Wildlife Watch

WILDLIFE MANAGEMENT ADVISORY COUNCIL (NORTH SLOPE)
COMMUNITY NEWSLETTER

Volume 12, Number 1 ***July 2002***

Yukon North Slope Research 2002 – 2003

WMAC(NS) reviews proposals for research projects related to wildlife management and ecological monitoring on the Yukon North Slope. Some of these projects are funded through the Inuvialuit Final Agreement.

Projects supported by the Council are recommended to Parks Canada, the Yukon Government's Department of Environment, the Government of the Northwest Territories' Department of Resources, Wildlife and Economic Development and the Canadian Wildlife Service. Recommendations are based on research priorities identified in the Yukon North Slope Long Term Research Plan, the draft Yukon North Slope Wildlife Conservation and Management Plan, the draft Canadian North Slope Muskox Management Plan, the Muskox Management Workshop (Aklavik, October 2001), the Porcupine Caribou Management Plan, the ISR Grizzly Bear Management Plan, meetings with the Aklavik Hunters and Trappers Committee, the Aklavik HTC research priority list, community consultation at public meetings in Aklavik and research priorities identified at the Arctic Borderlands Ecological Knowledge Co-op Annual Gatherings. Reports on the Council's recommendations are conveyed to the Inuvialuit Game Council, the Aklavik HTC and the Environmental Impact Screening Committee.

WMAC(NS) monitors the progress of all recommended projects by requesting status reports and final reports from all agencies that receive funding. This newsletter summarizes research projects that were supported and recommended by the Council for 2002-2003.

Muskox Management

Muskox Satellite Program

The objective of this program is to learn more about where the muskox like to live at different times of the year and how much they move around. This program was begun in 1999 when muskox were first fitted with satellite collars. These collars were designed to last 3 years and will be replaced in July 2002. All 5 muskox with currently active satellite collars will be captured to remove the collars. Four of these 5 muskox will be fitted with new satellite collars plus 4 new muskox (1 cow and 3 bulls) will also be captured and collared. The satellite automatically records the locations of the muskox throughout the year. Samples will be taken from the captured muskox to get information on diseases, parasites

photo: Parks Canada

and genetic make-up. Body measurements, age, body condition parameters will also be recorded. All of this information helps biologist make decisions about managing the muskox and assists in determining a sustainable harvest quota. YTG and Parks Canada coordinate this project.

Muskox Population Survey and Composition Count

An aerial survey and composition count was conducted in April in order to get information on the size, distribution and age structure of the Yukon North Slope muskox population between the Alaska border and Shingle Point. The need for ongoing information was identified as a priority at the Muskox Management Workshop, held in Aklavik, in October 2001. In addition, the draft Canadian North Slope Muskox Management Plan directs managers to monitor the size of the muskox population by conducting population surveys. Good estimates of population size and trend are necessary to consider a hunt on such a small population. 186 animals were counted in this late winter survey. Another composition count will be done in conjunction with the satellite collaring in July. YTG and Parks Canada coordinate this project.

Richardson Mountains Joint Muskox Study

Biologists from both Yukon and NWT are interested in learning more about the muskox that have been seen in the Richardson Mountains. YTG has proposed a meeting that would to bring together affected organizations to discuss the management of this population and think about what type of research would be useful.

Studies on the Porcupine Caribou Herd

Radio Collaring

The radio collars are very helpful in carrying out a number of important projects. They help researchers locate and identify individual caribou and are used to document winter range use. The collars have also been very important in showing how important the Arctic National Wildlife Refuge is to calving caribou. For the best results there should be between 80 and 100 radio collars on the herd. More collars need to be placed on caribou each year to replace the caribou that have died of natural causes. The U.S. Fish and Wildlife Service will do a fixed wing flight to locate currently radio-collared caribou in March 2003. Once the location of herd is known, the collars will be put on some new caribou. Co-operating agencies purchase radio collars and the Yukon Government is responsible for putting them on the caribou. *photo: Yukon Government*

Satellite Location Program

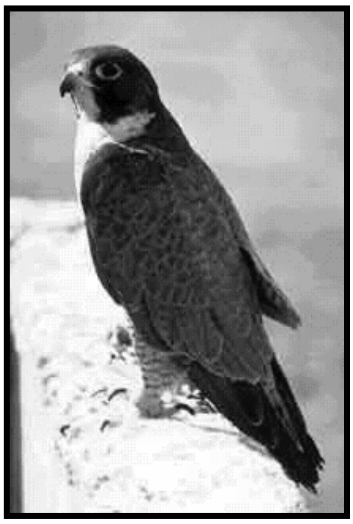
Many agencies are co-operating in this program to keep satellite collars on caribou cows. Satellite collars are a less expensive way to find out about caribou movements because you don't need to use a plane or helicopter every time you want to know where the caribou are located. The satellite tracks the animals automatically and shows the general distribution of the herd. The satellite collars also provide valuable information about the timing and routes of the migrations. This project was started in 1997 when ten satellite collars purchased. Contributions from various organizations every year pay for satellite system fees and data retrieval. Interested agencies, organizations and schools in the Yukon, Alaska and the NWT are able to track the location of the collared caribou on the Internet (www.taiga.net/satellite/index.html) and through maps that are distributed to many locations in the region once a week.

Ecological Monitoring

Arctic Borderlands Ecological Knowledge Co-op

The Co-op was founded in 1994 when representatives from a variety of community groups, agencies and governments started an ecological monitoring program for the Yukon, Alaska and NWT, within the range of the Porcupine caribou herd. The focus of this monitoring is on climate change, contaminants and regional development. Co-op activities include the tracking of ecological indicators in the region, community projects and an Annual Gathering to report on its findings and exchange information. The Co-op also conducts a Community-based Monitoring Program each year in Aklavik, Old Crow, Fort McPherson, Kaktovik and Arctic Village. A local researcher is hired to conduct interviews with local experts. Community observations related to the condition and number of berries, fish, caribou and other animals as well as weather conditions throughout the year are recorded. This will be the sixth year of the program in Aklavik. The Canadian Wildlife Service coordinates this project in partnership with community and government agencies in the region. A summary of the Co-op's activities can be found at www.taiga.net/coop.

Weather and Permafrost Monitoring



Long-term monitoring of weather and permafrost temperature is needed to track changes in climate and to understand how these changes will affect the environment of the Western Arctic. A weather station has been established in Ivvavik National Park to record precipitation, wind speed and direction, air temperature, incoming short wave radiation, relative humidity, dew point, snowfall and snow depth as well as barometric and vapour pressure. Permafrost probes measure soil temperature at various depths. Measurements are recorded on data loggers and are transmitted by satellite. *photo: C. McEwen*

Firth River Water Quality and Flow Monitoring

Water quality monitoring is being conducted in Ivvavik National Park to determine current water conditions and to monitor possible changes in water quality over time. This monitoring is done to find out if there are any contaminants in the water. Analysis of the data so far shows that the water quality in the Firth River is excellent. Changes in the amount of water flowing in Arctic rivers, and the timing of peak and low water levels, may be affected by climate change. A station to measure water flow is located on the Firth River. Water flow in the Firth is being monitored in order to provide park visitors with current information on river navigability and river crossings. Information about water flow is also valuable for understanding how Arctic ecosystems function.

Additional North Slope Projects and Programs

A number of other projects and programs were recommended by the Council. These include:

- ***Ground Temperatures and Recent Climate Warming, Western Arctic Coast.*** The objective of this project is to obtain information on ground temperature warming on Herschel Island. It will be conducted by Chris Burn (Carleton University), Scott Smith (Agriculture and Agr-Food Canada) and the Herschel Island Park Rangers.

- ***Vegetation Change- Ivvavik Coastal Plain and Herschel Island.*** YTG and Parks Canada will coordinate this project to compare vegetation information collected in Ivvavik National Park and on Herschel Island from 1985 to 1989 with similar data collected in 2000 and 2001. This work is being done to see how the vegetation has changed in these areas over time.

- ***Breeding Bird Distribution and Habitat Associations on the Yukon North Slope: Clean-up and Conversion of Field Data from 1992-93.*** Information collected in 1992 and 1993 about breeding birds on the Yukon North Slope will be converted to modern computer maps and files. This will make the information easier to analyze and distribute and will assist in identifying the areas that are important for various species. The Canadian Wildlife Service in Whitehorse will be coordinating this project.

- ***Richardson Mountains Sheep Joint Management Planning.*** The objective of this project is to encourage the development of a joint management plan for sheep in the Richardson Mountains.

- ***Experimental Infections of Dall's Sheep with Muskox Lungworm.*** This University of Saskatchewan project will try to find out if the parasitic lungworm found in muskox populations east of the Mackenzie River can infect Dall's sheep and, if it can, to determine its effects on the sheep. It is important to have this information as the muskox are expanding their range and could come in contact with the sheep in the Richardson Mountains.

- ***Reproductive Ecology of Tundra Swans in the Mackenzie Delta Region.*** This study is being conducted by a graduate student of the University of Northern British Columbia to develop a way to monitor Tundra swans as an indicator of environmental health. One part of the research is to collect traditional knowledge about Tundra swans from people in Aklavik and Tuktoyaktuk.

- ***Herschel Island Vegetation Studies.*** This is the continuation of a long-term program to obtain information on soils and vegetation on Herschel Island. The information collected by YTG Department of Environment and the Herschel Island Rangers will assist in understanding habitat use and ecology on the island.

- ***Hunter Education Workshop***. YTG will provide a hunter education workshop in Aklavik that focuses on wildlife biology, hunting practices, and marksmanship as part of a larger program being conducted in Yukon and NWT communities.

- ***Yukon North Slope Harvest Information.*** This project will document harvest of moose, caribou and sheep, by Inuvialuit hunters in Aklavik from January to December 2002. It will be conducted by YTG.

Wildlife Management Advisory Council (North Slope)

- **Inuvialuit Game Council**: Danny C. Gordon; Herbert Felix; Alternates: Billy Archie, and Carol Arey
- **Government of Canada**: Martin Raillard, Canadian Wildlife Service; Alternate: Alan Fehr, Parks Canada
- **Government of Yukon**: Doug Larsen, Renewable Resources; Alternate: Dorothy Cooley, Renewable Resources
- **Chairperson**: Lindsay Staples
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