

Gates of the Arctic National Park and Preserve Annual Report 2002





Table of Contents

Message from the Superintendent.....	3
Purpose and significance of Gates of the Arctic.....	4
Map of Gates of the Arctic.....	5
Performance and Results Section.....	6-22
<i>Park Resources</i>	6-15
<i>Public Enjoyment and Visitor Experience</i>	16-21
<i>Wilderness Stewardship and Backcountry Planning</i>	18
<i>Organizational Effectiveness</i>	22
FY 2002 Financial Summary.....	23
Park Organization.....	24

Contributors:

Dave Mills, Superintendent
Robyn Burch, Chief of Administration
Tom Liebscher, Chief of Resource Management
Roger Semler, Chief of Operations
Steve Ulvi, Management Assistant
Doug Beckstead, Historian
John Burch, Wildlife Biologist
Melanie Cook, Biological Science Technician
Jobe Chakuchin, Natural Resources Specialist
Tina Copeland, Interpretive Specialist

Eileen Devinney, Anthropologist
Donna DiFolco, Cartographic Technician
Nikki Guldager, Wildlife Biologist
Marsha Henderson, Fire Management Officer
Dave Krupa, Cultural Anthropologist
Amy Larson, Aquatic Ecologist
Jim Lawler, Wildlife Biologist
Morgan Miller, Fire Education
Debbie Nigro, Wildlife Biologist
Don Pendergrast, Outdoor Recreation Planner
Jeff Rasic, Archeologist

Layout, Design, and Editing

Donna DiFolco and Tina Copeland

Maps

Donna DiFolco and Marsha Henderson

Photos

by Gates of the Arctic staff,
unless otherwise noted

Printed on
Recycled
Paper



For more information, contact us at:
Gates of the Arctic National Park and Preserve
201 First Avenue
Fairbanks, Alaska 99701
(907)457-5752
or visit our web site at www.nps.gov/gaar

Message from the Superintendent

I am pleased to submit this annual report for Gates of the Arctic National Park and Preserve. The year 2002 continued to be an active and successful year of accomplishments in preserving our country's heritage, a heritage exemplified by unique, superlative natural and cultural resources. Through these accomplishments we continue to gain increased public support for protection of the values and resources that comprise one of America's most wild and remote areas. We have made significant improvements in understanding the cultural and natural resources of the central Brooks Range and have made advances in how we share this information with the public, as well as how we conduct and maintain effective day-to-day operations.

This report is organized along the outline of the park's Strategic Plan and the structure of the Government Performance and Results Act. It links our accomplishments to park mission, long-term and annual goals and tracks measurable outcomes that allow us to determine the effectiveness of our efforts in preserving the park and preserve unimpaired, for the benefit of future generations and for the appreciation and enjoyment of the present generations.

We continue to improve our ability at the park level to conduct long and short-term planning and environmental and cultural compliance. We have completed important background research, a preliminary step in updating our General Management Plan, and have begun public scoping on the issues that relate to park backcountry management.

I am especially proud of our continued excellence in employee and visitor safety. Our continued record of no lost time employee injuries and that of no reported visitor injuries for 2002, demonstrates the effectiveness of our extensive employee and visitor training programs. We have a very hazardous environment in which to live and conduct our business, perhaps one of the coldest and most remote areas in the state. Our in-depth backcountry orientation program was greatly improved this year with the completion of a safety and *Leave No Trace* video that is available to visitors before they enter the park.

As this report details, we have a very active cultural and natural resources program, typified by diverse and active inventory and monitoring programs. Being a relatively young park area, our focus at Gates of the Arctic continues to be one of seeking understanding of the natural and cultural systems we are trusted to protect. We continue to expand our programs into new areas by working with communities within and outside the park's boundary. Partnerships have been developed with Alaska Native organizations, universities, state and federal agencies and organizations from around the globe in order to better accomplish these goals. Our Sister Park relationship with Russian protected areas continues to develop through the sharing of expertise and working together on common challenges.

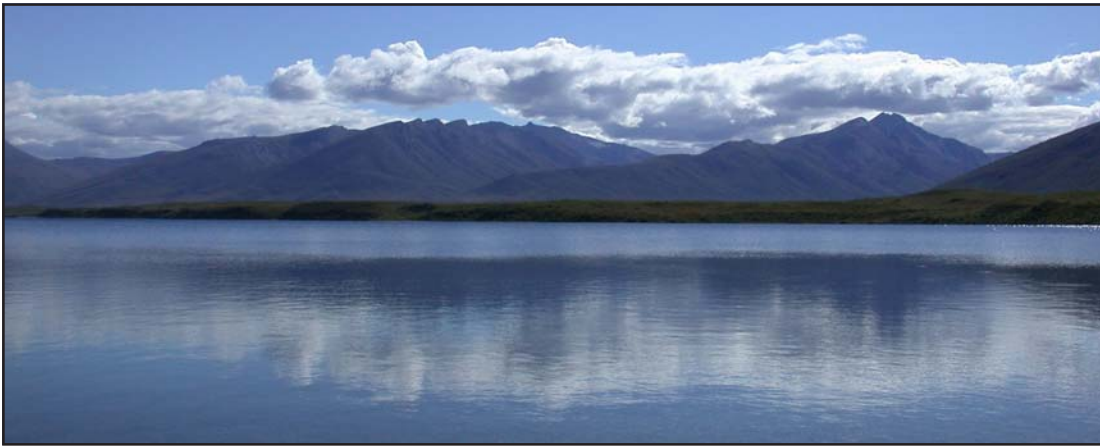
I am pleased to announce that nearly a decade of effort and planning has resulted in the construction of the new Arctic Interagency Visitor Center. This cooperative interagency effort between the National Park Service, Bureau of Land Management and the Fish and Wildlife Service will result in the grand opening of the new center in Coldfoot, Alaska on the Dalton Highway during the summer of 2003 and will become the park's primary frontcountry visitor center.

In reading the following pages, I hope you will appreciate the hard work and dedication of the many people, organizations, agencies and partnerships who have contributed the resources and support necessary to make our strategic planning goals a reality.

Dave Mills

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

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 the park and preserve 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.



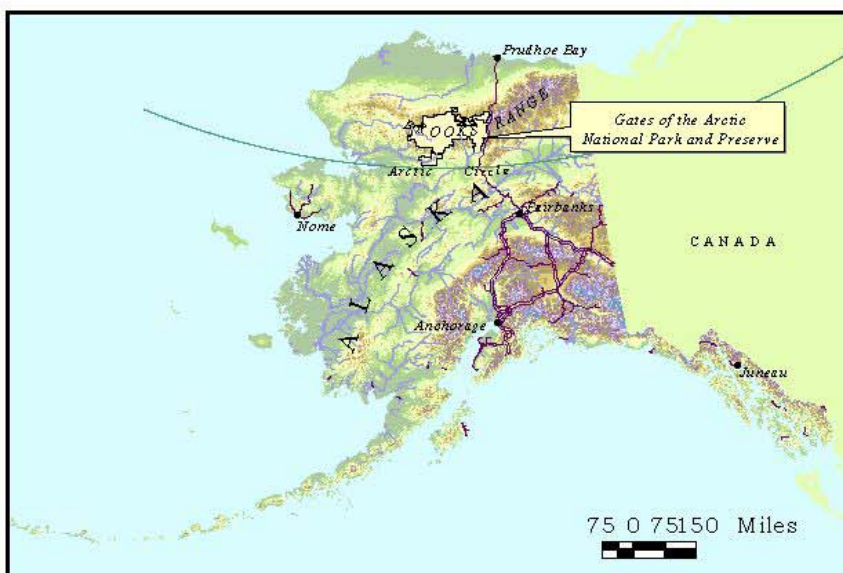
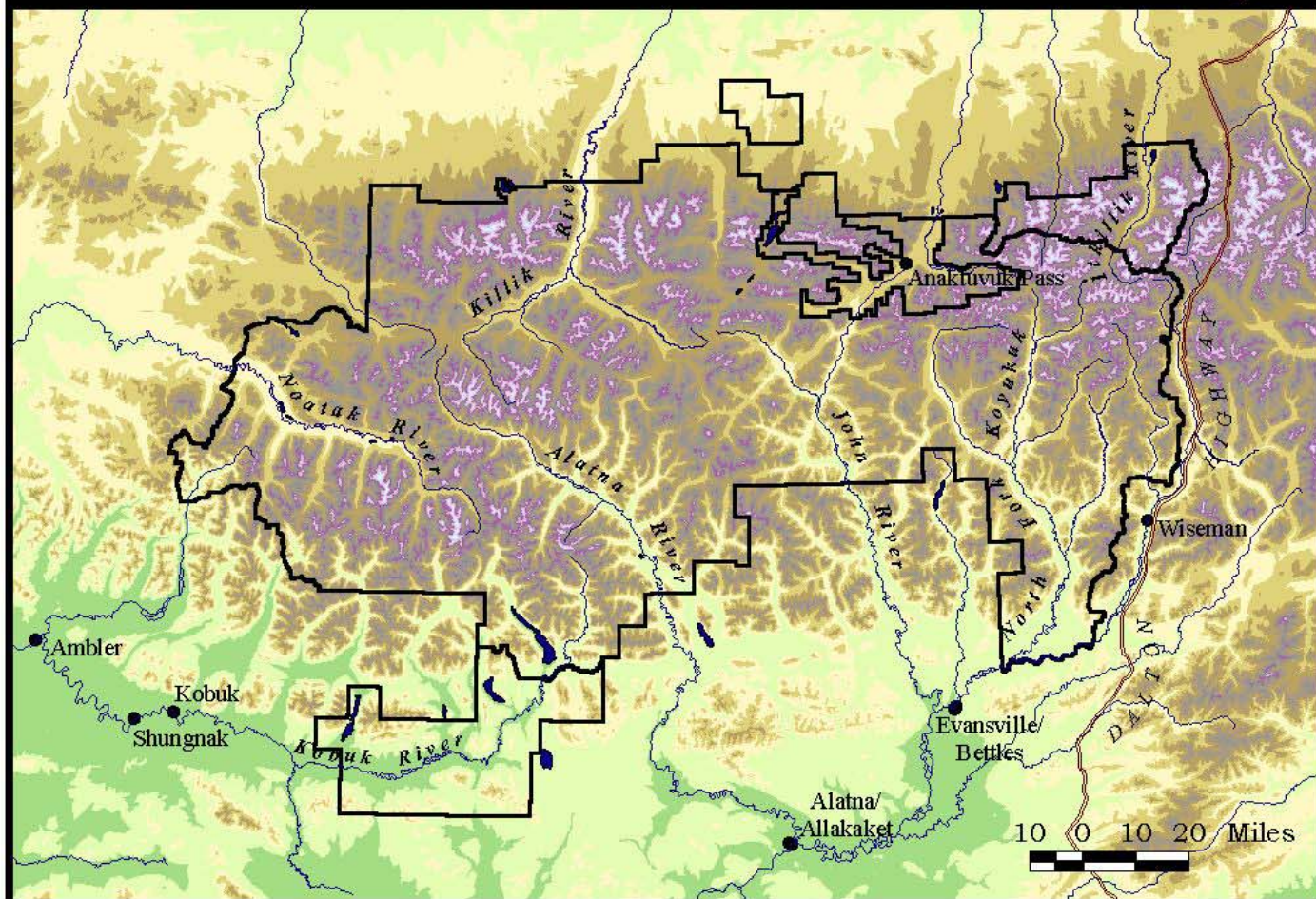
The Purpose of Gates of the Arctic National Park and Preserve is to:

- 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.

Gates of the Arctic National Park and Preserve has National Significance:

- 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



Gates of the Arctic National Park and Preserve lies north of the Arctic Circle in the central Brooks Range of Alaska. Visitors typically access the area via the Dalton Highway and hike in, or by air. Commercial carriers serve Bettles and Anaktuvuk Pass, where the Park maintains field offices. Air charter operators based in Bettles use float planes to fly visitors into the park, landing 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 and VIPs offer orientations which brief visitors in safety issues and *Leave No Trace* camping techniques.

Preserve Resources

Mission Goal: 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: Water Quality. By September 30, 2005, the water quality at Gates of the Arctic will remain unimpaired.

Annual Goal: By September 30, 2002, an aquatic biologist will be hired and begin to develop a water quality program for the park.

GOAL ACHEIVED: Our aquatic biologist was hired in August, and water quality is unimpaired.

Aquatic Ecologist on Board at Gates of the Arctic

Gates of the Arctic National Park and Preserve and Yukon-Charley Rivers National Preserve (YUGA) now has an Aquatic Ecologist on board who is developing projects in three key areas.

Amy Larsen, whose emphasis is in wetland ecosystem dynamics, is initiating a wetland inventory and characterization project at Gates of the Arctic. The primary objective of this study is to collect baseline water quality, plant species composition, and macroinvertebrate data in small ponds.

Secondly, she is developing a cooperative project to evaluate pond drying and thermokarst pond

expansion in interior Alaska. This project will be a collaborative effort between YUGA, Yukon Flats and Kanuti National Wildlife Refuges.

As a member of the YUGA resource team, Amy also is helping to develop the Central Alaska Network's (CAN) monitoring plan. The data will provide Yukon-Charley Rivers National Preserve with important baseline information on key aquatic resources in the Preserve.

Accomplishment:

- Hired an aquatic ecologist for YUGA who is developing a water quality program for Gates of the Arctic.

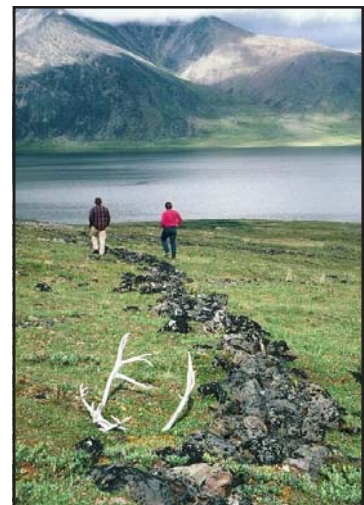


Archeological Site Monitoring

During the summer, 2002, field season, resource management specialists and backcountry rangers visited seven sites at Selby and Kurupa Lakes. Sites were monitored and assessed for overall condition. Sites may be altered by natural or human-caused impacts, such as erosion or vandalism. The goal of monitoring is to prevent the loss of these irreplaceable resources.

Left: Chert biface

Right: Caribou drive line



Mission Goal: 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, 2005, 8 natural resource inventories identified in the Resource Management Plan are completed for Gates of the Arctic. (Numerous Inventory and Monitoring projects are ongoing at the time of the plan being written. Resource Inventories for the following are planned to be completed or implemented during the period of this Strategic Plan: wilderness, musk oxen, sheep populations, fish, birds, moose, human use (including subsistence)).

Annual Goal: By September 30, 2002, 3 populations' health will be reported as data bases. The sheep, muskox, and bird field studies will be completed and results determined.

GOAL EXCEEDED: Natural resource inventories completed for sheep, muskoxen, hare and birds. In addition, an annual report was completed for the hare study. Small mammal inventory was completed through I/M program.

Demography and Home Ranges of Dall's Sheep near Anaktuvuk Pass

NPS wildlife biologists completed a 4-year study of the movements and seasonal distribution patterns of Dall's sheep near Anaktuvuk Pass, a Nunamiut community that lies just inside the Park boundary. Besides being one of the most commonly viewed wildlife species in the Park, Dall's sheep are a traditional subsistence food source for local hunters. Unlike caribou, the other common large mammal of this area, Dall's sheep do not make large-scale seasonal migrations.

Our findings suggest a high degree of fidelity to home ranges.

Our findings suggest a high degree of fidelity to home ranges. Results indicate little mixing between adjacent groups, whether geographical barriers were present or not. While the mean home range size was 23 square miles, rams tended to have larger home ranges than ewes. Certain areas appear to constitute Dall's sheep habitat year-round, rather than moving between ranges seasonally, and the extent of use of these areas appears to be dictated by their availability (e.g., during winter, snow may restrict Dall's sheep to certain areas).

The mean body weight of captured adult ewes was 114 lbs., comparable to body weights of Dall's sheep elsewhere in Alaska. Annual mortality rate has been between 11 and 22%. Results from blood samples taken from captured sheep were negative for the 7 tested viral and bacterial infectious agents. Lungworms and gastro-intestinal parasite larvae found were typical of other wild sheep populations. Together, all these results indicate no health problems, either for the sheep or for the humans that may consume them.

Harvest of Dall's sheep in the area near Anaktuvuk Pass has been less than projected. While the allowable harvest of Dall's sheep for the community of Anaktuvuk Pass is 60 sheep, no more than 10 of which can be ewes, the observed harvest levels have ranged from 5 to 17 sheep a year, the majority of these being rams.

Preliminary results...indicate a healthy population.

Whereas foot surveys met with poor success during this study, results from aerial surveys using a small plane have been substantially better. Although results have been variable, sample sizes have been large enough to determine sex and age composition of the population. Preliminary results from this survey indicate a healthy population.

Accomplishments:

The goal of providing information to help Park managers ensure healthy populations of Dall's sheep was met by addressing several objectives.

- Assessed the health of Dall's sheep near Anaktuvuk Pass;
- Determined the home range size, seasonal movements, and range fidelity of Dall's sheep;
- Assessed the local harvest of Dall's sheep;
- Evaluated the feasibility and economics of foot-surveys and aerial surveys for Dall's sheep;
- Continued the exchange of information with residents of Anaktuvuk Pass.



Due to steep, rugged terrain and poor weather conditions, foot surveys met with poor success during the Dall's sheep study. Aerial surveys using small planes yielded greater sample sizes with which to base conclusions.

6th Annual Snowshoe Hare Survey

March 2002 saw the completion of the 6th annual snowshoe hare survey in Gates of the Arctic. Compared with previous years, we counted very few tracks this year, indicating a severe drop in the hare population. Freshly browsed stems (from the current season) were difficult to locate, as nearly all were buried under several inches of

We counted very few tracks this year, indicating a severe drop in the hare population.

snow. The average diameter of browsed stems (which includes stems mostly browsed in previous years) was approximately 5 mm. Results from analyses of nitrogen and tannin content of browsed stems are not yet complete. The soil samples yielded extremely low concentrations of cadmium, copper and arsenic.

Plans for the 2003 season are to continue the hare survey, but try using slightly different methods. We will attempt to set up the transects early in the year (February) and count tracks opportunistically after fresh snowfall.

Accomplishments:

- Conducted the 6th annual hare track count survey to obtain an index of the population size.
- Collected data on browsed vegetation and analyzed soils for heavy metal content.



The 2002 snowshoe hare survey saw lots of heavily browsed vegetation but very few hare tracks.

Looking for Muskoxen in Gates of the Arctic

Muskoxen (*Ovibos moschatus*) were extirpated from northern Alaska in the middle of the 19th century and were re-established in northern Alaska in the late 1960s and early 1970s. Following their release, these muskoxen populations increased and dispersed. As a result, muskoxen are being seen with increasing frequency in Gates of the Arctic. Re-establishment of populations of muskoxen into GAAR would be a desirable outcome of their natural and current dispersal and range expansion.



A muskox stands on the bank of the Noatak River in Gates of the Arctic National Park and Preserve.

Since 1997, incidental observations of muskoxen within Gates of the Arctic were tabulated in a database. Where possible, information regarding sex and age of animals and locations of observations were obtained from sightings by park visitors, park employees and reports from local residents.

The majority of muskoxen observations within Gates of the Arctic occur during the summer when the greatest number of visitors and staff are in the park. Currently, 66 observations of muskoxen have been recorded in the Park. Observations along the Noatak River, resulting mainly from recreationalists, account for 67% of the total, while observations near Anaktuvuk Pass, reported mostly by community members, account for an additional 12%. Both sets of sightings are likely multiple observations of a few animals in each location. Rarely was the sex of the animal noted. Of 66 sightings, 26 reported bull muskoxen and one reported a cow. The cow observation was not within the Park, but within 10 miles of the Park boundary.

We have flown aerial surveys to look for muskoxen since 1999. The surveys followed major river drainages

on the north and west sides of the Park, concentrating in valley bottoms since these areas were expected to be the most favorable for muskoxen. No muskoxen were observed during the aerial surveys in 1999. During the 2000 winter survey, 3 bull muskoxen were observed in 3 separate locations along the Noatak River. Muskoxen groups were observed in the park in 3 locations in the Noatak River valley during the winter 2001 survey, one of which was comprised of a bull and a cow. During the summer 2001 survey, 1 bull muskox was observed just outside the Park boundary. Muskoxen were observed in 3 groups along the Noatak River and in the Itkillik drainage during the winter survey of 2002, including a cow-bull pair (in the Noatak River drainage).

The maximum number of muskoxen occurring concurrently in Gates of the Arctic (including a 10-mile buffer) was in the winter of 2001 when 7 muskoxen were observed along the Noatak River. More significant was the first documented observation of a female muskox in the Park. This is a significant step in the re-establishment of a breeding population within Gates of the Arctic. A second observation of a female muskox in the same general area during the winter survey of 2002 indicates either a resident female or substantial dispersal into the Noatak River. Either possibility would indicate a strong potential for the Noatak River drainage to support muskoxen.

More significant than the number of muskoxen observed was the observation of a female muskox.

It is unlikely any large groups of muskoxen currently occupy Gates of the Arctic; nevertheless, a Park-wide population estimate of 7 muskoxen is conservative. Although no cow muskoxen with calves have been observed in Gates of the Arctic, there is potential for them to calve in some of the larger and wider drainages on the north and west sides of the park. In addition to the female muskoxen observed along the Noatak River during 2001 and 2002, mixed-sex groups of muskoxen occur 30 miles to the north-east of the park in the Ribdon drainage. Dispersal of animals from the Ribdon group may eventually lead to the presence of a breeding population in the north-east corner of the park. Therefore, re-establishment of this species within the park may simultaneously occur in more than one area and the re-establishment of a breeding population may be imminent.

2002 Bird Surveys

Many of the avian species found in Gates of the Arctic National Park and Preserve are neotropical migrants, wintering in the southern United States, the tropics and South America. Several species, such as the Bluethroat and Northern wheatear, migrate to Asia and North Africa. Migrating birds are facing widespread loss of habitat in critical feeding and staging areas along migration routes and in wintering areas.

Pesticides and herbicides constitute additional threats to migrating birds, particularly those wintering in third world countries. Impacts of these threats on neotropical migrant bird populations may be detected first through changes in bird abundance, distribution and reproductive success on the breeding grounds. In 1993, Boreal Partners in Flight coordinated a program using offroad point counts to monitor bird species abundance in Alaska. As part of this program, park biologists established 3 offroad point count routes within the park; three new routes have been added since 1993, resulting in 2 routes in 3 different sur-

vey areas.

In 2002, 57 bird species were detected during the off-road point count transects. Of those 57 species, 6 species were detected in all 3 survey areas. Species composition was comparable between the Anaktuvuk Pass and Pingo Lake transects, however, species detected on the Middle Fork Koyukuk transects were different from those detected at Anaktuvuk and Pingo Lake. Species that were unique to Middle Fork Koyukuk were those that are typically found



The fox sparrow is one of several species of sparrow found in Gates of the Arctic.



Swainson's thrush is commonly heard along the forested Middle Fork Koyukuk River route.

in boreal forest and riparian systems (e.g. Canada goose, spotted sandpiper, solitary sandpiper, olive-sided flycatcher, bank swallow, gray jay, boreal chickadee, ruby-crowned kinglet, Swainson's thrush, varied thrush, yellow warbler, myrtle warbler, and northern waterthrush), while those unique to Anaktuvuk Pass or Pingo Lake are more typically detected in mountain and lake system habitats (e.g. red-throated loon, long-tailed jaeger, golden eagle, upland sandpiper, least sandpiper, American golden plover, Lapland longspur, horned lark and rosy finch).

Documenting Human Use in Gates of the Arctic Killik River

The purpose of this project is to locate all campsites, viewpoints and landing points, determine current level of human use and assess future effects of human use. An inventory of human use sites was done in the 2002 field season. A new site was found in the upper stretch, with visitor use of the Killik River valley suspected to be slowly rising. Some old sites, originally surveyed in the mid-1980s, appear to be no longer in use. Over all, very little sign of current human use was found. Like most broad river valleys, the Killik River has a range of small to large gravel bars that provide many opportunities for minimum impact camping. Four out of six sites observed did not appear to be actively used. Two sites were left for future cleanup action.



Crewmember Mike Weidmer of the Alaska Department of Fish and Game looks over vegetation classes on a site along Easter Creek. The site is a staging area for Killik River floaters, along the Easter Creek floodplain.

Kobuk River

Assessments of recreational, sport hunting and subsistence use sites on the Kobuk River were completed in the 2002 field season. Two new sites were found in the upper stretch of the Kobuk River. Sites along the lower half of the Kobuk River Preserve are visited by various user groups in different times of the season. Roughly 88 percent of all use sites (8 of 9) along the Kobuk River appear to be actively used. Most of the Upper Kobuk River Valley has moderate to large gravel bars providing many opportunities for minimum impact camping. Most of the access to the Kobuk River is from Walker Lake, other use areas include Nutuvukti Lake, Lake Minakokosa and



Ranger Bill Fitzpatrick surveys a site along the Kobuk, spruce trees provide cover from weather. The site is located on a high bench, overlooking the confluence of the Kobuk and Reed Rivers.

Narvak/Selby Lakes. With a total of 14 actively used sites, the Kobuk Preserve is among three other use areas that account for 62.5% of all actively used sites in Gates of the Arctic. Other areas included in this statistic are Walker Lake (10 sites), Noatak River (19 sites) and Arrigetch Creek (17 sites).

Summary of New Documented Sites

Since campsite inventories of human impacts began in 1982, a total of 165 campsites, viewpoints, trails and landing points have been documented. Throughout this time, use patterns have changed; some sites have been abandoned while new sites have developed. Currently, 61% of all documented sites are actively used.

Recent efforts to provide updated maps for rangers have resulted in increased observations of previously undocumented sites.

- 61% of newly discovered sites are found on ranger patrols.
- 45% of all newly discovered sites are in two use areas, the Kobuk and Noatak Rivers.
- An average of 5.4 new sites are discovered every year.

The discovery of 38 new sites in 7 years could be a result of a combination of factors:

- Increased efforts to locate new sites and explore new areas and/or
- Increased human use of an area

Long-term Goal: By September 30, 2005, Gates of the Arctic has identified its vital signs for natural resource monitoring.

Annual Goal: By September 30, 2002, vital signs for monitoring have been identified.

GOAL ACHIEVED: Small mammal and vegetation inventories were completed for vital signs determination.

Small Mammal Inventory of Gates of the Arctic

In July and August of 2002, two field crews sampled small mammal fauna at eight base locations in the Gates of the Arctic National Park and Preserve (GAAR). These localities were scattered throughout the park and preserve in a variety of elevations and habitats. Participating institutions included Idaho State University, National Park Service, University of Alaska Museum (UAM), USDA National Parasite Lab, University of New Mexico and The Finnish Forest Research Institute (Vantaa Research Centre). Elena Potikha also participated as visiting scientist from Sikhote-Alin Zapovednik (GAAR sister-park).

The specific products of this inventory include a large collection of well prepared, well documented and di-

verse preparations of mammal specimens and associated materials (tissues, parasites, fecal samples, digestive tracts). A total of 1853 small mammal specimens, comprised of 18 species, were archived from the eight localities. All voucher specimens of mammals were deposited in the University of Alaska Museum (UAM). Three murid rodents (tundra vole, singing vole and northern red-backed vole) and a shrew (montane shrew) were the most frequently sampled species (516, 466, 400 and 111 specimens, respectively)

and comprised over 80% of all specimens collected. The findings from this study, when combined with specimen information gathered from a preliminary review of holdings in other major collections, bring the total number of documented small mammal species in GAAR to 20 of 22 potential species or 91% coverage.

The discovery of a tiny shrew (*Sorex yukonicus*)

at Fortress Mountain, north of the crest of the Brooks Range, constitutes a new species for GAAR and is a major range extension of this poorly documented species. This inventory also extends the range of the meadow vole (*Microtus pennsylvanicus*) northward into the park and preserve and upper Kobuk River drainage and expands the distributions of the pygmy shrew (*S. hoyi*), montane shrew (*S. monticolus*) and cinereus shrew (*S. cinereus*).



The discovery of a tiny shrew...constitutes a new species for GAAR and is a major range extension of this poorly documented species.

The occurrence in GAAR of collared lemming (*Dicrostonyx groenlandicus*), tundra shrew (*Sorex tundrensis*) and barren ground shrew (*Sorex ugyunak*) is now substantiated with specimens. Specimens of the Alaska marmot (*Marmota broweri*) from Fortress Mountain and Nunushuk River provided new locality records for this poorly known and under-represented species.



Vascular Plant Inventory

The NPS is cooperating with the University of Alaska Museum to complete a vascular plant inventory of Gates of the Arctic National Park & Preserve. Leading botanists from Alaska, Canada and Norway conducted an inventory during the summer 2002 field season as a part of this partnership. Sites were targeted for sampling in order to document the full range of species diversity. Selection was based on geology, topography, elevation, known species range, existing museum specimens, spatial coverage, local knowledge and habitat types identified from color infrared photographs. Site selection was further narrowed by inventorying previously undocumented areas where suitability of habitat and known range of those species believed to occur in the park and preserve. A total of 2700 plant collections were made and are now being processed at the University of Alaska Museum Herbarium in Fairbanks.



Long-term Goal: Ethnographic Resource Baseline. By September 30, 2005, the number of Gates of the Arctic ethnographic resources inventoried, evaluated, and entered on the National Park Service Ethnographic Resources Inventory (ERI) is increased from 0 in FY1999 to 2.

Annual Goal: By September 30, 2002, preliminary research on the Kobuk River, Alatna River and the Kayak Caribou Hunt will begin.

GOAL ACHEIVED

Upper Kobuk Whitefish Project

The “Upper Kobuk Whitefish Project,” sponsored by the NPS, is documenting the traditional ecological knowledge of whitefish along the upper Kobuk River. Susan Georgette and Jim Magdanz of the Alaska Department of Fish and Game (Kotzebue) visited Shungnak and the upper Kobuk River fish camps to record local knowledge and helping with the whitefish harvest.



Accomplishments in 2002:

- Documented the detailed knowledge of Kobuk River residents concerning whitefish, a culturally and practically significant food resource.

Vera Douglas cuts humpback whitefish to make amatchiak. The whitefish project researchers spent much of their time at Vera's fish camp. Whitefish are an important food resource to the people of the upper Kobuk River, both culturally and practically. (Photo by J. Magdanz).



Kobuk Human-Land Relationships

The “Kobuk Human-Land Relationships Study” is a joint, multi-year project by NPS, Alaska Department of Fish and Game and Shungnak IRA, documenting a range of understandings about the land and resources upon which people of the upper Kobuk River depend. Oral recordings, life histories and genealogical data are being collected and analyzed to help refine our understanding of traditional Kobuk culture of the past. Interviews also tease out refined understanding of the enormous changes that have occurred there, the different and sometimes conflicting world views between generations, and the (often) inadvertent effects of outside management/regulatory mandates on rural communities along the Kobuk.

The project's principal investigator, Jim Magdanz of ADF&G, recently summarized the project's progress: “We have completed interview series with five elder couples

and two additional key respondents. (We) hope to conduct at least one more key respondent interview series this winter. An interview series usually involves half a dozen interview sessions over several months time and includes an oral life history, a mapped life history and a genealogy. This project also is developing a comprehensive genealogical database (that is, not just the respondent families) for the upper Kobuk River.”

Accomplishments in 2002:

- Recorded new interviews in Kotzebue with Kobuk elder Rose Custer, documenting her remarkable life along the Kobuk.
- Recorded new genealogical data for the upper Kobuk River.



Vera Douglas sets a gill net across the river from her fish camp. (Photo. by Susan Georgette).

Museum Collections and Objects:

A revised inventory of the collections was completed and submitted to AKSO collections. Also, additional natural and cultural resource staff received training on collections management. This summer, small mammal and plant specimens were collected, but none as of yet have been catalogued.



Archeological Baseline:

The site estimation project was completed and has helped us take stock of archeological resources. Although a seemingly large number of sites have been identified in GAAR (781 sites), only about 1% of the park and preserve has been inventoried at even a reconnaissance level. Based on site densities, it is projected that the park and preserve may contain as many as 50,000 to 100,000 additional sites.

Project Jukebox

Working 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

*Jukebox programs help us to
reintegrate voice and speaker,
story and place,
issue and context.*

Alaska’s premier parks and preserves. These “Jukebox” projects integrate oral recordings with maps, pictures and text in an interactive computer program. Current projects are Internet compatible and stored on CD, making them ideal as tools for distance delivery education. Jukebox pro-

grams help us to reintegrate voice and speaker, story and place, issue and context. Last year Doug Beckstead rejuvenated the Yukon-Charley Jukebox program by migrating it from Hypercard roots to an internet compatible version with more graphics and even some transcripts of the audio. This year Gates of the Arctic began a new effort in cooperation with UAF to expand the interview set through new work with long-time residents, including pilots, guides and others not featured in the original Jukebox. This new round of interviews is expected to be complete by June 2003.

Accomplishments in 2002:

- New cooperative agreement with UAF to expand the Gates Jukebox with 10 to 15 new interviews.
- Three new interviews under the agreement, with more schedule throughout the winter and spring.

Fire Management

Busy Season for Fire Staff

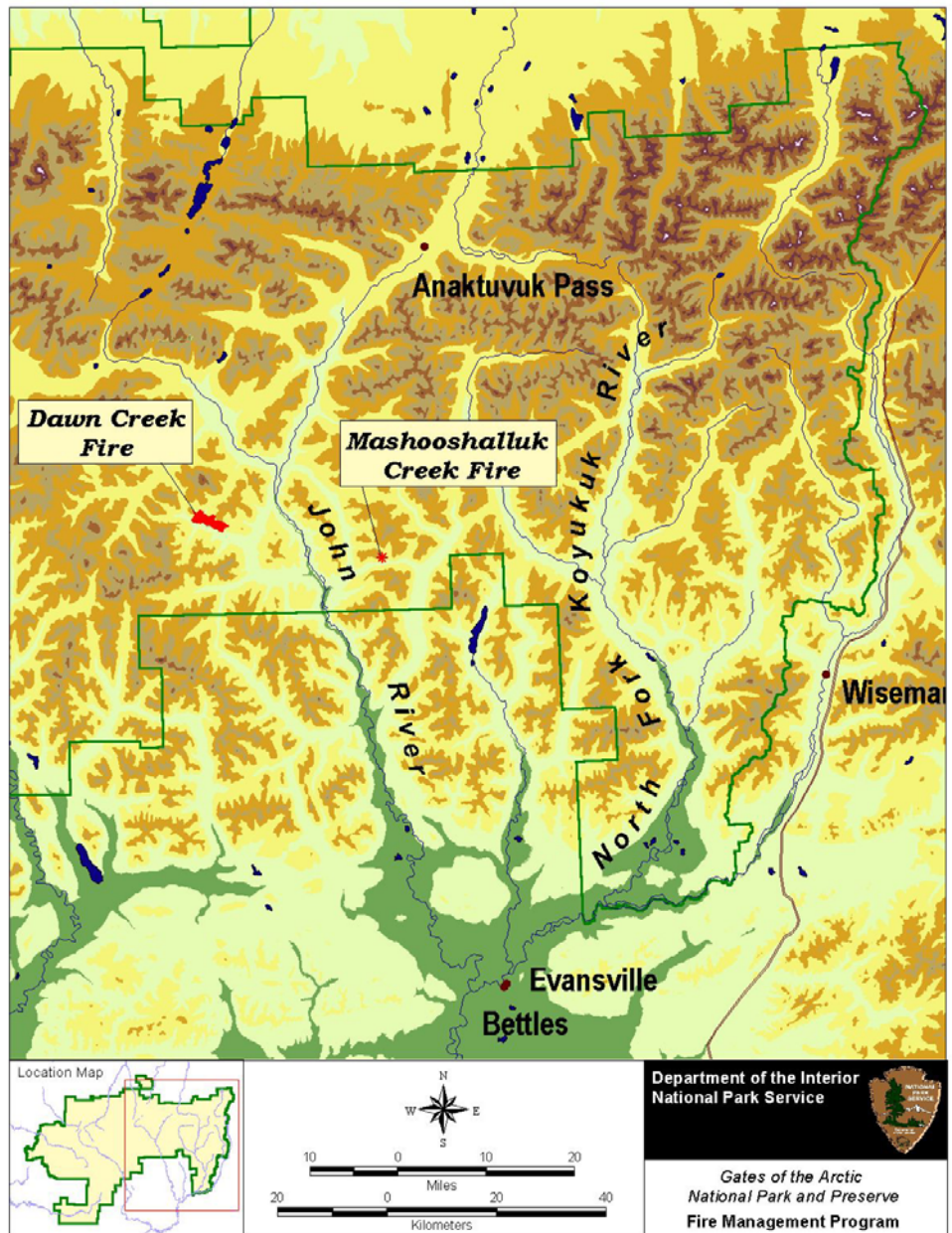
The 2002 fire season was one of the biggest not only in Alaska but also nationally. The fire staff for Yukon-Charley Rivers/Gates of the Arctic spent 164 days monitoring fires in Alaska parks and working on interagency fires within and outside the State. Fire assignments included assisting the State of Alaska in Initial Attack in the Mat-Su Valley, working on three large fires within Alaska, three assignments to assist NPS in the Lower 48, and three assignments on large interagency fires in the Lower 48.

Fire staff worked 164 days on NPS and interagency fires within the State and outside Alaska.

Gates of the Arctic had two fires within its boundaries this season. The Dawn Creek fire burned approximately 2600 acres in the Wolverine Creek drainage and the Mashooshalluk Creek fire burned approximately 60 acres.

Accomplishments:

- The fire management team accomplished their goal by managing wildland fire incidents in accordance with accepted interagency standards and achieving maximum efficiency through interagency coordination and cooperation.



Gates of the Arctic had two fires within its boundaries this season. The Dawn Creek Fire, which started July 20th, burned approximately 2600 acres in the Wolverine Creek drainage. A second fire, the Mashooshalluk Creek Fire, started August 24th and burned approximately 60 acres.

2002 Fire Facts:

- 543 fires burned a total of 2,202,688 acres
- 354 human caused fires
- 189 fires ignited by lighting
- 10-day lighting bust occurred with over 35,000 strikes recorded between July 15th and July 25th

Provide for the Public Enjoyment and Visitor Experience

Mission Goal: 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, 2005, 95% of visitors to Gates of the Arctic are satisfied with appropriate park facilities, services, and recreational opportunities.

Annual Goal: By September 30, 2002, 91% of the visitors will be satisfied with the services of the park. This will be determined by survey results. The park staff will continue to provide a pleasant atmosphere for visitors to its 3 field stations and have information readily available as well as field stations staffed. Facilities will be well cared for and interpretive programs informative and enjoyable.

SURVEY DATA NOT YET RECEIVED

Visitor Use

Gates of the Arctic continued to take a leadership role in the region in gathering information about backcountry visitors. This year was the first year of the two-year Remote and Dispersed Visitor Estimation Project. The project addresses the need for more accurate estimations of backcountry use. While reliable information exists on front-country use in the region, there are few places that gather solid data on backcountry use.

Most Alaskan national parks cannot supply such information due to large size, small staffs, remoteness and multiple access points, gathering such information can be difficult at best. Added to this, most park areas in Alaska are hesitant to mandate backcountry permits in an effort to remain unintrusive. The purpose of this project is to gain more accurate information and reporting, that will better facilitate park management.

Gates of the Arctic established an active voluntary visitor registration program 1997 and continues to play a critical role in the project. As a regional leader in estimating visitor use Gates is developing and implementing methods that can be adapted to and adopted in other Alaska parks and protected areas.

Gates continued this year with its voluntary visitor registration, which is coupled with its Backcountry and Leave No Trace Orientation. Commercial service providers that place clients in the park or preserve are required to send their clients to this orientation as a stipulation in their Incidental Business



A visitor enjoys a rest on the shore of Selby Lake.

Permit (IBP). When visitors attend these orientations, they are encouraged to register. Gates also provides animal resistant food containers (commonly referred to as “bear barrels”) free of charge to visitors who register. Each year our efforts increase and compliance among IBP holders seems to be improving. Visitors can register at the Fairbanks office, the Arctic Interagency Visitor Center in Coldfoot and the ranger stations in Bettles, Anaktuvuk Pass and Marion Creek. Additionally visitors can register by phone.

Backcountry Patrols that contact visitors in the field ascertain whether or not visitors registered. With an idea of what percentage of visitors register, it is a simple matter to estimate overall backcountry use. In coming years, Gates of the Arctic hopes to further increase its registration rate by supplying items like park patches and bandanas to individuals that do register.

Social Science

In association with the Aldo Leopold Wilderness Institute, Gates of the Arctic continued investigating visitor experience and perception. In the Kobuk Hunter Study and Phase II of the Gates of the Arctic Visitor Study, visitors commented on a variety of subjects. The goal of the Phase I study, conducted last year, was to understand and describe the range of visitor experiences, resulting in common themes from participants. These Phase I themes shaped

The goal of the Phase I study was to understand and describe the range of visitor experiences...

the content and direction of the survey questionnaire developed for Phase II. For Phase II, researchers contacted visitors at park gateway points in Fairbanks and Coldfoot. Visitors who expressed interest in participating at that time were mailed questionnaires after their Gates of the Arctic experience.

Results of Phase II are not yet available, but last year's Kobuk study and Phase I touched on some of the unique attributes of visitor experiences in Alaskan parklands. One of the most compelling aspects of visitor experience in Gates of the Arctic, expressed by both sport hunters and non-consumptive recreational users, is its remoteness.

While participants named "remoteness" as the greatest influence on why they decide to visit the Kobuk River, hunters encountered other visitors more often than usual in the park. This higher-than-average encounter ratio is due to concentrated use on the Kobuk River during

One of the most compelling aspects of visitor experience in Gates of the Arctic...is its remoteness.

hunting season. On average, hunters encountered roughly 6 other groups during a 10 night trip. The results show that hunters generally had unrealistic expectations about the likelihood of such encounters and that hunters would prefer to see fewer people.

The Gates of the Arctic Visitor Study Phase I revealed that hikers and floaters were strongly influenced by the relative absence of other visitors. The absence of visible impacts from previous visitors had a greater influence than the naturalness of the area. Researchers noted that,

"many interview participants expressed concern about the impact of their visit to the Park. Even leaving footprints was an issue for some. Most visitors were well-versed in minimum impact practices, but some were unsure about the best practices for "arctic settings."



Phase I interviewing also noted that some participants have the perception that Gates of the Arctic visitors in general share a land ethic of "treading lightly" when visiting the Park. A researcher noted that, "in some cases, respondents did not mind encountering other visitors specifically because they shared values or other similarities." When asked about their experience of overflights in the Park, "some respondents felt that planes full of 'people like them' were less obtrusive than (other users)."

Another survey, with questions similar to those in Phase II, was sent to commercial service operators; their responses will be informative and of great interest because our commercial service operators have an enormous breadth and wealth of experience.

Our social science work at Gates of the Arctic will help us understand our visiting public better, while giving us valuable insights into existing and potential management of this magnificent park and preserve. The more we know about our visitors and our commercial services operators, the better we can manage the Park to the mutual benefit of all concerned.

Accomplishments:

- Completion of the Kobuk Hunter Study.
- Completion of the GAAR Visitor Study Phase I.
- Gates of the Arctic Visitor Study Phase II

Wilderness Stewardship and Backcountry Planning

Gates Backcountry Management Plan

Gates of the Arctic National Park and Preserve is one of the “wildest” of our national parks. It is large, remote, and by any measure of wildness it is an excellent example. To better manage this remarkable landscape, the Park is developing a Backcountry Management Plan (BMP). The planning effort will take 2-3 years and is an excellent opportunity for public comment and input.

The process officially began with the publication of the “Notice of Intent To Prepare an Environmental Impact Statement on the Backcountry Management Plan and General Management Plan Amendment for Gates of the Arctic National Park and Preserve” in the *Federal Regis-*



ter (Vol. 67, No 184, Monday, September 23, 2002). At the park level we will use newsletters, announcements, web pages, meetings, personal contact and e-mails to let the public know what’s going on and to collect their comments.

The purpose of the BMP and Environmental Impact Statement (EIS) is to provide park management a direction during the next 15-20 years for commercial services and recreational uses of the Gates of the Arctic backcountry. This includes all of the acreage within the park and preserve boundary, including the 7.2 million acres of designated wilderness. Tracts in private ownership are excluded.

The park now operates under the General Management Plan (GMP) written in 1986. It is 16 years old and needs an update due to the increasing level and diversity of activities in the park, resource management and pro-



Participants discuss the Backcountry Management Plan at the Fairbanks scoping meeting.

tection needs, as well as requests for activities and facilities not anticipated in 1986. Some of the topics to be addressed in the BMP/EIS include backcountry hiking, sport hunting, mountaineering, aviation, boating, snowmobiling, dogsledding, commercial services, administrative and scientific research activities and various facilities related to these activities.

Comments of all kinds are welcome at every stage during the planning process. Backcountry planning should interest federal and state agencies, local governments, Native tribes, private organizations, backcountry users and the general public. Press releases, the park’s web site (<http://www.nps.gov/gaar>) and newsletters, as well as public scoping meetings will be sources of information about the planning process and opportunities to take comments. The

*Backcountry planning should
interest federal and state
agencies, local governments,
Native tribes, private
organizations, backcountry
users and the general public.*

e-mailed address for comments is: gaar_backcountry_planning@nps.gov.

There are four public scoping meetings scheduled in the remainder of 2002. These will be in Anchorage (November 6), Fairbanks (November 7), Juneau (November 19) and Seattle, WA (November 21). Resident zone community scoping workshops will be scheduled on a case by case basis for November through January. Those meeting places, dates and times will be made public once they are arranged after discussions with community leaders.

Long-term Goal: Visitor Safety. By September 30, 2005, the number of visitor accidents is no higher than the FY1992-FY1996 five-year annual average of 1.

Annual Goal: By September 30, 2002, Gates of the Arctic will have 1 or less visitor accidents. The park staff will continue to provide bear safety talks with park visitors and encourage proper camping etiquette for bear country. Also rangers will provide routine patrols to visit with travelers as well as to remain current on hiking and river conditions so as to provide the best possible information.

GOAL EXCEEDED: No visitor accidents or injuries this year. Park rangers conducted a total of 35 field patrols of 399 person-days via foot, watercraft, aircraft and ski/snowshoe.

Visitor and Resource Protection

Gates of the Arctic is wild and remote country where simple mistakes can rapidly escalate into tragedy, yet we are pleased to report that during the 2002 summer field season there were no significant visitor accidents or injuries. If it were not for the outstanding skill and self-reliance of our backcountry visitors, we would experience more emergencies.

Nonetheless, we continue to upgrade our emergency response capabilities. The Gates of the Arctic operations staff now includes four nationally certified Emergency Medical Technicians and we recently upgraded our emergency medical response equipment in Bettles, Coldfoot and Anaktuvuk Pass.

Our mandate to protect park resources is a challenging one, given the vastness of the park and the relative scarcity of park rangers. Unfortunately, we experienced a disturbing number of unlawful sport-hunting incidents this fall, several of which resulted in criminal charges. These incidents included the unlawful taking of a bull caribou on the Noatak River, a Dall's sheep near Oolah Lake, a grizzly bear near

Itkillik Lake and an assortment of other hunting and illegal guiding offenses.

In the Noatak River incident, a group of river floaters witnessed the unlawful activity and reported their observations to the National Park Service. This is an outstanding example of citizens playing an active

We appreciate the high level of stewardship exhibited ... and need the help of all visitors in protecting our priceless resources...

role in resource protection and stewardship. The unlawful actions represent the "stealing" of our natural heritage and degradation of park resources.

We appreciate the high level of stewardship exhibited when these incidents are reported and need the help of all visitors in protecting our priceless resources for future generations.

New Gates of the Arctic Backcountry Video

We are proud to announce the completion of the new Gates of the Arctic backcountry safety and *Leave No Trace* video. This 30-minute production was made possible through special funding from the National Park Service Recreation Fee Demonstration Program.

Filmed on location in the Gates of the Arctic backcountry by Aurora Films of Anchorage, Alaska, this production depicts some beautiful arctic images while providing an in depth look at the "best practices" needed to ensure personal safety and stewardship of park resources by backcountry travelers.

The messages and advice incorporated in the film



are built upon a foundation of the principles of the national *Leave No Trace* program. Visitors who adopt these principles will improve their ability to have a safe adventure in Gates of the Arctic while minimizing their social and physical impacts upon this fragile arctic environment.

The film will be available for viewing at National Park Service Ranger Stations in Bettles, Anaktuvuk Pass and Kotzebue, as well as the Arctic Interagency Visitor Center in Coldfoot and Fairbanks Public Lands Information Center. We will be offering a "mail out" loaner program of the film in VHS or DVD format for visitors wishing to plan their next adventure to Gates of the Arctic from the comfort of their home. We also hope to make copies of the film available to the many guide, outfitter and air taxi providers operating in Gates of the Arctic.

Mission Goal: Park visitors and the general public understand and appreciate the preservation of parks and their resources for this and future generations.

Long-term Goal: Visitor Understanding and Appreciation. By September 30, 2005, 86% of Gates of the Arctic visitors understand the significance of the Preserve.

Annual Goal: By September 30, 2001, 75% of visitors understand the significance of the park and preserve (based on survey results). The park staff will talk with park visitors and provide information regarding their visit, be it backpacking, river tripping, driving the neighboring Haul Road, or hunting. Interpretive programs will be provided for group tours.

SURVEY DATA NOT YET AVAILABLE

Education and Outreach

Our Interpretive Specialist, Tina Copeland, had the pleasure of joining U.S. Fish and Wildlife staff, Tanana Chiefs Conference staff and high school students for Earth Quest 2002. Earth Quest Science Camp is sponsored by a partnership of local, state, federal, and native organizations. The camp is designed to give rural Alaskan high school students a hands-on approach to methods used by natural resource professionals in the field.

Gates of the Arctic will be continuing winter/spring educational outreach as we have in past years. This year our Interpretive Specialist will be teaming up with Education Specialist Linda Jeschke of Western Arctic Parklands to visit students in Kobuk and Shugnak. Outreach is also planned for the communities of Anaktuvuk Pass, Wiseman and Fairbanks.



Earth Quest students conduct macroinvertebrate study.

Backcountry Planning Web Site

As a part of the backcountry planning efforts at Gates of the Arctic, webmaster Doug Beckstead has created a series of web pages that allow visitors immediate access to a number of elements regarding the planning process. This includes both park-based and regional newsletters on the process, schedules, research projects that relate to the planning process and several points of contact for visitors to submit their comments and suggestions to a centralized address. As the plan develops, additional pages will be added including drafts of the plan, etc. Work is continuing on developing a web-based form that concerned citizens can use for submitting their comments. The GAAR backcountry planning website is available at:

http://www.nps.gov/gaar/Expanded/planning_update/planning/planning.htm

In addition, Doug Beckstead converted the planning newsletter produced by the Alaska System Support Office to a web-based document and posted it on the GAAR website, making it available to a world-wide audience. The cyber-version of the newsletter appears almost exactly as the original printed version, but uses a whole lot less paper and ink.

Thank you, Volunteers!

Gates of the Arctic benefits every year from the hard work of many volunteers. This year, volunteers worked a total of 1,395 hours for the Park.

Natural Resource Profiles Go on the Web

The Washington Office of the National Park Service mandated that all parks create a series of uniform webpages dealing with the natural resources found in them. Under the guise of the Natural Resource Profile Initiative, these pages feature short synopses of the flora, fauna, geology, plants, water and air resources of the national parks. Working with the natural resource staffs of both parks, webmaster Doug Beckstead succeeded in making Gates of the Arctic and Yukon-Charley Rivers National Preserve the first Alaska park areas to meet the requirement of having these pages live and available on the Internet.

These pages are intended to provide a quick view of the natural resources in each park. In the cases of Gates of the Arctic and Yukon-Charley Rivers, the park expanded webpages expound on a number of these resources by including reports generated as part of the ongoing research by the staff. The most recent report to go online is by John Burch, entitled, *Ecology and Demography of Wolves in Yukon-Charley Rivers National Preserve, Alaska: Final Report, September 2002*. Others include reports from the invasive plant species inventory project undertaken by USGS biologist Chris McKee during the summer of 2002 in Gates of the Arctic and Yukon-Charley and the Yukon-Charley bird project.



Arctic Interagency Visitor Center

The new visitor center located in Coldfoot is moving ahead as planned, with its grand opening expected in summer 2003.



From its conception through all phases of thematic development, design and application, the new visitor center has been planned and developed with equal effort by staff from the Bureau of Land Management, U.S. Fish and Wildlife Service and National

Park Service. The result of this project coordination will be evident in better service for the public—both those visiting the Dalton Corridor and those that call it home.

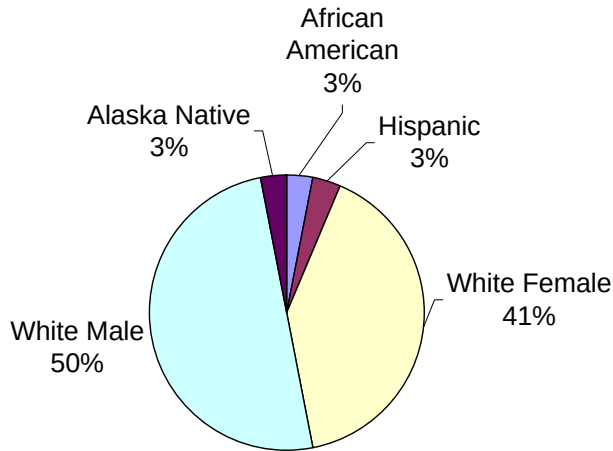


The new Visitor Center in Coldfoot will be having its grand opening this summer (2003). At left, Visitor Use Assistant Heidi Schoppenhorst talks to visitors in the old visitor center.

Ensuring Organizational Effectiveness

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

Workforce Diversity of Permanent Employees



Long-term Goal: Employee Safety. By September 30, 2005, the number of Gates of the Arctic employee lost time injuries is reduced to 0 from the FY1992-FY1996 five-year annual average of 3.873.

Annual Goal: By September 30, 2002, the employee lost time injury rate will be 2 or lower. The park and preserve will continue extensive safety training programs, discuss safety at employee meetings, hold "tailgate" safety sessions, and discuss safety in regards to individual projects/assignments.

GOAL EXCEEDED: We had no lost time injuries this year and only one minor report.

Facility Management

A new battery storage and inverter system was installed at the Marion Creek Administrative Complex this summer, thanks to the efforts of Marion Creek Maintenance Worker, Scott Schoppenhorst. This new system will allow us to conserve energy costs with our diesel generator system. We hope to continue to improve this system in the future with the addition of solar panels. A new septic system serving four park housing units was installed at the Bettles Administrative Site during the summer of 2002 with repair/rehabilitation funding. This \$136,000 project accomplished a critical need, by replaced an aging

septic structural system with obsolete lift pumps with a new arctic system including 470 feet of insulated pipe, 3 septic tanks, and a super-insulated leach field. Much credit should be given to Bill Heubner of the Alaska System Support Office for his design and oversight of this project.

The Bettles housing remodel project funded through repair/rehabilitation and housing income funds continued in the winter of 2002 with the completion of interior remodeling of two park housing units. This project including the installation of new drywall with texturing and painting, a complete kitchen and bathroom remodel, and the installation of new carpet. This project was completed just in time to accommodate two new incoming families.

Financial Summary

Operating Budget Base Allocations (ONPS) Expenditure Highlights

\$873,000 for Resource Preservation and Management

Natural Resource work included studies on Dall sheep and muskox, hare survey, small mammal inventory and furbearer harvest information. Cultural studies included information gathering for the Kobuk area and continued documentation of archeological and historical sites. Research work began for the Backcountry Wilderness Plan.

\$735,000 for Visitor Services

Interpretive and educational programs were conducted in communities near the park as well as for visitors arriving at three visitor contact centers. The new Leave No Trace video was completed and implemented for visitor backcountry orientation and planning for a documentary film began.

\$250,000 for Facility Operations and Maintenance

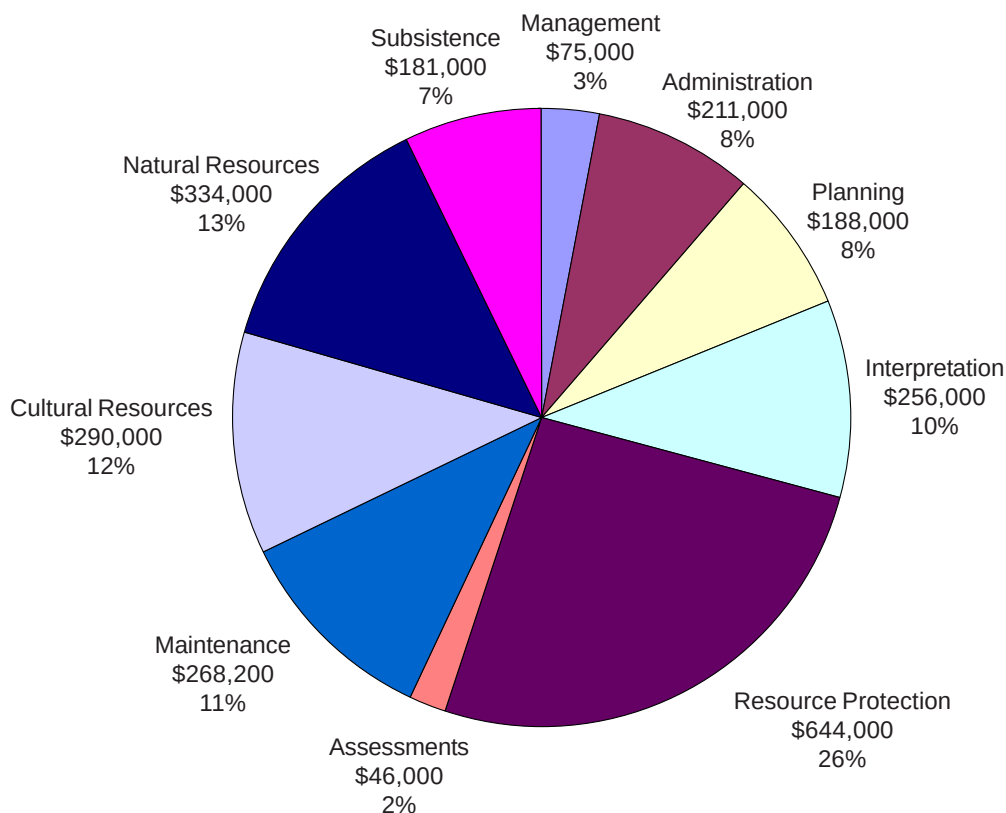
Conservation efforts continued with the installation of new battery storage and inverter system at Marion Creek.

\$210,000 for Park Administration

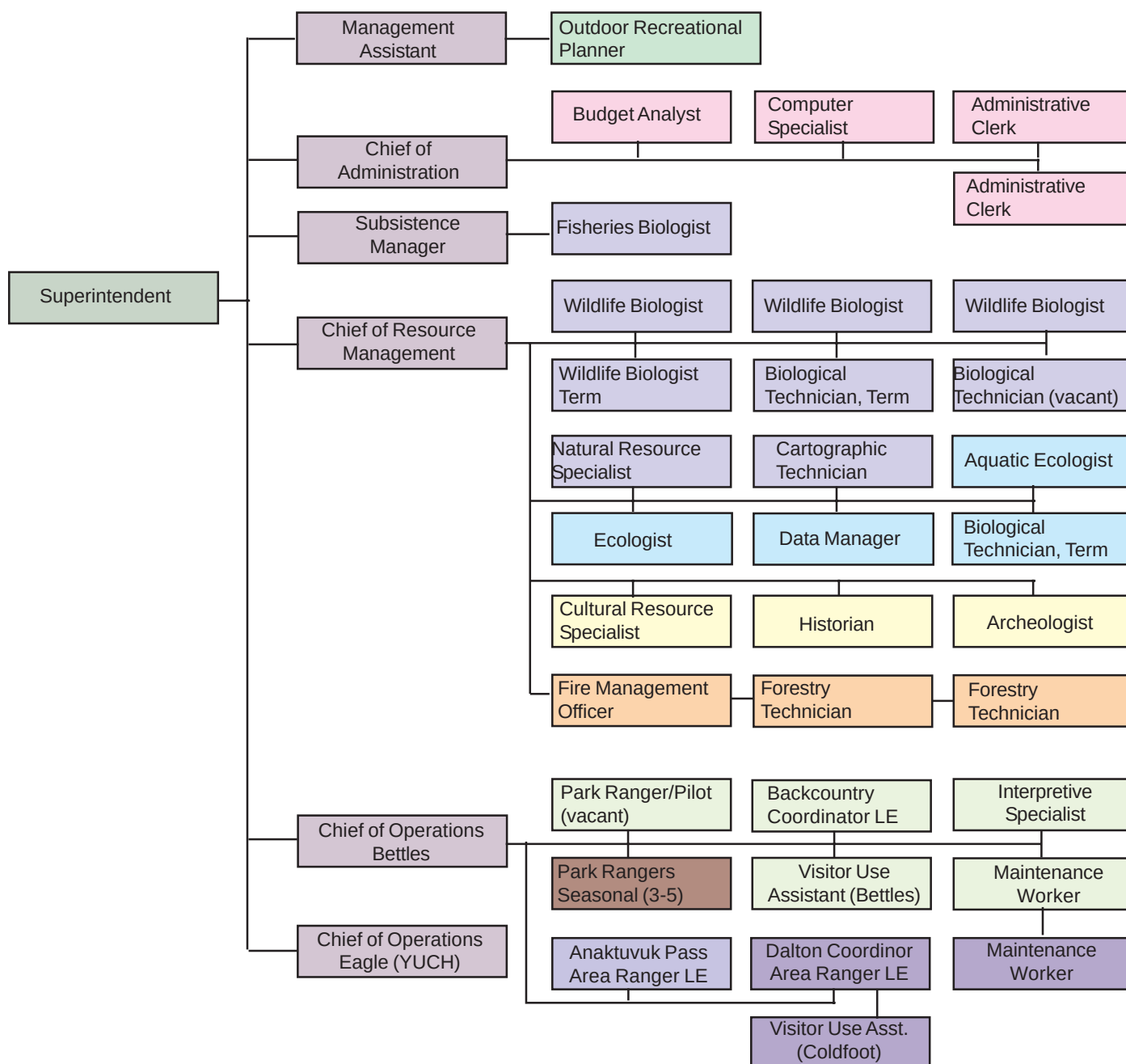
Bettles computers were networked and connected to the Fairbanks office network.

All Sources of Park Funding

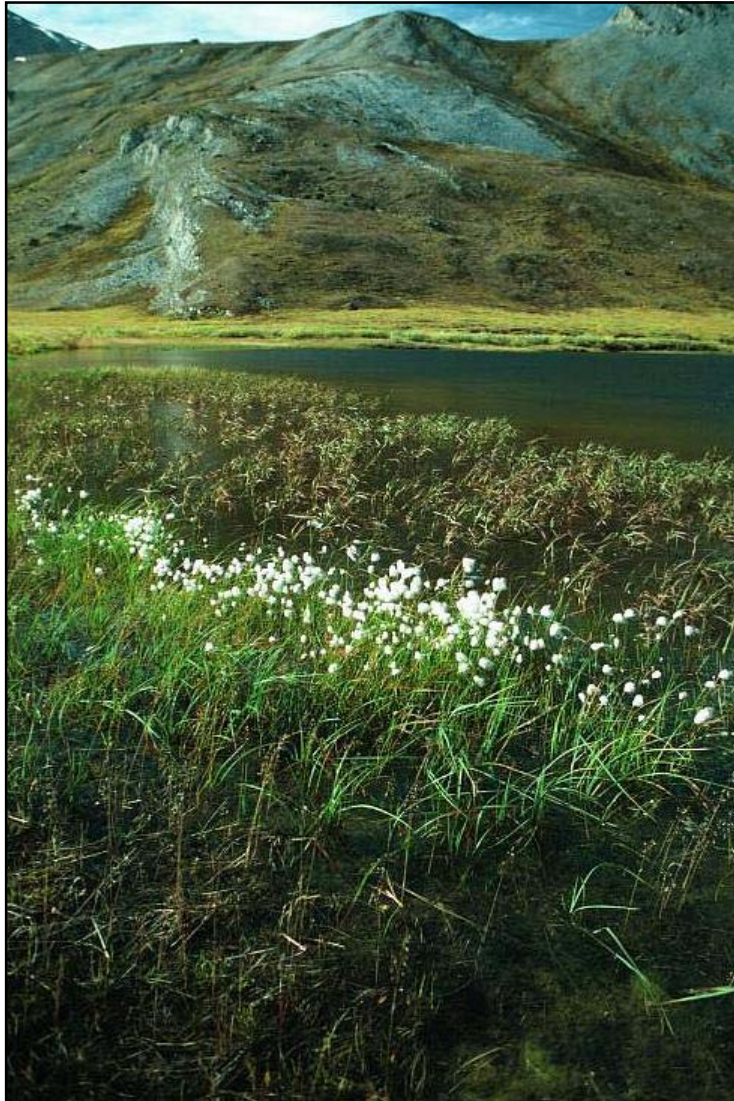
\$2,493,000 Total



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.



The National Park Service cares for special places saved by the American people so that all may experience our heritage.



EXPERIENCE YOUR AMERICA

U.S. Department of the Interior * National Park Service

