

Partnering for Caribou Recovery

Fall 2014 Update





Why are Caribou in Decline?

The decrease in caribou populations in Alberta and British Columbia is being driven primarily by increased predation. Disturbance of caribou habitat from human activity has been identified as an important factor leading to increased predation.

Habitat modification due to human activity, such as forest harvesting and oil and gas development, has contributed to higher numbers of moose and deer in places that were historically caribou ranges by replacing old forests with shrubs and vegetation that moose and deer like to eat.

The increased presence of moose and deer in these areas has attracted higher numbers of wolves and cougars. To avoid predators, caribou distance themselves spatially across large ranges. But, with higher numbers of predators moving into caribou ranges, and increasing pressure on caribou habitat due to land-use changes, there's simply less space for caribou to avoid predators.

The result is more caribou killed by predators. Furthermore, because caribou have low reproductive output, their populations are particularly vulnerable to increased predation.



Woodland caribou are declining throughout much of their range in Canada. It's possible that some of Western Canada's caribou populations could disappear from the landscape within the next 20 years.

Although much is known about what's driving population declines, there's an urgent need to understand how to halt and reverse these trends.

The Alberta Biodiversity Monitoring Institute (ABMI) is contributing to several multi-stakeholder projects. Each collaborative effort is working independently to test and evaluate options for caribou recovery.

The ABMI's Caribou Monitoring Unit

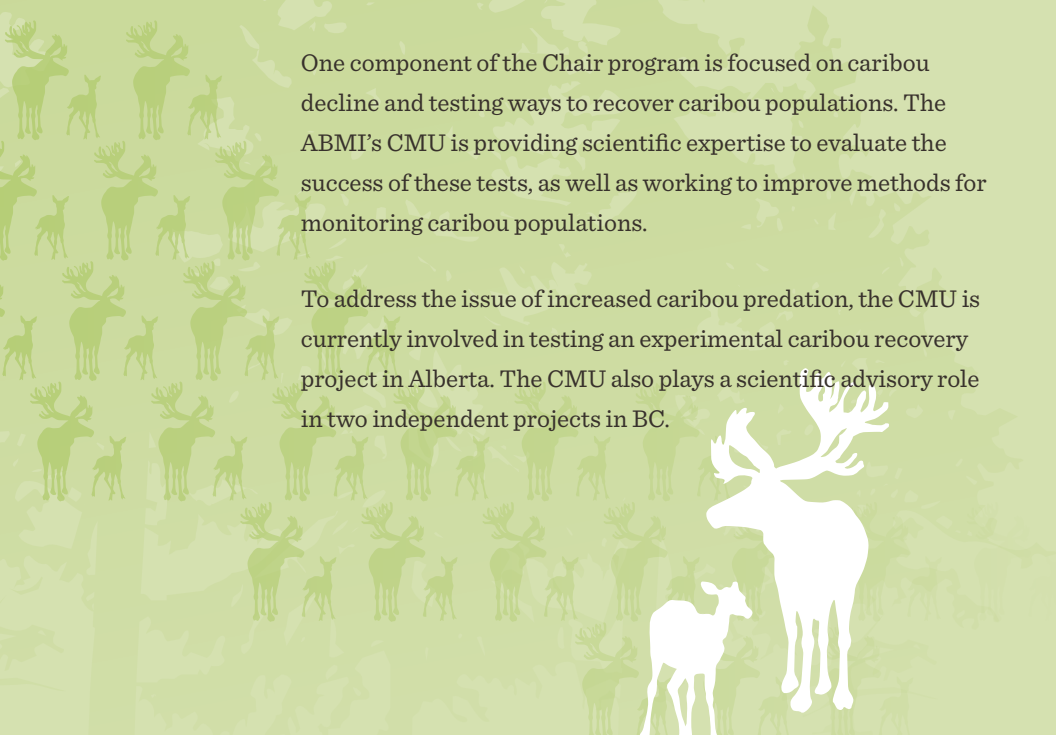
The ABMI has established a Caribou Monitoring Unit (CMU) to support caribou recovery by:

- Helping to estimate and monitor the abundance of caribou
- Testing recovery options for caribou herds and monitoring the results of these tests over time

This work is critical for a caribou recovery process as articulated by the Alberta Biodiversity Conservation (ABC) Chair Program. The ABC Chair program was established in 2013 to understand and develop mitigation strategies for key biodiversity challenges related to activities from the energy industry in Alberta.

One component of the Chair program is focused on caribou decline and testing ways to recover caribou populations. The ABMI's CMU is providing scientific expertise to evaluate the success of these tests, as well as working to improve methods for monitoring caribou populations.

To address the issue of increased caribou predation, the CMU is currently involved in testing an experimental caribou recovery project in Alberta. The CMU also plays a scientific advisory role in two independent projects in BC.



Predator exclosure fencing and maternal pens are designed to protect caribou by providing them with a predator refuge.

NEXEN PREDATOR EXCLOSURE FENCING TRIAL

Why:

This project is testing different fence design options for different habitat types across boreal Alberta. The aim is to increase caribou survival across large areas by protecting them from predators.



What:

- A 1-hectare site, south of Fort McMurray, Alberta, fenced off to exclude caribou predators.
- The exclosure is baited to discover what predators are attracted to the fence and how to keep them out.
- Once the best design(s) is identified, the goal is to fence an area that is very large ($> 100 \text{ km}^2$) to exclude caribou predators.
- On an annual basis, yearling caribou will be released from the fenced area to join the caribou range.



Partners: Nexen Energy ULC and other COSIA member companies, ABC Chair

KLINSE-ZA

MATERNAL PEN

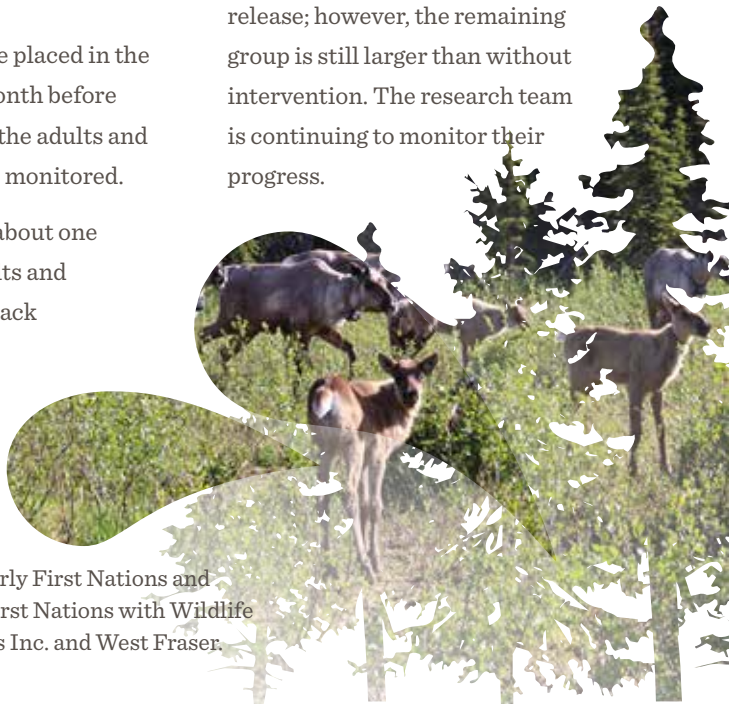
Why:

The project is an emergency measure recovery action recommended for the Klinse-Za caribou herd in a recovery action plan developed by West Moberly First Nations and supported by the government of BC.

What:

- A 3.9-hectare maternal pen in northeast BC.
- Maternal penning is designed to increase caribou calf survival by capturing pregnant female caribou and transporting them to the holding pen to give birth in a secure environment.
- Pregnant females are placed in the enclosure for one month before calving, after which the adults and newborn are fed and monitored.
- Once the calves are about one month old, both adults and calves are released back into the wild.
- In the spring of 2014, 10 pregnant caribou were placed in the pen, and over the following weeks 10 healthy calves were born inside the pen.
- In July 2014, all animals were released fitted with radio collars.
- Some caribou were predated upon release; however, the remaining group is still larger than without intervention. The research team is continuing to monitor their progress.

Partners: West Moberly First Nations and
Saulteau First Nations with Wildlife
Infometrics Inc. and West Fraser.



REVELSTOKE CARIBOU REARING IN THE WILD MATERNAL PEN

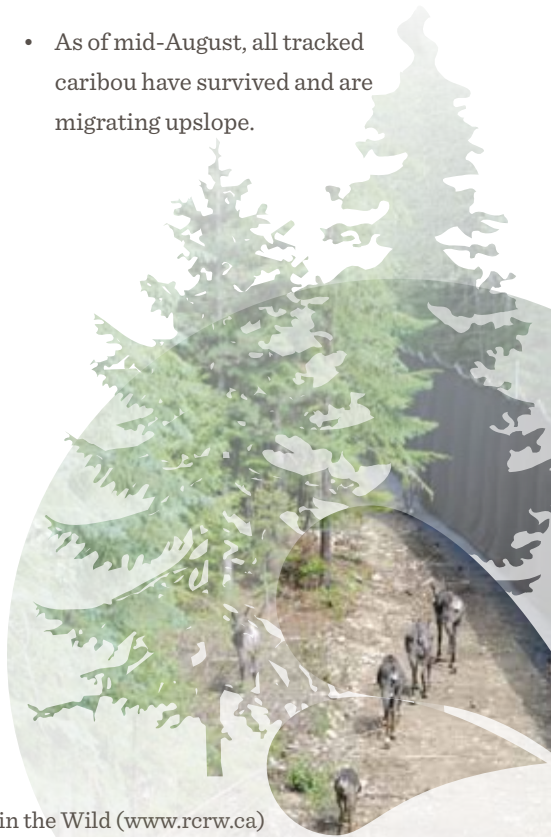
Why:

Prior to the maternal penning project, protection of over 100,000 ha of old growth forest from harvesting and an experimental moose reduction effort that successfully reduced wolf numbers both helped to stabilize the largest caribou herd in the region. It is hoped that maternal penning will now increase the herd.



What:

- A 6.4-hectare maternal pen north of Revelstoke, BC.
- Calf predation is highest during the first few weeks of life, so keeping calves in a pen for one month affords them a refuge from predation during the riskiest period of their lives.
- In March 2014, 12 caribou were placed in the pen: 9 pregnant cows, 1 non-pregnant cow, and 2 yearlings that were with their moms.
- 9 healthy calves were born in the pen and radio-collared.
- On July 23, 2014, all of the caribou were released.
- As of mid-August, all tracked caribou have survived and are migrating upslope.



Partners: Revelstoke Caribou Rearing in the Wild (www.rcrw.ca) is a community-based partnership committed to the recovery of mountain caribou in the Revelstoke area.

Partners

There is a large network of partners working together to stem the decline of caribou in Alberta and BC through innovative recovery strategies and caribou population monitoring.

Program/Project Funders:

ABC Chair Program:

Alberta Innovates – Bio Solutions, Canada's Oil Sands Innovation Alliance (COSIA), and the University of Alberta Faculties of Science and Agriculture, Life and Environmental Sciences.

Nexen Predator Exclosure:

Nexen Energy ULC, and other COSIA member companies

Klinse-Za:

Environment Canada, West Moberly and Saulneau First Nations, Resources North Association, Province of BC, West Fraser, Teck, Spectra, Walter, Anglo-American, TransCanada

RCRW:

Environment Canada, Shell Fuelling Change, Fish and Wildlife Compensation Program, Columbia Basin Trust, the Province of BC, Parks Canada, Downie Timber, and Golder Associates Ltd. RCRW also received in-kind contributions from the Splatins First Nation and the Okanagan Indian Band, City of Revelstoke, the Revelstoke Community Forest Corporation, Monashee Outfitting, Selkirk Mountain Helicopters, Selkirk Tangiers Heli-Skiing, Mustang Helicopters, the Revelstoke Snowmobile Club, the North Columbia Environmental Society, Beaumont Timber, K3 Cat Skiing, Cooper Beauchesne and Associates, and many other businesses and volunteers.

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