

Finlayson Caribou Herd Recovery Program Summary

WHY did the program take place?

In 1982, the Yukon government counted the Finlayson herd after hunters complained they had difficulty finding the caribou. When the government found low numbers, it set up a recovery project to determine if wolf predation and human harvest were responsible for the decline in caribou numbers. The wolf reduction phase of the recovery program involved killing wolves from 1983 to 1989. The recovery phase (1990 to 1998), involved aerial counts and monitoring of caribou, moose and wolf populations.

WHERE did the program take place?

The 23,000 km² annual home range of the Finlayson caribou herd is in east-central Yukon. The Finlayson study area is part of the Pelly Plateau, a complex of small mountains, forested rolling hills, and plateaus that are separated by broad U-shaped valleys. Other ungulates in the study area included Dall's sheep, mountain goats and mule deer. At the initiation of the program it was learned that at least five First Nation communities relied on the Finlayson caribou herd for food.

WHO was involved?

The Yukon government undertook the recovery program with the Ross River Dena Council and the communities of Ross River and Watson Lake. Contemporary wildlife management bodies and processes were not in place at the time the Finlayson caribou recovery project began – today, in this region of the territory, there would be oversight or input from the Yukon Fish and Wildlife Management Board, and others.

WHAT was done?

The 15-year-long Finlayson caribou herd recovery program began when the First Nations people of Ross River and Watson Lake voluntarily restricted their own caribou harvest in 1983 and it is believed that First Nation harvest was significantly reduced during the recovery program. Although licensed harvest was not reduced by legislation during the reduction period, it is believed that pressure by licensed harvesters was reduced during this time.

The reduction phase (1983 to 1989) had wolves systematically removed (entire packs shot from helicopters) and incidentally trapped. The goal was to remove as many wolves as possible on the premise that only a large reduction of the wolf population was needed to reduce predation on caribou and allow the herd to recover. In the Finlayson program, wolves were reduced to lower levels for more years than most other similar experiments which resulted in considerable learning about these systems for biologists.

Caribou harvest by licensed hunters was restricted through regulation in 1998 at which time outfitters were also limited for this herd.

In 1983, there were an estimated 238 wolves present in the area, in 24 packs. By 1989 only 29 wolves in seven packs remained in the study area (about 14–17% of the original population). A total of 451 wolves were killed in the Finlayson herd's range during the wolf reduction phase.

In the recovery phase – after reduction ceased – the population ecology and behaviour of wolves was studied in detailed. Radio-collared pack members were used to define wolf pack territories, and count pack members from 1990 through 1994 and snow-tracking methods were used to determine wolf population size in 1996 and 1998.

Harvest reporting was an important component of the program follow up. Game guardians were hired by Ross River Dena Council to monitor First Nation harvest.

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WHAT were the outcomes?

The effects of lethal wolf population reduction and reduced harvest on Finlayson caribou and moose lasted about a decade.

The Finlayson caribou herd had doubled in size over 1983-1990 to about 6,000 animals and regional moose numbers were estimated to have almost tripled from 3000 to 9000. But by 2007 the Finlayson herd was down to 3,077 animals and moose numbers also fell significantly.

Monitoring between 1990 and 1994 of how often different wolf packs killed moose found that a pair of adult wolves killed an average of 27 moose each winter, while a pack of 10 wolves killed about 46 moose.

By 1994 the wolf population had stabilized at about 240 wolves: roughly the same number as when wolf reduction began in 1983.

Current situation

No inventories of caribou have been conducted since 2007. Moose were last inventoried in the North Canol part of the area where moose numbers had declined to approximately 1987 levels. No follow up wolf inventories have been conducted since 1998. Licensed hunters continue to harvest Finlayson caribou through the permit system for this area. Currently there is no dedicated First Nation harvest monitoring program in this area.

Lessons learned

- The recovery program provided compelling evidence that wolves and harvest were primary factors limiting the numbers of both caribou and moose.
- The recovery program showed that lethal wolf control for a defined period (7 years) could not establish a long-term recovery of moose and caribou.
- Once wolf population reduction ceased, wolves increased rapidly and pack size recovered in six years. Seven years after wolf reduction stopped and once harvest resumed, moose and caribou numbers appeared to be decreasing.
- Habitat factors related to range condition, which influences caribou productivity and growth rates, were not formally assessed. These factors may have contributed to the subsequent decline in the herd.
- The kill rate is mainly determined by the number of packs and how many wolves are in each pack, not by the total number of wolves in the area.
- In the Finlayson area, when moose densities are low wolves can maintain the population at low densities.
- The Finlayson area represents a multi-predator prey system. However, even with bears in the area, wolf reduction resulted in an increase in prey numbers.
- The Finlayson recovery program laid a foundation for future studies of wolf predation and ungulates in Yukon. It showed what reduction programs can – and cannot -- achieve and the importance of including human harvest in similar management plans.
- Information gathered from the recovery program informed the subsequent development of a long-term wolf conservation and management plan (released in 1992).
- Additional research into recruitment of the Finlayson caribou herd indicates that the effect of wolves on caribou is not constant year after year, but is strongly tied to annual weather patterns.