



Wildlife Watch

WILDLIFE MANAGEMENT ADVISORY COUNCIL (NORTH SLOPE)
COMMUNITY NEWSLETTER

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Yukon North Slope Wildlife and Ecology Studies

A lot of interesting research has been done on the North Slope in the past few years. Researchers and managers have been conducting a number of studies to learn more about the environment, wildlife and habitat. Each of these studies has been reviewed by WMAC(NS) and recommended to the appropriate government for funding. This newsletter gives an overview of some completed and ongoing IFA – funded research projects on the Yukon North Slope.



Image courtesy of www.corbis.com

North Slope Wolf Study

A study was conducted on wolves on the Yukon's North Slope and in the western NWT from 1987 to 1993. Radio collars were placed on 65 wolves, from 13 of 20 known wolf packs in the region. Researchers found that there were two types of wolves in the northern Yukon. One type, the wolves that live along the Porcupine River and in the mountains south of the treeline, maintain territories. The other type are the migratory wolves that live on the North Slope and follow the caribou.

The study concluded that wolves are not a major cause of mortality for the Porcupine Caribou herd. The herd's long migration makes it difficult for predators like wolves to hunt the caribou heavily. Wolves kill only about three to five percent of the herd each year. There are only half as many wolves on the North Slope as in other areas due to natural factors, such as seasonal caribou availability, low denning success, natural mortality and due to harvest activity by hunters and trappers. The results of the wolf study can be viewed on the internet at www.taiga.net/wmac/wolf

Wolf Sample Analyses

Fourteen wolf heads were collected by the Aklavik HTC in the spring of 1998. YTG has sent these heads to a lab for DNA tests. The results of the tests will help biologists determine the way the wolves are related to each other. The wolves are also being tested for the disease trichinosis. The results will be available in the spring of this year.

Porcupine Caribou Adopt-A-Collar Program

The Porcupine Caribou Herd has the largest range of any land animal in North America. Tracking the herd's migrations over great distances across Alaska, Yukon and NWT is difficult and expensive. In 1997, YTG purchased and fitted ten satellite collars as a practical way to track the herd's movements over a long period of time. WMAC(NS), which recommended funds to purchase two satellite collars, was among the five agencies and co-management bodies that were part of this program. In March 1999, biologists will replace the old collars with new ones that will be good for another three years. Caribou locations, updated each week, are viewed eagerly on the internet by schoolchildren and others interested in the herd's movements, at www.taiga.net/satellite



Image courtesy of government of NWT

Muskox School Unit

The draft Yukon North Slope Muskox Management Plan called for a school unit to be developed so that young people could learn more about muskox. Sandra Elanik, a teacher in Aklavik, developed the unit to be used to teach students in all grades about muskox biology, habitat, and history. The Aklavik HTC administered the project.

Muskox Population Survey and Composition Count

The population survey and composition count addresses the Aklavik HTC's priority for more research on Muskox. YTG, Parks Canada and representatives of the Aklavik HTC took part in the surveys which were done using fixed-wing aircraft and helicopters. The first formal count was done in 1993. At that time the population was estimated at 157 animals. In 1995, 146 muskox were counted. An incomplete count of 121 animals was recorded in 1996. In April 1998, the survey counted only 94 muskox. Information was also obtained on the age and sex of the animals counted each year.

There are several possible reasons for the numbers changing from year to year. Muskox may have migrated across the border into Alaska or animals may have been missed during the count, because it is difficult to count brown animals against the brown wind-blown mountains in Ivvavik. Muskox group together, so if one group is missed, it will make a big difference to the total count. For the next two years, the animals will be surveyed annually, in conjunction with the Muskox Ecology Studies.

Herschel Island – Vegetation Mapping



In the summer of 1998, YTG biologists went to Herschel Island Territorial Park and trained Park Rangers to use soil and vegetation maps. By using these mapping techniques, vegetation types can be matched up with animal locations to show which type of habitat and terrain animals, such as muskox, prefer at different seasons of the year. Twenty-four wildlife observations were recorded over the summer. The next step will be to develop a database of observations that can be kept and updated in the Park's office. As they were working on the island, researchers noticed that the vegetation had changed since initial terrain mapping was done twelve years ago. At that time much of the island had been covered by ground shrubs and flowering plants: willow, dryas, lichens and vetches. But in the summer of 1998 researchers found much more grassy vegetation. Other noted changes, including low water levels and early-flowering plants, may point to global warming trends. The researchers plan to go back to Herschel to continue the vegetation work, which will include setting up an ITEX site. ITEX sites are plots of land where the same vegetation species are observed in circumpolar countries around the world, to monitor climate change. *(Image courtesy of Government of NWT)*

Muskox Ecology Studies

Many things are unknown about the muskox that roam the Yukon's North Slope. Questions remain to be answered about how long muskox live, how many calves they have, and how many calves survive, as well as how muskox interact with caribou. Aerial surveys have produced varying estimates of muskox numbers. It is believed that muskox move back and forth across the Yukon – Alaska border to another part of the herd, but it is not known how many animals move, or for how long.

The lack of knowledge about muskox makes it difficult to make predictions about how their population might change in the future. In order to learn more, YTG will be putting satellite collars on 10 muskox on the Yukon North Slope in the spring of 1999. The collared animals can then be located at any time. The goals of the project are to estimate reproductive rates and calf survival, verify the results of the population survey and monitor the way the animals use their territory year-round. An attempt will be made to document the way muskox behave when caribou are present.



Image courtesy of Government of NWT

Count of Muskox and Moose

In March 1998, Danny C. Gordon of Aklavik led a twelve-day snowmobile trip across the Yukon North Slope. The goal of the trip was to learn more about the muskox and their behavior, and to see if the method was a useful way to monitor wildlife. The participants recorded sightings of caribou, moose, foxes and other animals, and counted 34 muskox. They also conducted snow sampling at several locations.

The trip provided a number of insights into environmental conditions on the North Slope in late winter, and is considered to be an important contribution to the goal of community involvement in ecological monitoring. The Inuvialuit Communications Society made a video of the trip to share the journey and its findings with others. A journal of the trip can also be viewed on the internet at www.taiga.net/wmac/survey98

Firth River Water Station

In 1998, Parks Canada reactivated the water monitoring station at the Firth River that had been operated by the Water Survey of Canada from 1980 to 1995. The water monitoring station transmits information about water levels in the Firth to Parks Canada, from spring break-up to when the river freezes. This information, over time, will show if river flows are increasing or decreasing. Flow level information is also used for public safety by river travelers to help them plan their trips. Parks Canada installed the required equipment and Water Survey of Canada assisted with training, maintenance, and data management. Parks Canada also plans to start collecting water quality samples from the Firth River in the summer of 1999 as another part of their ecosystem monitoring efforts.

Community-Based Ecological Monitoring Program

For the past three years, community researchers in Aklavik, Fort McPherson, and Old Crow have interviewed local experts in order to record their observations about the environment. People in these communities were asked about fish, berries, weather, caribou movements and condition, and changes in the health of the environment. The researchers reported their results to their communities and to the Arctic Borderlands Ecological Knowledge Co-operative annual gathering. Written reports were also produced.

This information, along with the results of other studies, is being archived and used by the Co-op to help understand changes occurring in ecosystems. Results of the Community-Based Monitoring Program, as well as information on the Arctic Borderland Ecological Knowledge Co-operative can be found on the internet at www.taiga.net/coop.



Image courtesy of Government of Yukon

Database of Traditional Knowledge on the Yukon North Slope

The Aurora Research Institute in Inuvik was contracted to research and develop a database of the existing traditional knowledge about wildlife and the environment on the Yukon North Slope.

As a result of their work, a record of existing documents, audiotapes and videotapes was gathered together in one database. This source of information on traditional knowledge can be accessed on the internet at www.taiga.net/webdata/aklaviktk. Bringing all of this information together will help to avoid duplicating this work in the future.

Richardson Mountains Grizzly Bear Reproduction Rates

In 1993, the Government of the Northwest Territories began a six-year project to study female grizzly bears in the Richardson Mountains. Fifteen bears were radio-collared and tracked in order to learn about reproductive rates and cub survival. Once a year, in early June, the bears have been located to see if they had cubs. The bears will be located for the last time this June, and collars will be removed in September 1999. The results of this project should be released in the spring of 2000 and will be used to determine sustainable harvest rates. Each year, two field assistants from Aklavik have been hired to help with the study.

Grizzly Bear Research in Ivvavik National Park

During the summers from 1993 to 1995, eight radio-collared grizzly bears were tracked in Ivvavik National Park. The bears were tracked from the air once or twice a week as they roamed the Firth River valley, to see what habitats they used at different times in the season and what kinds of food they found. Other research activities included gathering traditional knowledge of the bears from Inuvialuit elders and hunters. A detailed survey of the habitat in the Firth River valley was also completed. Backpacking crews of two or three people spent up to 24 hours at a time following and watching bears on the ground. The results of the study have provided information on bear movements, activity patterns, food habits and seasonal habitat use. A report of the study is available from Parks Canada in Inuvik.



Image courtesy of Simon Fraser University

North Slope Wolverine Study



In 1993, Yukon biologists put radio collars on 13 wolverines. By tracking the wolverines using the radio collar locations, the biologists found that the home range of the male wolverines was almost twice the size of the females'. They also took blood samples from the wolverines and tested them for diseases. Four out of the five males tested positive for canine distemper, while none of the females showed signs of the disease. The biologists suspect that because the males move over a larger range, they are exposed to more disease and risk of mortality.

Image courtesy of The Wolverine Foundation

Wildlife Management Advisory Council (North Slope)

- **Inuvialuit Game Council:** Danny C. Gordon, Aklavik, Chucky Gruben, Tuktoyaktuk; Alternates: Billy Archie, and Carol Arey, Aklavik
- **Government of Canada:** Joan Eamer, Canadian Wildlife Service; Alternate: Alan Fehr, Parks Canada
- **Government of Yukon:** Brian Pelchat, Renewable Resources; Alternate: Dorothy Cooley, Renewable Resources
- **Chairperson:** Lindsay Staples
- **Secretariat:** Aileen Horler

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