

# Caribou

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*This report addresses work undertaken by Canadian Wildlife Service – Ontario Region (CWS-ON) up to March 31<sup>st</sup>, 2025, on caribou, in anticipation of the Regional Assessment in the Ring of Fire Area, including the diverse data collected from numerous field programs and partnerships with other institutions. Where appropriate, reference is made to other available information including published and unpublished reports and datasets.*

*Much of the work described in this report was completed before the finalization of the Terms of Reference for the Regional Assessment in the Ring of Fire Area<sup>1</sup> and thus prior to the designation of an assessment area and development area for the regional assessment (RA) process. The terms ‘development area’ and ‘assessment area’ are used where we specifically refer to these areas as defined Terms of Reference. Throughout this report, we refer to ‘RoF region’ which, for the purposes of this report, we define loosely as the area including and surrounding the Ring of Fire assessment and development areas (as defined in the Terms of Reference for the Regional Assessment in the Ring of Fire Area<sup>1</sup>), and some overlapping ecoregions.*

## Summary

Two ecotypes of woodland caribou occur in Ontario, including in the RoF region: boreal caribou and eastern migratory caribou. The ecotypes are distinguished based on female anti-predator strategies during the calving season. Boreal caribou are present in the RoF assessment and development areas year-round while eastern migratory caribou are present in the RoF development area during winter and in the assessment area year-round. Boreal caribou are listed as Threatened under both the federal Species at Risk Act (SARA) and the Ontario Endangered Species Act (ESA) and are a priority species under the pan-Canadian approach to transforming species at risk conservation in Canada. Eastern migratory caribou are under consideration for addition to SARA as Endangered and are listed as Special Concern under the ESA.

CWS-ON has undertaken the collection of baseline data on caribou and caribou predators in the RoF region to improve regional-level understanding of caribou population parameters and distribution of caribou predators. Many of these surveys began before the delineation of the Regional Assessments’ assessment and development areas. This includes the first range-wide caribou fecal DNA surveys in Ontario’s Far North and regional-scale trail camera surveys of caribou and caribou predators. Projects are being undertaken in collaboration with groups including ECCC-WLSD, Trent University, NRCan, Wilfrid Laurier University, and Indigenous organisations.

Between 2021 and 2025, over 3,700 caribou fecal samples were collected by CWS-ON across six provincial boreal caribou ranges, covering an area greater than 250,000 km<sup>2</sup>, or approximately 50% of the federal boreal caribou range in Ontario. Preliminary results of the

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<sup>1</sup> Terms of Reference for the Regional Assessment in the Ring of Fire Area (<https://iaac-aeic.gc.ca/050/documents/p80468/160520E.pdf>)

surveys show that caribou sign<sup>2</sup> was not evenly distributed across this area, with significant concentrations of caribou close to the RoF development area, while few or no caribou sign was observed in the northeastern portion of Ozhiski range or the coastal portion of the James Bay range. These observations align with previous surveys and caribou telemetry data from the region. Caribou sightings during the survey also reflect a significant overlap of boreal caribou and eastern migratory caribou winter ranges in this region. Observational results from these surveys have been used to model predicted suitable winter caribou habitat across boreal caribou ranges most closely overlapping the assessment area. Results show that both peatland type and the climatic effect of James and Hudson Bay may influence predicted winter habitat suitability. Predicted suitable winter caribou habitat was located primarily within the Missisa range and to the northwest of the Ozhiski range. Fecal samples from the surveys are undergoing genomic analysis at Trent University and hormonal analysis at the Toronto Zoo. Preliminary pregnancy rates based on hormonal analysis are presented here, but additional genomic and stress hormone analysis is ongoing.

CWS-ON has also begun to analyze available information from caribou telemetry data collected by the province of Ontario from radio-collared caribou, to summarize how eastern migratory and boreal caribou distribution and abundance within the assessment area may vary across seasons. Pregnancy rates from individuals captured during radio collaring indicated pregnancy rates were consistently high at over 80% across all years and ranges.

A review of potential threats to caribou populations and their habitat in the RoF region was undertaken in 2023 based on a literature review of impacts of mining and industrial development on woodland caribou, using the IUCN's direct threat classification scheme. The full review can be found in Appendix C.

Caribou ranges overlapping the RoF assessment area contain low percentages of anthropogenic and natural disturbance and large, continuous, undisturbed tracts of habitat. There is currently no range-wide population size estimate for the federal Far North boreal caribou range that overlaps the assessment area. A summary of available caribou demographic information for provincial boreal caribou ranges overlapping the assessment area is provided. Two provincial ranges overlapping the assessment area (Missisa and Ozhiski) were recently assessed as having stable or possibly increasing caribou population trends based on telemetry data from 2019-2023. The other ranges overlapping the assessment area (James Bay, Kesagami, Nipigon and Pagwachuan and Kinloch) are assessed as being likely in short-term caribou population decline due to low annual female survival and decreasing population trends; however, provincial range-wide estimates for these ranges are based on data that is at least 11 years old, and from a small number of animals.

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<sup>2</sup> Species sign count refers to the number of times individuals or signs of a particular species are observed during a survey or monitoring effort. These signs can include tracks, scat, nests, vocalizations, or any other indication of the species' presence.