



What does it all mean?

The Porcupine Caribou herd is likely stable or declining.

In November 2024, the PCTC reported the herd is likely stable or slightly declining, with key indicators below average, some for over a year. This suggests a shift from growth to potential decline. Recommendations include closely monitoring indicators, prioritizing a photocensus by increasing monitoring flights in 2025, and continuing current research programs. Using all sources of information in this report along with Indigenous knowledge will yield the best understanding of the status of the herd.

Peter Mather



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2025 Porcupine Caribou Herd Monitoring Update

from the Porcupine Caribou Technical Committee (PCTC)
Annual Summary Report 2023-24

FOR FURTHER INFORMATION:

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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 make recommendations on conservation and management of the herd and its habitat.

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.



Will Hein

PORCUPINE CARIBOU INDICATORS:



Number of caribou

- The last successful photocensus was in 2017. That survey counted about 218,000 caribou. In summer 2024, census flights were attempted, but the herd was too dispersed to photograph.
- We use a computer model to estimate population when a caribou count isn't possible. It gives us estimated information on the herd's size and trend. This year's computer population model indicates that the herd no longer appears to be increasing and has likely decreased in size from the last photocensus in 2017.
- All model scenarios estimate that the herd remains in the Green Zone as identified in the Harvest Management Plan.



Caribou survival

- Adult and yearling caribou wearing collars are tracked throughout a year to find out an annual survival rate and calves with collared females are monitored to learn their early life survival (3-week survival).
- This year, adult female caribou survival remained high (89%).
- Male, yearling female, and calf survival (to three weeks old) were lower than average.
- Adult female survival is a big factor in population growth, but when the herd is struggling, we expect to first see more deaths in adult males and young females.



Calving

- The calving rate for all female caribou was 73%, which is below average for the herd.
- Birth rates for adults over four years old remain high, but three-year-old female caribou are having low birth rates, which may be due to declining nutrition caused by environmental conditions or food availability.
- At 3-weeks post-calving, surveys showed 57 calves for every 100 cows which is typical for this herd.
- We have been recording the weights of nine-month-old female calves as an indicator of food quality, overall maternal condition, and environmental conditions. Recent data suggests these conditions are not as positive as in the early 2000's.



Hunter reports

- Because most of the Porcupine Caribou herd was not available to hunters in Canada in the winter of 2023-2024, few samples were collected. We can't draw conclusions about overall caribou condition from the data, but hunters have reported that the caribou were not in great condition in the fall of 2023.
- On-the-land observations from hunters indicated fewer calves in fall and late winter in recent years. Biologists, too, observed this while completing other monitoring activities this year. We will continue to watch the number of calves carefully.



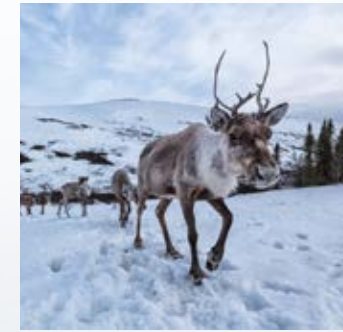
Wildfires

- In 2023, about 2,250 square kilometres of the herd's range burned in wildfires, which is above average. Most of the fires were in the Yukon part of the range, and six were considered large.
- The largest fire in 2023 burned both summer and winter range northeast of the Old Crow Flats. Much of this fire occurred in tundra habitats, which is unusual for the herd's summer range.
- In 2024, there were much fewer wildfires than in 2023, but complete wildfire data are not available yet.
- 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 monitor and measure lichen distribution every 5 years.
- There appear to be small decreases in the amount and spread of lichen in the herd's range since 1985. Declines primarily occurred in the mid-2000's due to fire.
- Climate-related changes in vegetation and the impact of wildfires will continue to affect lichen growth and spread.



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 much deeper than usual in the Eagle, Old Crow, and North Slope regions, in some cases at record levels. The Ogilvie region had above-average snow depth. Snow density was above average in the Yukon. People working in the field in Alaska, where the herd wintered, reported deeper snow in meadows and along rivers in the winter range.



Human development

- The Coastal Plains Oil and Gas leasing Program in the Arctic National Wildlife Refuge did not proceed further under the Biden Administration, however the Trump Administration has ordered additional leasing and expedited permits for oil and gas production in Alaska.
- If coastal plains oil and gas lease sales and development occur as proposed, major new disturbances and footprint will occur within parts of the Porcupine Caribou calving, post-calving, and summer ranges.
- An application to do oil and gas work near Eagle Plains has also been received in the Yukon and is currently under consultation.

All images by Peter Mather unless otherwise noted



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