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# Porcupine Caribou Herd Monitoring Update

from the Porcupine Caribou  
Technical Committee Annual  
Summary Report 2022-2023

## How and why are we gathering knowledge about the Porcupine Caribou herd?

- The users of Porcupine Caribou have been following and learning about the herd and its yearly cycle for generations.
- Scientists and managers are also finding ways to track and learn more about the herd.
- The information helps the Porcupine Caribou Management Board (PCMB) make recommendations on conservation and management of the herd and its habitat.

FOR FURTHER INFORMATION:

Porcupine Caribou Management Board

dlemke@pcmb.ca

**pcmb.ca**

# WHAT IS AN INDICATOR?

▶ Indicators are pieces of information that can be studied over time to track changes in the Porcupine Caribou herd's numbers, health, and habitat. They are updated each year using measurements, analysis, and comparison tools.

▶ Each year, we make an annual report of all the measured "indicators" for stakeholders.

▶ Monitoring the Porcupine Caribou helps us watch for changes with the herd.



## PORCUPINE CARIBOU INDICATORS:



### Number of caribou

- In 2017, surveys numbered the herd between 202,000 and 235,000 caribou, with a likely count of about 218,000 caribou.
- The herd most likely remained stable or increased between 2017 and 2022 based on computer model predictions. The computer model brings together a lot of monitoring information to estimate a number of caribou. It gives the PCMB information on the herd size and trend when a photocensus is not possible.
- The herd is in the Green Zone as identified in the Harvest Management Plan.



### Caribou survival

- Caribou wearing collars are tracked throughout a year to find out an annual survival rate.
- Even small changes in the survival of adult cow caribou can make the difference between a herd growing or declining.
- This year, around 90% of the adult female caribou survived, which is a sign that the herd is stable. Adult female survival rates have been high or very high over the past five years.



### Calving

- The calving rate for caribou cows was 78%, which is average for the herd.
- In 2023, calf survival to three weeks of age was 77%, one of the lowest that we have measured. But when we counted in late June, the ratio of calves to cows was 58 calves per 100 cows, which is typical for this herd.
- We may not know how many of these calves survive to their first birthday, but we work with communities to learn what hunters are seeing, and our crews observe calf numbers during March fieldwork each year. These are our best sources of information on whether there are a lot or relatively few calves in late winter.



### Hunter reports

- Hunters measured backfat and rated the condition of 157 caribou this year.
- Hunters reported caribou body condition as fair or average. Lower scores may be because most harvests occurred in the post-rut period when males are at their leanest.



### Wildfires

- Wildfires burned some patches of caribou habitat in 2023 and there were many smaller fires throughout the range in 2022. Fires are a concern for caribou as they remove lichen, which is a primary food for caribou.



### Lichen

- Lichens are a critical food source for caribou. Using satellite images, we have begun monitoring and measuring lichen distribution. There appear to be small decreases in the amount and spread of lichen in the herd's range since 1985, usually after large wildfire years.



### Snow

- We study snow depth and hardness because when snow is deep or hardened by wind, caribou use more energy digging through it. This may affect the condition of the caribou and their unborn calves.
- Snow was deeper than usual in the Eagle, Ogilvie, and Old Crow regions. The North Slope region had slightly above average snow depth. Snow is getting denser over time in most Yukon regions. People working in the field noticed deeper snow than usual in the Yukon and Alaskan parts of the winter range, where most caribou wintered.



### Human development

- No major human development changes have happened in recent years in the Porcupine herd's range.
- Oil and gas leases that were sold in 2021 in Alaska's Arctic National Wildlife Refuge have now been cancelled. But a coastal plains oil and gas leasing program is being prepared and will probably include oil and gas development activities in the caribou herd's calving and summer ranges.
- An application to do oil and gas work near Eagle Plains has also been received in Yukon.

All images by Peter Mather unless otherwise noted



Will Hein