



WHERE HAVE THE WOLVES GONE?

WOLF MONITORING IN THE CENTRAL ALASKA NETWORK: YUKON-CHARLEY RIVERS

ROUGHLY 10 TO 12 WOLF PACKS INCLUDE A SIGNIFICANT PART OF YUKON-CHARLEY RIVERS NATIONAL PRESERVE (YUCH) IN THEIR HOME RANGES. IN 14 YEARS OF CONSECUTIVE MONITORING, THE NUMBER OF WOLVES IN THE PRESERVE HAS NEVER BEEN LOWER THAN IN THE SPRING OF 2007.

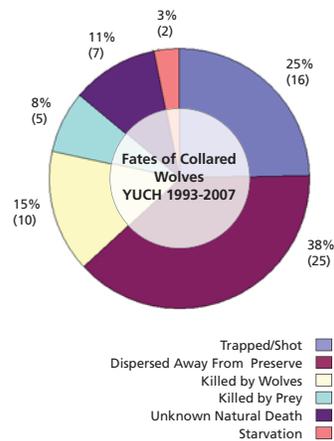
Wolves can be located by finding and following tracks in the snow during winter flight surveys. Specialized devices, such as radio/GPS collars, have greatly increased the success and decreased the cost of wolf monitoring. Despite a winter characterized by low snowfall and poor flying conditions, researchers replaced or newly fit radio collars on 9 wolves from 8 packs during the 2006/2007 monitoring season.

have disappeared and home ranges have shifted for a number of other packs. Finally, birth and survival of wolf pups has dropped.

In 2006 the average litter size was 4.3. In 2007 this number shrank to 3.2. In total, 19 pups from 6 packs were counted during the fall survey, while 2 packs appear to have lost their offspring.

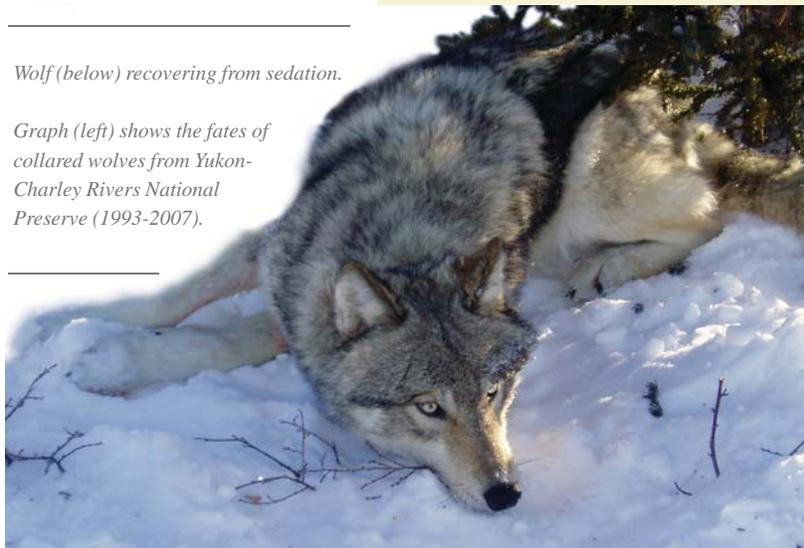
The highly controversial wolf management program in the areas surrounding YUCH did not appear to impact the preserve during the 2006/2007 season. While 11 wolves were shot in the control area adjacent to the preserve, none of them were from YUCH. This could easily change in the future, since monitoring has revealed that all of the preserve's wolf packs regularly travel far outside its borders.

One of the year's most striking discoveries was a decrease in the average number of wolves per pack from 5.4 to 2.3 over the course of the winter. The survey conducted in April 2007 revealed an all time low for the preserve's wolf population (about 17) since monitoring began in 1993. Subsistence harvest was responsible for the death of 4 wolves, though this is not unusual for YUCH. In addition, a few historical packs



Wolf (below) recovering from sedation.

Graph (left) shows the fates of collared wolves from Yukon-Charley Rivers National Preserve (1993-2007).



Why Are Wolves Important?

They are a top predator whose presence, or absence, has far-reaching affects on the entire ecosystem.

Wolves (*Canis lupus*), are one of six keystone large mammal species in interior Alaska and are specifically identified in the enabling legislation and management objectives of all three CAKN parks. Wolves are good indicators of long-term habitat change within ecosystems because they depend on healthy populations of large ungulate prey (such as moose and caribou), which in turn respond to vegetation, weather and other habitat patterns across the entire landscape. As a top predator, wolves may play a key role in influencing prey populations, and as a result may influence vegetation patterns and ungulate

harvest by humans on NPS parks and preserves in Alaska. Wolves are of great importance to park visitors because of the unique opportunities to view wolves in Alaska's parks. Information on wolf populations will allow managers to protect wolves in a variety of ways. Examples include locating and isolating active dens from disturbance; determining whether wolves are being impacted by activities (such as wolf control) outside park boundaries; and evaluating the long-term changes in Alaska populations using genetic data gathered during radio collaring.

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PARKS BEING MONITORED:



- DENA: Denali National Park & Preserve
- WRST: Wrangell-St. Elias National Park & Preserve
- YUCH: Yukon-Charley Rivers National Preserve

How Are We Monitoring Wolves?

Researchers studying wolf populations in the Central Alaska Network utilize radio collars and radio telemetry to monitor a sample of packs in each park and/or preserve. When possible, dominant breeding wolves in each pack are identified and selected for collaring, based on their behavior and appearance.

Aerial monitoring of collared wolves focuses on obtaining early-winter and late-winter population counts and evaluating pup production and den use in early summer. When a wolf is selected for collaring, it is captured via aerial pursuit and darting. While it is sedated, the wolf is also given a variety of health measurements and blood is taken for genetic sampling.



CENTRAL ALASKA NETWORK

USING SCIENCE TO PROTECT OUR PARKS

THE CENTRAL ALASKA NETWORK (CAKN) IS ONE OF 32 NATIONAL PARK SERVICE INVENTORY AND MONITORING NETWORKS. EACH NETWORK EXISTS AS PART OF A NATIONAL EFFORT TO BETTER UNDERSTAND AND MANAGE PARK LANDS USING SCIENCE-BASED INFORMATION.

In order to focus this effort, 270 national park units with significant natural resources were grouped into 32 regional networks.

The Central Alaska Network is made up of 3 parks: Denali National Park and Preserve, Wrangell-St. Elias National Park and Preserve, and Yukon-Charley Rivers National Preserve. Together, these 3 parks contain over

21.7 million acres and makeup 25% of all the land in the National Park Service. They represent a great diversity of climate and landform, from temperate coastal rainforests to glaciated mountain ranges. What they share in common are their largely wild and unaltered landscapes.

In order to track the condition of our parks, Central Alaska Network

scientists have chosen 37 key indicators, or “vital signs,” to represent the overall health of the network. Each vital sign falls into one of 4 categories: animal life, physical environment, human use, or plant life. Underlying these 4 vital sign categories is a focus on habitat change.

CAKN VITAL SIGNS:

Animals
Arctic Ground Squirrel Bald Eagles Brown Bears Caribou Freshwater Fish Golden Eagles Macroinvertebrates Moose Passerines Peregrine Falcon Ptarmigan Sheep Small Mammals Snowshoe Hare Wolves
Environment
Air Quality Climate Fire Flooding Glaciers Land Cover Permafrost Rivers & Streams Shallow Lakes Snow Pack Soundscape Tectonics & Volcanoes
Humans
Human Population Human Presence Natural Resource Consumption Trails
Plants
Exotic Species Forage Quantity/Quality Insect Damage Plant Phenology Subarctic Steppe Vegetation Structure/Composition

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