.

- ❖ Visits to 100 previously recorded sites to update location and condition information.
- ❖ Collection of radiocarbon samples from 20 sites, which will increase by 50% the total number of dated sites in the park.
- ❖ Discovery of rare preserved wood artifacts at two sites. Artifacts include bow and arrow fragments.
- ❖ Discovery of unique sites that consist of historic or prehistoric age rock cairns perched on high mountain peaks.



Archaeologist Andy Tremayne records a historic tent ring at the Iniqaglig site, which roughly means, “they always camped here.” The camp was last occupied by the Killikmiut band of Nunamiut in the 1930s and 1940s.

## Tent Ring Project Summary

Jeff Rasic

During the course of archaeological surveys in Gates of the Arctic in 2005, Andy Tremayne, an undergraduate student in Anthropology at University of Alaska Fairbanks, undertook a study of

tent rings as part of an honors thesis project. These stone circles, once used to anchor skin tents, are a common but poorly understood part of the archaeological record in northern Alaska. Andy sought to explore the age, function, design, and distribution of tent rings through an examination of newly discovered sites in combination with literature research. He received a grant from the University of Alaska Geist fund to pursue this work. Preliminary results have been interesting and suggest that tent rings are much older than have been previously thought. Furthermore, distinct variation in the size and shape of tent rings suggest that methods of tent ring construction have changed over time and appear to differ from region to region, perhaps a reflection of cultural or linguistic boundaries. So far the work has documented more than 300 tent rings within and adjacent to the park and resulted in discovery of 52 tent rings during 2005 field surveys.

## Archaeological Mentorship Program

By Becky Saleeby, Alaska Regional Office

The summer of 2005 was the second of three summer seasons for the Archeological Mentorship Program. Funded by a National Park Service (NPS) Shared Beringian Heritage grant, the program provides training and archeological fieldwork opportunities for young people from villages in Northwest Alaska. The program was envisioned as a way to bridge the gap between professional archeologists and young people in NPS-affiliated villages. Archeologists from the Alaska Regional Office (ARO), Western Arctic National Parklands (WEAR), and Gates of the Arctic National Park and Preserve collaborated to provide training for five young people, aged 17 – 22, from the villages of Point Hope and Kiana in 2005.

In 2005, the mentorship lasted five weeks, from early July to mid-August. The five students, along with a community coordinator from Point Hope and one from Kiana, were all employed for the duration by the National Park Service as temporary, summer hires. During the first week, they traveled to Kotzebue for training, delivered by ARO and WEAR archeologists and staff. The second week was spent back in their home villages working on specific



projects they designed for their own communities. In Kiana, they mapped the old village site, now in ruins. In Point Hope, they planned and began construction of a traditional sod house. The final component of the mentorship was fieldwork. Two of the students went to Knik to participate in an on-going historic archeological project there, while two students traveled to Agiak Lake in Gates of the Arctic to join an archeological crew mapping and testing an extensive landscape of ancient caribou-hunting sites.

Interns from Kiana and Point Hope participated in an archaeological mentoring program sponsored by the Beringian Shared Heritage Program and coordinated by the Alaska Regional Office. Interns participated in excavations and mapping of archaeological sites at Agiak Lake.



### Get the Lead Out

Our archaeological survey this summer was electronics intensive. We used digital cameras, GPS, and a laptop, but were able to power them entirely with a portable solar charging system. Using only rechargeable batteries we estimate having saved more than 600 disposable AA batteries (32 pounds worth!).



Elders examine an old wash bin at the Sulupaat camp on the Killik River. Sulupaat was the last Nunamiut camp on the Killik and was abandoned in 1949 when the Killik band walked to Anaktuvuk Pass.



### **Killik River Nunamiut Ethnohistory and Archaeology**

By Jeff Rasic

A component of the Killik-Nigu-Noatak River cultural resource inventory project was a series of site visits to historic Nunamiut camps on the Killik River with the participation of elders from Anaktuvuk Pass, who last occupied the sites in the 1940s. These camps are some of the most significant sites in the park. They figure prominently in Nunamiut cultural history as one of the areas the Nunamiut first returned to an inland lifestyle after a time spent living on the Arctic coast, and they also document one of the last examples of a mobile hunting, fishing and gathering lifestyle in North America. The work consisted of site visits, interviews, and archival research and was a cooperative effort between Gates of the Arctic and the North Slope Borough/Simon Paneak Museum. The elders were Justus and Ethel Mekiana, Rhoda Aghook, and

Mollie Aghook. James and Anna Nageak translated between Inupiaq and English. Grant Spearman, the director of the Simon Paneak Museum was instrumental in organizing the project, which built on decades of his careful research.

Highlights of the project include:

- ❖ Elders sharing over 20 hours of stories and knowledge, captured with video and audio recordings.
- ❖ Documenting 50 place names and associated oral history and stories from the Killik and Nigu Rivers.
- ❖ Relocating and recording detailed oral history and archaeological information from seven historic camp sites.
- ❖ Jay Flaming, a graduate student in Anthropology at University of Alaska Fairbanks, conducted research for a Master's thesis devoted to Killikmiut history and archaeology.

---

## Another Severe Fire Season at Gates

By James Savage

Fire activity in and around Gates of the Arctic was high this year with numerous fires burning outside the Park, and two within the Park. This is the second year in a row that Gates of the Arctic has seen a very active and long fire season. While not unusual in terms of acres burned, back to back severe fire seasons like 2004 and 2005 are unprecedented since records began in 1950.

The 2005 fire season began early with the Chapman Creek fire, which started outside the Park on May 30. This fire burned actively for several weeks, requiring control actions outside the Park to keep the fire from moving toward the community of Coldfoot.

Suppression action was taken to keep the fire south of Cathedral Mountain, east of the Middle Fork Koyukuk River, and south of Twelve Mile Creek on the west side of the Middle Fork. This fire was a high priority fire for suppression resources until significant rain fell the week of July 10. The fire continued to smolder all summer, however, and was not declared out until September 30, having burned for 152 days. Of the 162,860 acres that burned in the Chapman Creek fire, 18,242 acres were within Gates of the Arctic.

The Reed River fire started within Gates of the Arctic, and was managed as a Wildland Fire Use for Resource Benefit incident. This fire burned 470 acres in 46 days, starting July 28 until it was declared out September 11.

*Back to back severe fire seasons like 2004 and 2005 are unprecedented since records began in 1950.*



*The National Park Service contributes to knowledge about natural and cultural resources and associated values; management decisions about resources and visitors are based on adequate scholarly and scientific information.*

*Long-term Goal: Natural Resources. By September 30, 2008, 33% (3 of 9) species of management concern in Gates of the Arctic have improved information regarding their occurrence, distribution, and abundance in the Park, subject to availability of funding.*

**Annual Goal:** By September 30, 2005, 11% (1 of 9) species of management concern in Gates of the Arctic have improved information regarding their occurrence, distribution, and abundance in the Park.

**GOAL ACHIEVED**

## Dall's Sheep in the Arctic Network

By Jim Lawler

The Brooks Range is the northernmost extent of Dall's sheep. Little is known about the health and distribution of this alpine and arctic species that is sensitive to environmental variation. A wide-spread decline in Dall's sheep occurred throughout the Brooks Range in the late 1980s and early 1990s, but the extent of the decline and the degree of recovery are unknown. For the majority of the western Brooks Range, the last comprehensive survey was done in the early 1980s when NPS biologist Frank Singer inventoried suitable Dall's sheep habitat within Gates of the Arctic National Park and Preserve and the Western Arctic National Parklands. NPS's Arctic Network (ARC�) was established in 2003 to coordinate inventory and monitoring efforts within Gates of the Arctic National Park and Preserve, Kobuk National Park, Noatak National Preserve, Cape Krusenstern National Monument, and Bering Land Bridge National Preserve. Since Singer's survey, Dall's sheep surveys have been performed consistently in only a few areas of ARC� parks; for the majority of ARC� parks, the last survey conducted was Singer's.

The project's objective was to conduct a population survey for Dall's sheep using

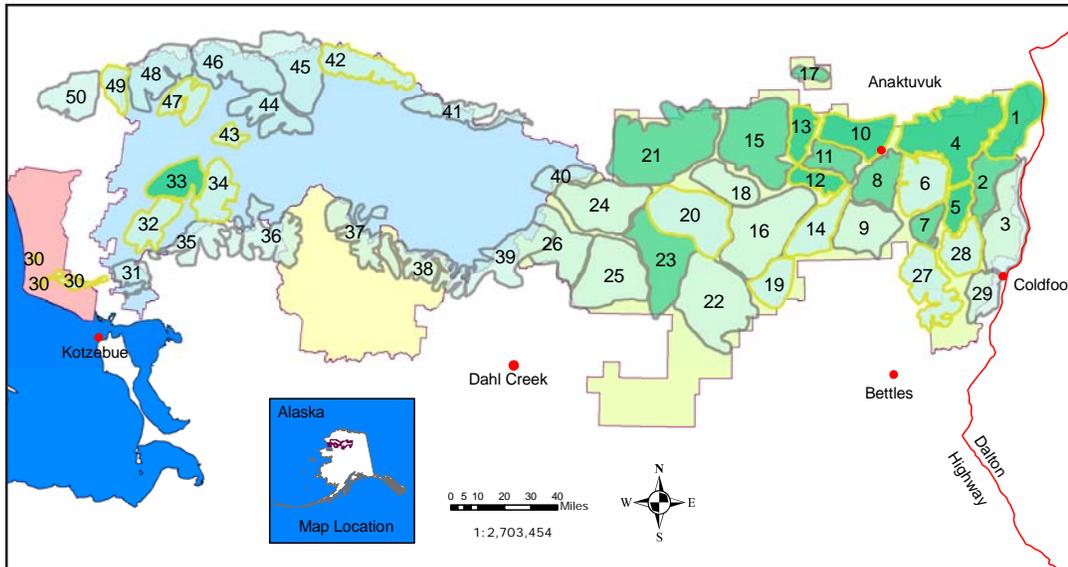
fixed-wing aircraft to determine the current distribution and abundance of Dall's sheep in the central and western Brooks Range. Relative to the historical data, the survey revealed the following about the current Dall's sheep population:

- Sheep densities remain higher in the northeastern portion of the survey area compared to southern and western portions.
- Sheep density declined in 13 of 20 survey units. These units were in the eastern portion of the survey area.
- Sheep density increased in the western portion of the survey area.
- Units surveyed in entirety in 1983-1984 and 2005 had 33% fewer sheep (4,624 sheep in 1983-1984 compared to 3,121 sheep observed during the 2005 survey).

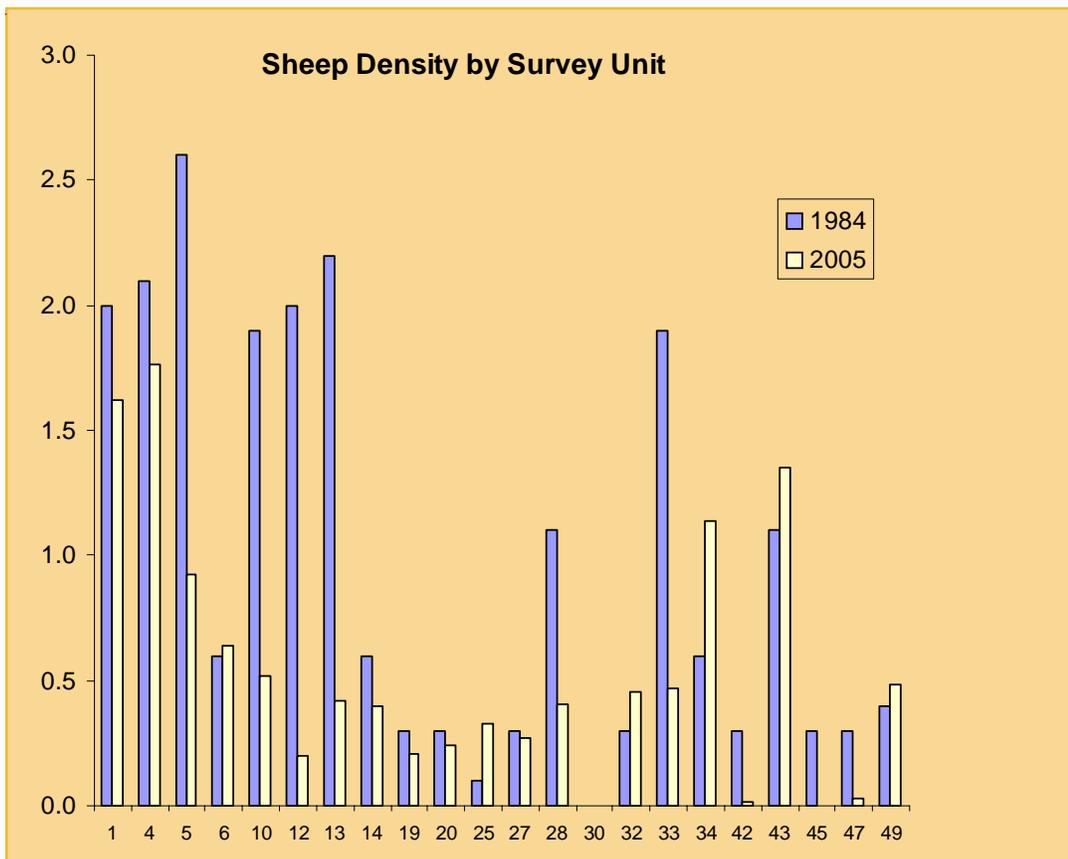
The survey will continue in 2006. The final report from this project will evaluate changes in sheep densities in the entire survey area from 1983-1984 in comparison to 2005-2006, and will provide a population estimate of Dall's sheep in ARC� parklands. In areas where surveys have been conducted since the early 1980s, a more detailed evaluation of changes in the sheep population will be possible.

This information will be of great use to ARCN parklands, NPS and other natural resource agencies as baseline data. It will also be useful for Park managers

evaluating the condition of the Dall's sheep population in the western Brooks Range and will help guide management of this unique alpine and arctic species.



Sheep survey units in the Brooks Range parklands. Survey units were classified as high density sheep areas (> 1.3 sheep/mi<sup>2</sup>; dark green) or low density sheep areas (≤ 1.3 sheep/mi<sup>2</sup>; light green) based on Singer's original data from 1983-1984. Units surveyed during June and July 2005 are outlined in yellow.



Dall's sheep densities observed in survey units in the western Brooks Range during the summers of 1983/1984 (blue) and 2005 (yellow). Eighteen units were surveyed in their entirety with the exception of two (units 10 and 20). In these two units, at least 75% of the area was surveyed.

## Riparian Bird Inventory

By Niki Guldager

Many migratory species face widespread loss and alteration of habitats at important sites along their migration routes. Impacts of habitat loss may be first detectable through changes in patterns of bird abundance and distribution on the breeding grounds. The riparian bird inventory was designed to document bird species distribution, diversity, density and habitat within Gates of the Arctic's major riparian corridors.

In 2005, the third year of this project, we sampled more than 150 points for landbirds along the Alatna and Itkillik Rivers, bringing the total number of survey points conducted in 2003 – 2005 to more than 800. The 2005 work completed surveys along all the major rivers in Gates of the Arctic, which also

include Noatak, North Fork of the Koyukuk, John, Kobuk and Killik.

Prior to the riparian bird inventory and an extensive shorebird inventory in 2003, Gates of the Arctic was largely un-surveyed, leaving a gap in our knowledge of the breeding distribution and habitat requirements of many migrant and resident bird species. Future field work will include using sound equipment to record songs and calls for 10-minute intervals throughout the day during the breeding season to determine daily and monthly timing for future monitoring efforts.

This bird inventory project was established through the Park Flight Program, which is a partnership between the NPS, National Park Foundation, National Fish & Wildlife Foundation/USAID, American Airlines, and the University of Arizona.

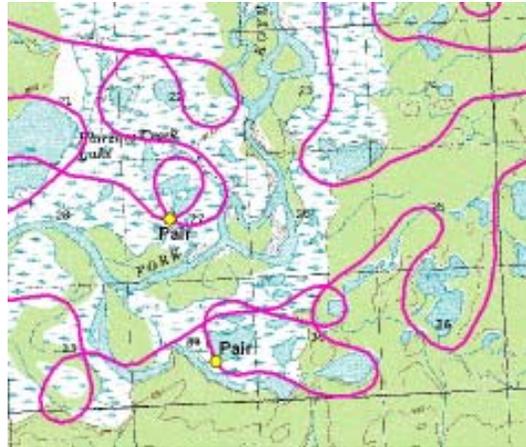


Bonapart's Gull chicks wait for mom to return on a clump of dirt on Kutuk Lake adjacent to the Alatna River. About 60 bird species were detected along the Alatna River in June 2005.

## Swan Survey

By Niki Guldager

Every 5 years, U.S. Fish and Wildlife Service surveys all trumpeter swan habitat in Alaska. The first survey was done in 1970. In 2005, the NPS at Gates of the Arctic participated. We conducted surveys on the south side of the Brooks Range in and near the Park. Data was given to USFWS and will be incorporated into their report.



Flight path of joint USFWS/NPS aerial swan survey over Gates of the Arctic, 2005. The seemingly random flight pattern follows major waterways and circles larger lakes in an effort to locate any swans that may be present.

## Determining Baseline Genetic Variation of Moose

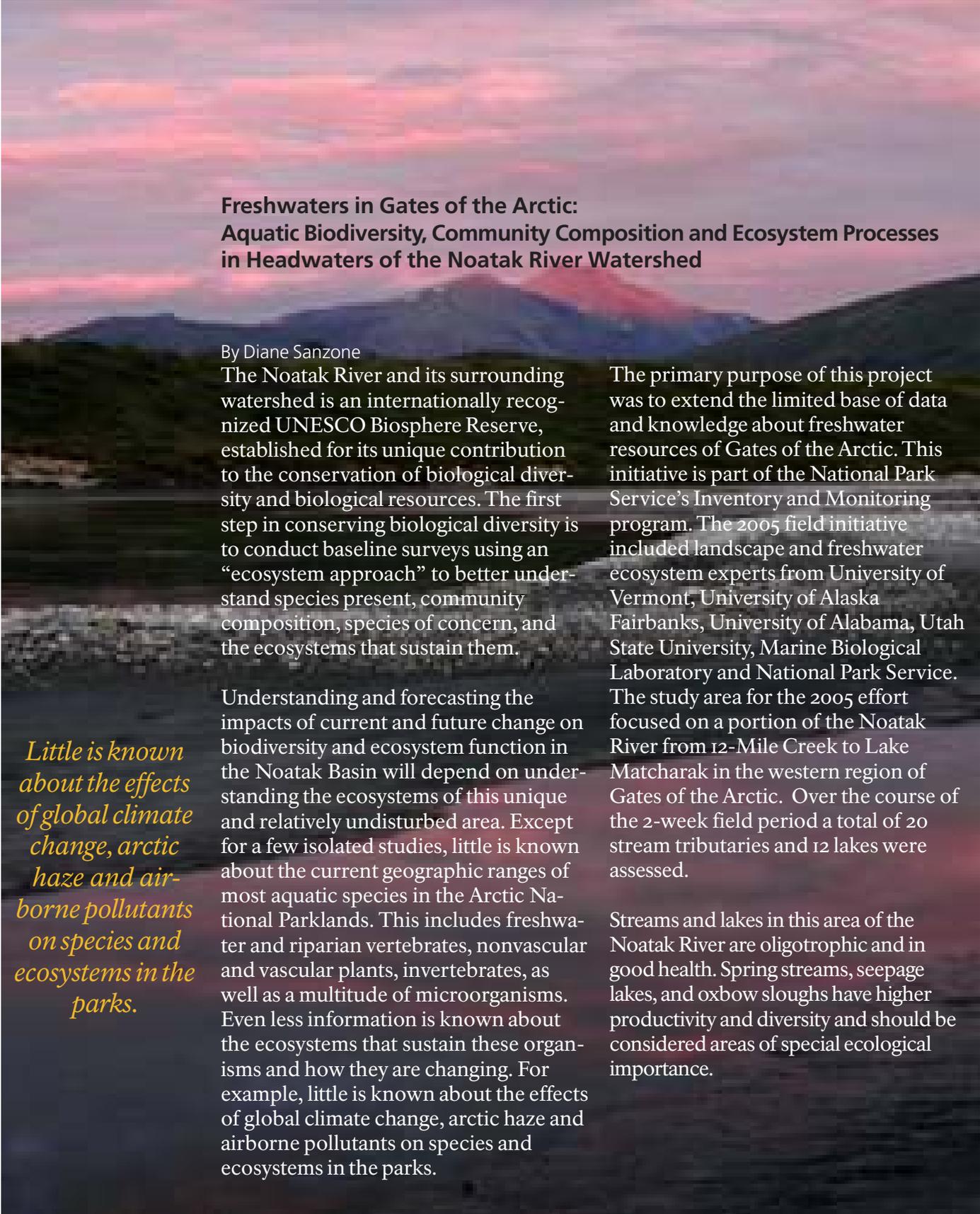
By Melanie Cook

This study will determine levels of genetic diversity and relatedness among the moose inhabiting the Selawik National Wildlife Refuge, Noatak National Preserve and Gates of the Arctic National Park and Preserve. In an interagency collaboration with USGS Alaska Science Center, Molecular Ecology Laboratory, about 300 unique blood samples collected from moose in these areas will be analyzed genetically. Nuclear-DNA microsatellite genotyping, the Polymerase Chain Reaction and mitochondrial-DNA sequencing will be used to determine levels of heterozygosity, allelic composition, inbreeding and levels of relatedness among the moose in these areas. In addition, complementary primer sets will be used so the data collected here will be comparable to other genetic data being collected for moose in Alaska by the Alaska Department of Fish and Game. Together with radio-telemetry data, this baseline genetic data will be used to monitor the “natural and healthy” status of this

population as mandated by the Alaska National Interest Lands Conservation Act of 1980. This genetic data will 1) determine levels of relatedness and interbreeding among moose in these areas, 2) provide a benchmark against which to monitor and detect future genetic change, 3) add to statewide genetic data currently being analyzed by the Alaska Department of Fish and Game and 4) assist in the development of long-term management plans to ensure population diversity and persistence throughout the state of Alaska.



*Together with radio-telemetry data, this baseline genetic data will be used to monitor the “natural and healthy” status of the moose population.*



## Freshwaters in Gates of the Arctic: Aquatic Biodiversity, Community Composition and Ecosystem Processes in Headwaters of the Noatak River Watershed

By Diane Sanzone

The Noatak River and its surrounding watershed is an internationally recognized UNESCO Biosphere Reserve, established for its unique contribution to the conservation of biological diversity and biological resources. The first step in conserving biological diversity is to conduct baseline surveys using an “ecosystem approach” to better understand species present, community composition, species of concern, and the ecosystems that sustain them.

Understanding and forecasting the impacts of current and future change on biodiversity and ecosystem function in the Noatak Basin will depend on understanding the ecosystems of this unique and relatively undisturbed area. Except for a few isolated studies, little is known about the current geographic ranges of most aquatic species in the Arctic National Parklands. This includes freshwater and riparian vertebrates, nonvascular and vascular plants, invertebrates, as well as a multitude of microorganisms. Even less information is known about the ecosystems that sustain these organisms and how they are changing. For example, little is known about the effects of global climate change, arctic haze and airborne pollutants on species and ecosystems in the parks.

*Little is known about the effects of global climate change, arctic haze and airborne pollutants on species and ecosystems in the parks.*

The primary purpose of this project was to extend the limited base of data and knowledge about freshwater resources of Gates of the Arctic. This initiative is part of the National Park Service’s Inventory and Monitoring program. The 2005 field initiative included landscape and freshwater ecosystem experts from University of Vermont, University of Alaska Fairbanks, University of Alabama, Utah State University, Marine Biological Laboratory and National Park Service. The study area for the 2005 effort focused on a portion of the Noatak River from 12-Mile Creek to Lake Matcharak in the western region of Gates of the Arctic. Over the course of the 2-week field period a total of 20 stream tributaries and 12 lakes were assessed.

Streams and lakes in this area of the Noatak River are oligotrophic and in good health. Spring streams, seepage lakes, and oxbow sloughs have higher productivity and diversity and should be considered areas of special ecological importance.

## Soil Remediation at Walker Lake Proves Successful

by Jobe Chakuchin

Contaminated soil found in 2003 during the retaining wall removal project at Walker Lake was treated with aeration and intermittent direct heat during the summer of 2004. Approximately two cubic yards of soil was contained in a lined area and covered for the 2004-2005 winter season. Samples were taken in June 2005 and sent to Analytica International in Fairbanks for analysis. The results for Gasoline Range, Diesel Range and Residual Range Organics

came back with low background levels. The results were sent to the Alaska Department of Environmental Conservation (DEC) who confirmed that concentrations were very low and do not pose a risk to human health or the environment.

After the results were confirmed, DEC recommended that the National Park Service (NPS) either use or dispose of the soil without conditions or restrictions. In July 2005, NPS field staff proceeded to broadcast the soil along the cut bank uphill of the old Walker Lake Lodge site.



Student volunteer Tammy Jones, from Shungnak, and Chief of Resources Tom Liebscher transfer soil into buckets for broadcasting.

## Jukebox Continues to Expand

By Dave Krupa

In the early 1990's, and in cooperation with the University of Alaska Fairbanks Oral History Program, NPS sponsored the development of multimedia oral history databases that allow park planners, staff, local communities, and virtual visitors to hear and experience accounts of life in and around Alaska's premier parks and preserves. Dubbed "Project Jukebox," oral recordings are integrated with maps, pictures, and text in an interactive computer program. The project continues to expand. Developments in 2005 to the Gates of the Arctic Project Jukebox include:

- New interviews were added with long-time geologists Gill Mull, George Gryc, Bill Patton, and Bill Brosge. The interviews were supplemented with inclusion of extensive photographic records from these scientists.
- A public access terminal for Project Jukebox was added to the Coldfoot Visitor Center in June. This stand-alone computer station provides access to all NPS Jukebox programs for the state, as well as recordings from the "Raven's Tales" public radio series.
- Gates of the Arctic also funded a new Jukebox module that will support interviews focusing on the development of the Dalton Corridor from pipeline construction to the present.
- All Project Jukebox programs have been migrated to a web accessible format and the entire corpus of programs can now be found at: [www.uaf.edu/library/jukebox](http://www.uaf.edu/library/jukebox).

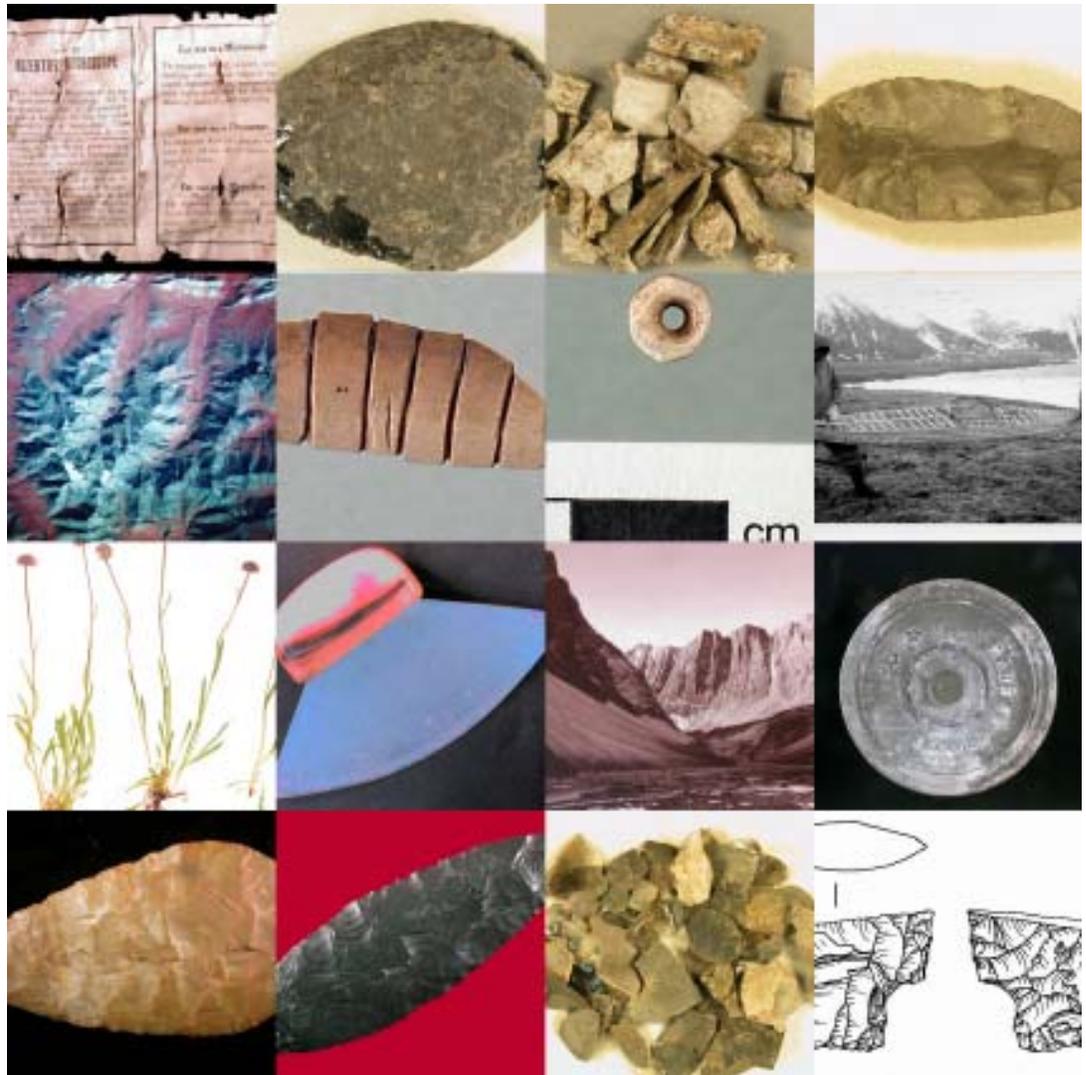
*In "Project Jukebox," oral recordings are integrated with maps, pictures, and text in an interactive computer program.*

## Museum Collections Highlights

By Jeff Rasic

Gates of the Arctic maintains a collection of historical objects, photographs, archival materials, and archaeological, botanical, and paleontological specimens. The collections preserve unique information for use in research, teaching, and resource management studies. In 2005, park staff accessioned 3,913 new items into the collections, primarily archaeological materials and project records from recent field investigations,

bringing the total number of items in the park collections is 61,091. Notable new accessions include park-related personal papers of long time Arctic researcher John Martin Campbell. These records include field notes, maps and reports on Brooks Range ethnography, archaeology, and wildlife from the 1950s-70s. We also received important records from geologist Tom Hamilton's landmark studies of Brooks Range glacial history that were conducted along the Alatna River and other locations in the park from 1961-1965.



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## *Provide for the Public Enjoyment and Visitor Experience*

*Visitors safely enjoy and are satisfied with the availability, accessibility, diversity, and quality of park facilities, services, and appropriate recreational opportunities.*

*Long-term Goal: Visitor Satisfaction. By September 30, 2008, 95% of visitors to Gates of the Arctic are satisfied with appropriate park facilities, services, and recreational opportunities.*

Annual Goal: By September 30, 2005, 95% of the visitors are satisfied with appropriate park facilities, services, and recreational opportunities.

**GOAL EXCEEDED**

### **Arrigetch in April**

By Pete Christian

In April, 2005, rangers from Bettles and Marion Creek conducted the first winter patrol to the Arrigetch Peaks in several years. With temperatures as low as -23F, rangers Pete Christian, Seth McMillan and Bob Maurer skied and snowshoed eight days into Arrigetch Creek, neighboring Hotsprings Creek and along the Alatna River to Takahula Lake. The purpose of this patrol was to assess winter and spring use of the area by incidental business permit holders and recreational mushers and to shovel the snowload off the cabin at Takahula Lake used by our resident stewards Steve and Kay Grubis.

An unusually deep and unconsolidated snow pack made traveling difficult at times; we sank up to three feet even with snowshoes on. An Arctic Oven tent with woodstove allowed two of us to sleep warm each night and to dry gear and clothing at day's end. Although night temperatures were cold and the snow bottomless, sunny days made for beautiful vistas. The dazzling icy slopes of the Arrigetch Peaks looked like fingers of winter's outstretched hand.

Although snowmachine and dogsled tracks were observed on the Alatna River, we saw no sign that visitors had trekked up Arrigetch Creek. The patrol ended at Kay and Steve Grubis' cabin on Takahula Lake. We spent two days shoveling heavy snow off the roof and ferrying materials and supplies to assist the Grubis' with their spring return to the Park. The patrol was a success with all objectives achieved and the added benefit of honing Pete, Seth and Bob's winter travel skills. A similar patrol in another part of the Park is scheduled for spring 2006 to monitor subsistence activities and protect park resources.

## Ensure Organizational Effectiveness

*The National Park Service uses current management practices, systems, and technologies to accomplish its mission.*

### Environmental Management Plan Implemented in Bettles

By Gary Youngblood



Flammable materials lockers stand outside the maintenance shop in Bettles where hazardous and unknown fluids are kept secure until it can be determined what they are and how to properly dispose of them.

Gates of the Arctic's operations staff (standing in front of the Bettles Ranger Station in the photo below) implemented a "reduce, re-use, recycle" program in Bettles that halved the amount of trash they haul to the local landfill.

In 2005, the Bettles staff took steps to reduce the amount of hazardous and house hold waste they produce. Located on the banks of the Koyukuk River 35 miles north of the Arctic Circle, no road serves Bettles, save an ice road in winter when sufficient snow cover allows for one. Being so remote, shipping out waste or hazardous materials is difficult. Also, the small landfill is filling up. The neighboring village of Evansville, on whose land the landfill sits, must restrict the amount of garbage dumped there. Faced with these challenges, we adopted a "Reduce, Re-use and Recycle" program, and have found ways to safely dispose most of our hazardous waste.

Used oil from the generator, air planes and vehicles was the largest source of

hazardous waste. There were also numerous drums of oil/water mix and diesel/water mix that had been recovered from the park by rangers and natural resources staff. We used an oil/water separator to extract the oil, and then burned it in a device that uses a fan to burn waste at an extremely high temperature so that fuel is completely consumed with minimal impact to the environment. Used sorbent from the separator is also burned in this manner. Approximately 300 gallons of waste was eliminated by use of the separator and burner.

*Approximately 300 gallons of waste was eliminated...*

Another challenge was to reduce landfill use. In partnership with Evansville Tribal Council, we placed recycling bins in the office, maintenance shop, and staff housing. It took extra time and effort, but the staff were very cooperative in separating their trash. By removing aluminum, glass and paper from household trash, the amount of waste taken to the landfill each month was halved. The effort was so successful, it prompted a letter of commendation from the Evansville Tribal Council.

With these efforts, and the implementation of "green procurement," NPS staff in Bettles are making great strides in protecting the environment of their community and the park they serve.

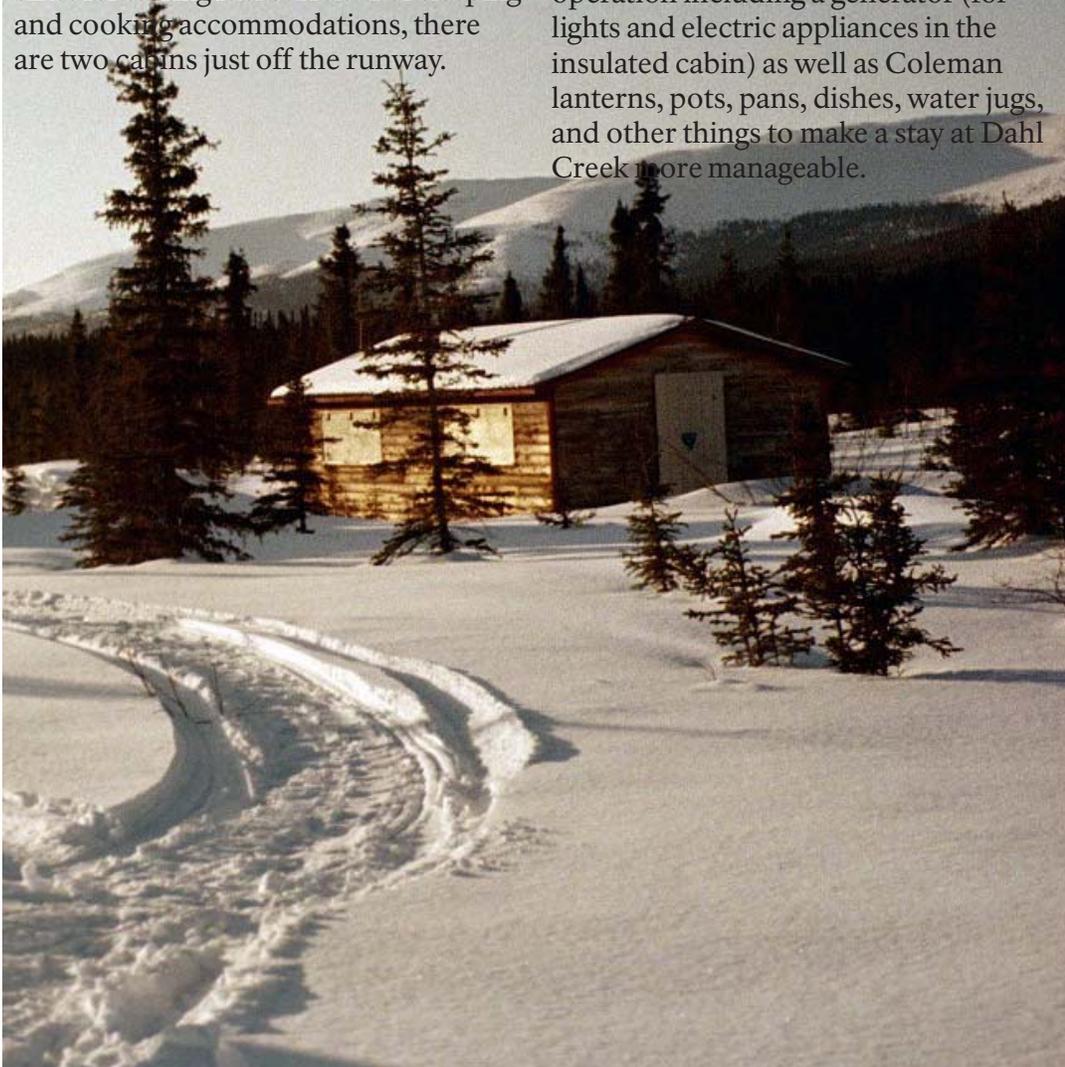


## Dahl Creek gets winterized!

By Jim Lawler

A number of aerial wildlife surveys NPS has conducted in the western Brooks Range in the past two years have been based at Dahl Creek, an airstrip about 5 miles north of Kobuk village on the Kobuk River. In 2005, bear, sheep, and moose surveys were based there. Gates of the Arctic, Western Arctic National Parklands, and Arctic Network share three leased cabins at Dahl Creek for fuel storage and overnight accommodations. One cabin is a fuel shed, right next to the airstrip, which houses two dikes for storing fuel barrels. For sleeping and cooking accommodations, there are two cabins just off the runway.

Although livable in summer, lack of insulation, windows and a stove made the going tough at other times of the year. This all changed in August. In a joint effort between Gates of the Arctic and Western Arctic National Parklands, one of the cabins was insulated top to bottom, wired and outfitted with windows, new doors and a new drip oil stove. Food storage and cooking improved with the addition of new propane range/oven and refrigerator/freezer. Bunks in the newly insulated cabin sleep eight. Inside the uninsulated cabin, which sleeps 10, we stashed additional upgrades to the Dahl Creek operation including a generator (for lights and electric appliances in the insulated cabin) as well as Coleman lanterns, pots, pans, dishes, water jugs, and other things to make a stay at Dahl Creek more manageable.



In a joint effort between Gates of the Arctic and Western Arctic National Parklands, one of the cabins used for aerial wildlife surveys at the Dahl Creek airstrip near Kobuk was insulated and renovated to make winter use of the cabin more comfortable. Above, wildlife biologist John Burch installs insulation in the cabin walls.

## Financial Summary

### Operating Budget Base Allocations (ONPS) Expenditure Highlights

#### *\$725,000 for Research and Resource Management*

We conducted considerable cultural resource work including archaeological studies across the northern portions of the park. Natural resource studies included many collaborative studies with other agencies and the Arctic Inventory and Monitoring Program. Compliance reviews of projects were active and wildlife regulatory management was very active under Federal and State systems.

#### *\$750,000 for Resource Protection and Visitor Services*

We finished constructing a temporary replacement Visitor center in Bettles, and were active in 3 gateway communities giving backcountry orientation programs. The Arctic Interagency Visitor Center in Coldfoot was in full operation for the first time. Wildlife law enforcement was active and effective.

#### *\$250,000 for Facilities Operation and Maintenance*

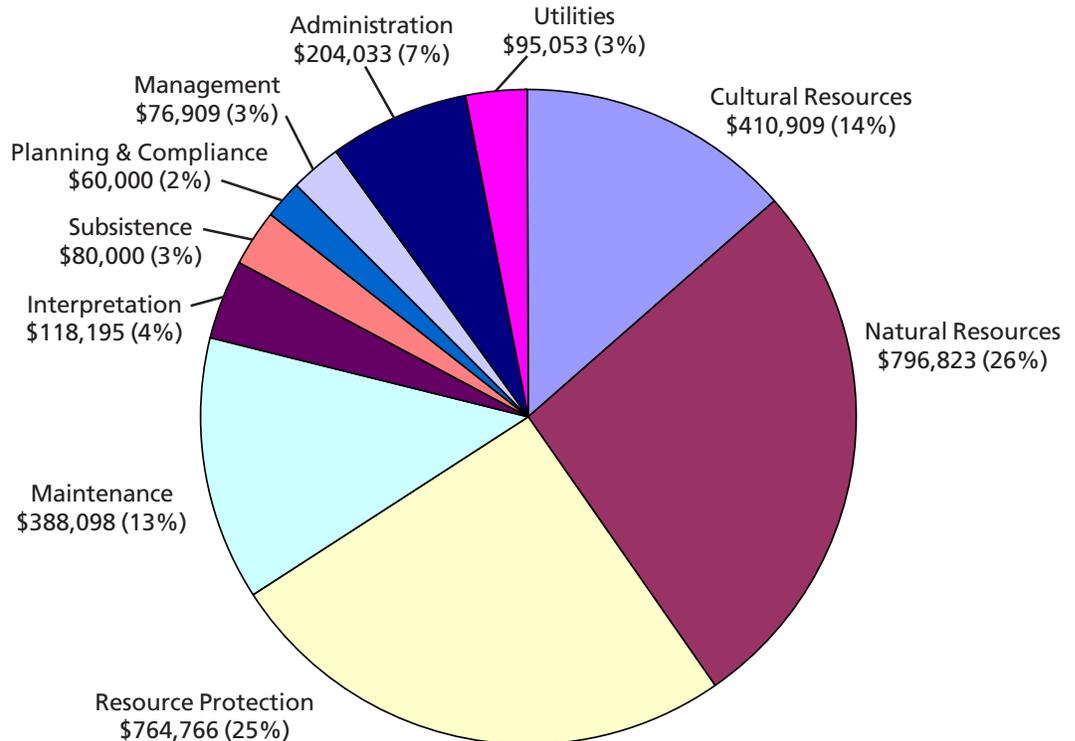
We maintained over 20 facilities in 3 remote communities and absorbed increasing costs of utilities. Bettles facilities were upgraded and improved for energy efficiency and extreme arctic environments. A solar system at Marion Creek decreased the reliance on fossil fuels.

#### *\$275,000 for Management and Administration*

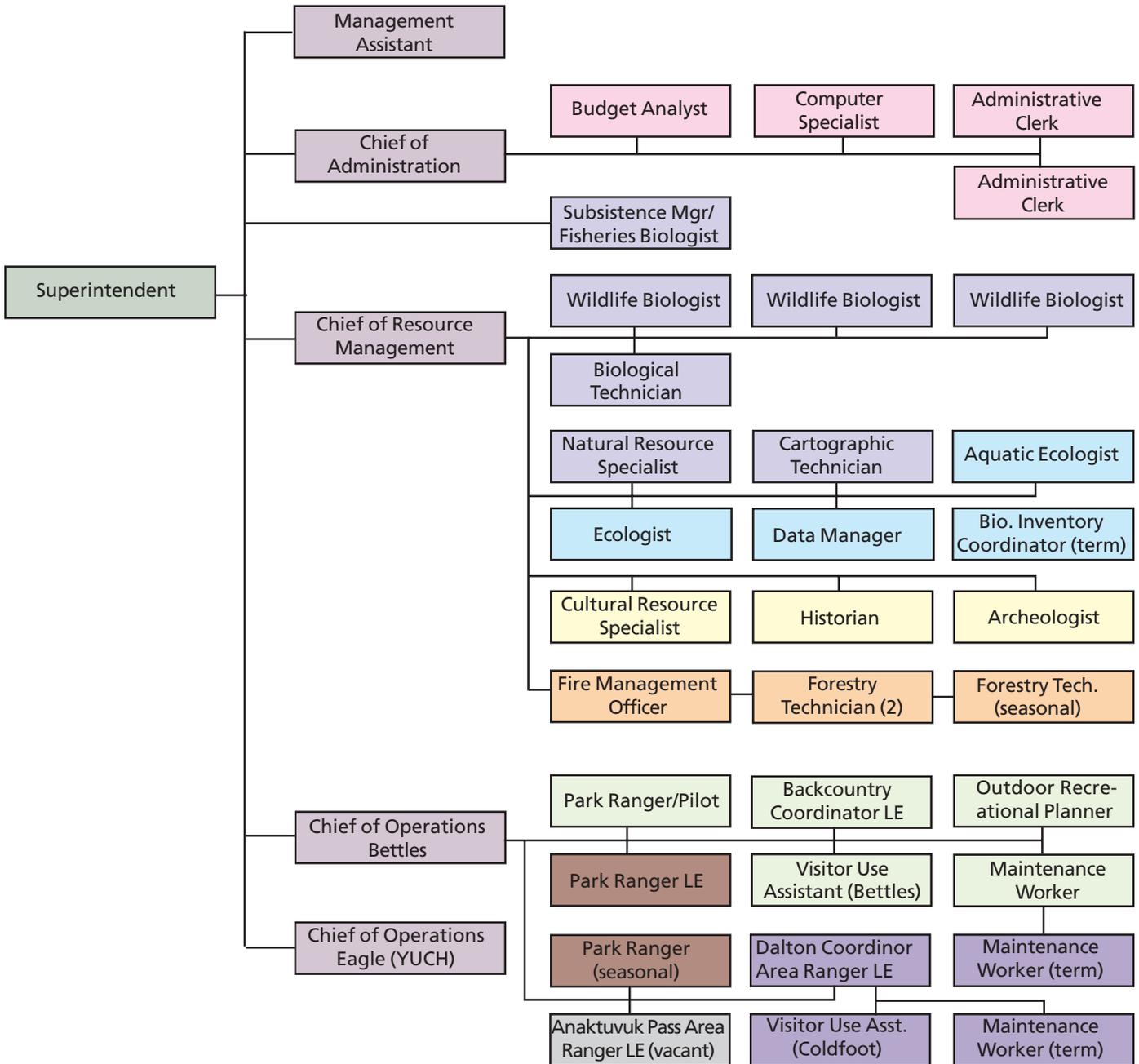
We continued improving our information technology system in response to increased requirements and user demands. We invested considerable effort in planning a new office in Fairbanks. The move should occur during the summer of 2006.

*What do we do?  
studies...  
compliance...  
construction...  
backcountry  
programs...  
upgrade and  
improve...  
planning...*

### All Sources of Park Funding \$2,673,402 total



# Gates of the Arctic National Park and Preserve Organization



Note: All positions are shared with Yukon-Charley Rivers National Preserve except those under the Chief of Operations in Bettles.



Visiting scientists assisting the Arctic Network join ARCN coordinator Diane Sanzone (far right) on the Noatak River in Gates of the Arctic National Park and Preserve, July 2005. Physical, chemical and biological characteristics of lakes and streams in the Noatak basin were assessed during a 2-week field operation.

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