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Caribou: Bathurst, Northwest Territories, Canada

Migration Description

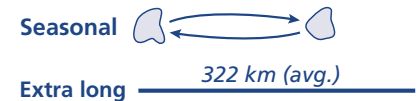
The Bathurst herd of barren-ground caribou ranges across the northeast portion of the Northwest Territories and western Nunavut. Though its winter ranges overlap with the Bluenose East herd to the west and the Beverly herd to the east, each population is defined by its use of specific calving grounds. The Bathurst caribou are inextricably tied to the Dene/ First Nations, Métis, and Inuit peoples. Known as *ekwō* (Tłıchō), *ekwe* (Michif), *ethhēn* (Denesoliné), and *tuktu* (Inuktitut), barren-ground caribou have provided food, clothing, and cultural sustenance for countless generations. Historically, Bathurst caribou usually spent winter months south of the tree line where open tundra becomes boreal forest, ranging as far south as northern Saskatchewan. In late April they migrate north to calving grounds near Bathurst Inlet. After giving birth, they spend 1-2 weeks grazing on spring vegetation with newborn calves. In summer, Bathurst caribou roam the tundra in huge aggregations to reduce exposure to biting insects, foraging on flowers, grasses, sedges, shrubs, and mushrooms to gain weight for the coming winter. Caribou migrate south as the days shorten and get colder, sometimes taking several weeks to move short distances while foraging and breeding along the way. The herds generally follow migration corridors, but vary the routes and duration of seasonal movements each year as they track lichen availability, snowmelt, and vegetation growth.

Threats to Migration

The Bathurst herd declined by 98% from 1986-2019. Though caribou population declines and recoveries are cyclical, many factors including predation, overharvesting, insect harassment, snow conditions, drought, and human disturbance have interacted in complex ways to reduce caribou reproduction and survival, resulting in their current decline. Their range has shrunk by 80% since 1997, and the migration now covers half its historic distance (Fig. 1). The Bathurst herd's decline and resulting range contraction have led to harvest restrictions and reduced access, affecting Indigenous communities. Extractive industries and infrastructure pose serious threats to the herd's long-term viability. As of 2025, three mines operate in their migratory range, and the resulting habitat disturbance and dust from mine roads are believed to impact caribou's access to foraging areas. Caribou strongly avoid the roads, particularly during periods with higher traffic. In addition to preventing caribou movements, roads may also increase hunter access. Climate change threatens caribou on many fronts: increasing fires destroy winter food sources, changing snow conditions impact river crossings, and rising temperatures and insect harassment stress the caribou. Also, more frequent rain-on-snow events can form nearly impenetrable ice layers over lichen and vegetation that caribou eat during winter. These threats endanger not only Bathurst caribou but the Indigenous communities who rely on them.

Local Population Facts

Migration



Threats



Species Facts

Common name: Barren-ground caribou

Species name: *Rangifer tarandus groenlandicus*

Range: Circum-polar north

Diet: Grasses, sedges, lichens, forbs, mushrooms, and shrubs

Global population: 1.84 million across 27 herds with publicly-available population data

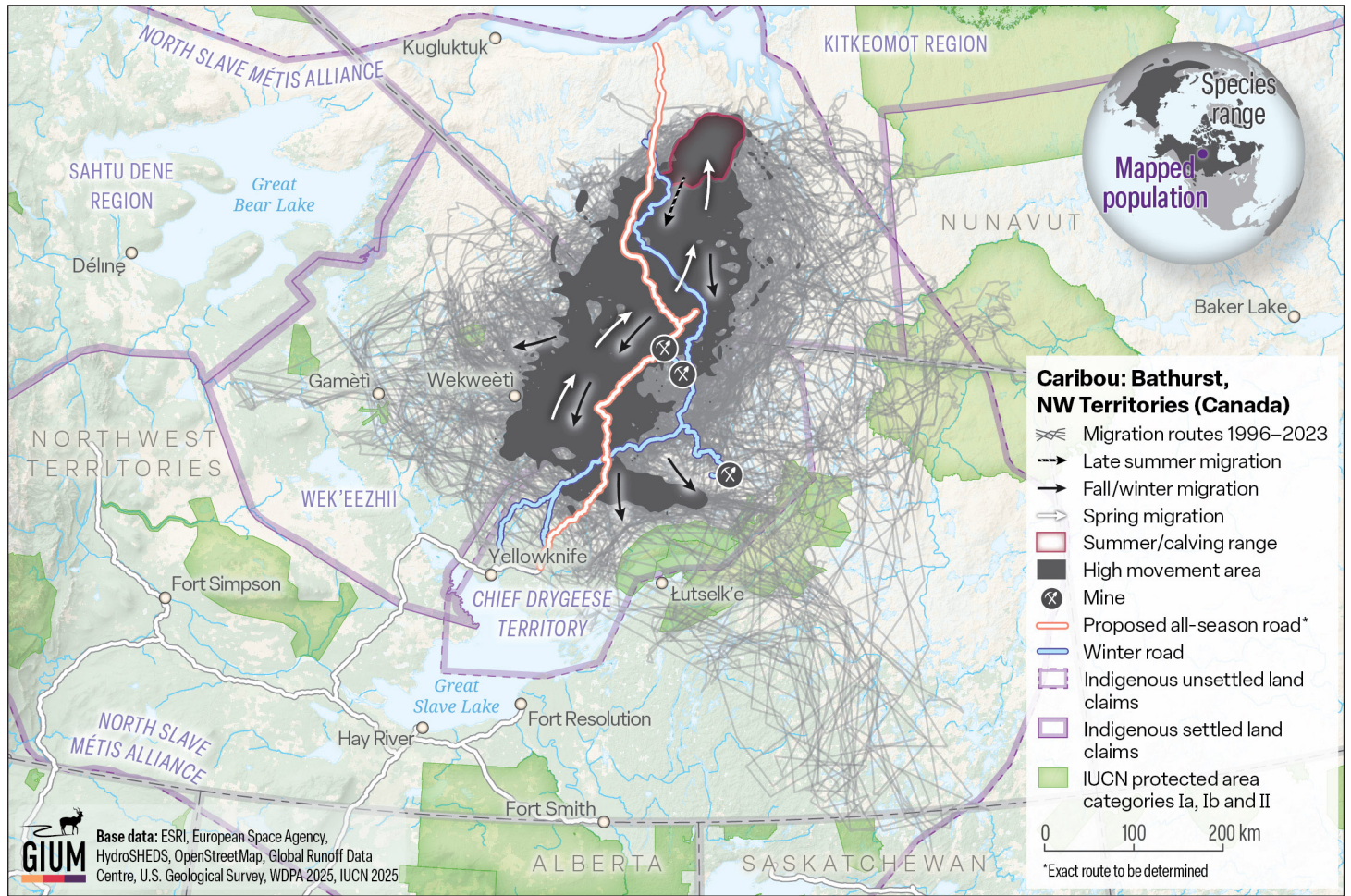
IUCN Conservation Status

VU Vulnerable

CMS Status

Not listed

Caribou Migration



Study Information

Sample size

226 individuals

Relocation frequency

variable, multiple days to 2 hours

Project duration

1996–2023

Data Analysis

Delineation of migration periods

Net squared displacement to delineate variable year-round movements

Models derived from

Brownian bridge movement model

Route Summary

Caribou of the Bathurst population show great variability in the distances traveled and the timing of their seasonal movements year to year. In general, animals travel northward during spring. Snowmelt is considered an important trigger for their annual spring migrations, when females travel hundreds of kilometers along the edge of receding snow and ice to reach their calving grounds near the Bathurst Inlet. As autumn progresses, the caribou migrate south. Historically, they migrated to the boreal forest in the fall, however, these movements and seasonal ranges have shifted, likely in response to changes in climatic conditions. Though there is individual variability in their winter and calving ranges, caribou are strongly influenced by sociality, leading to the massive aggregations that characterize their migrations.

Migration route length

- Min: 93 km
- Mean: 322 ± 86 km
- Max: 587 km

Data Providers

Data were provided by the the Government of Northwest Territories, in collaboration with Eliezer Gurarie of the Department of Environmental Biology, SUNY College of Environmental Science and Forestry, the Wek'èezhii Renewable Resources Board, the Tłı̄cho Government and the North Slave Métis Alliance. Camera trap photos were made possible through a collaboration with the Kugluktuk Angoniatit Association, the Government of Nunavut and the Government of Northwest Territories.

In partnership with:



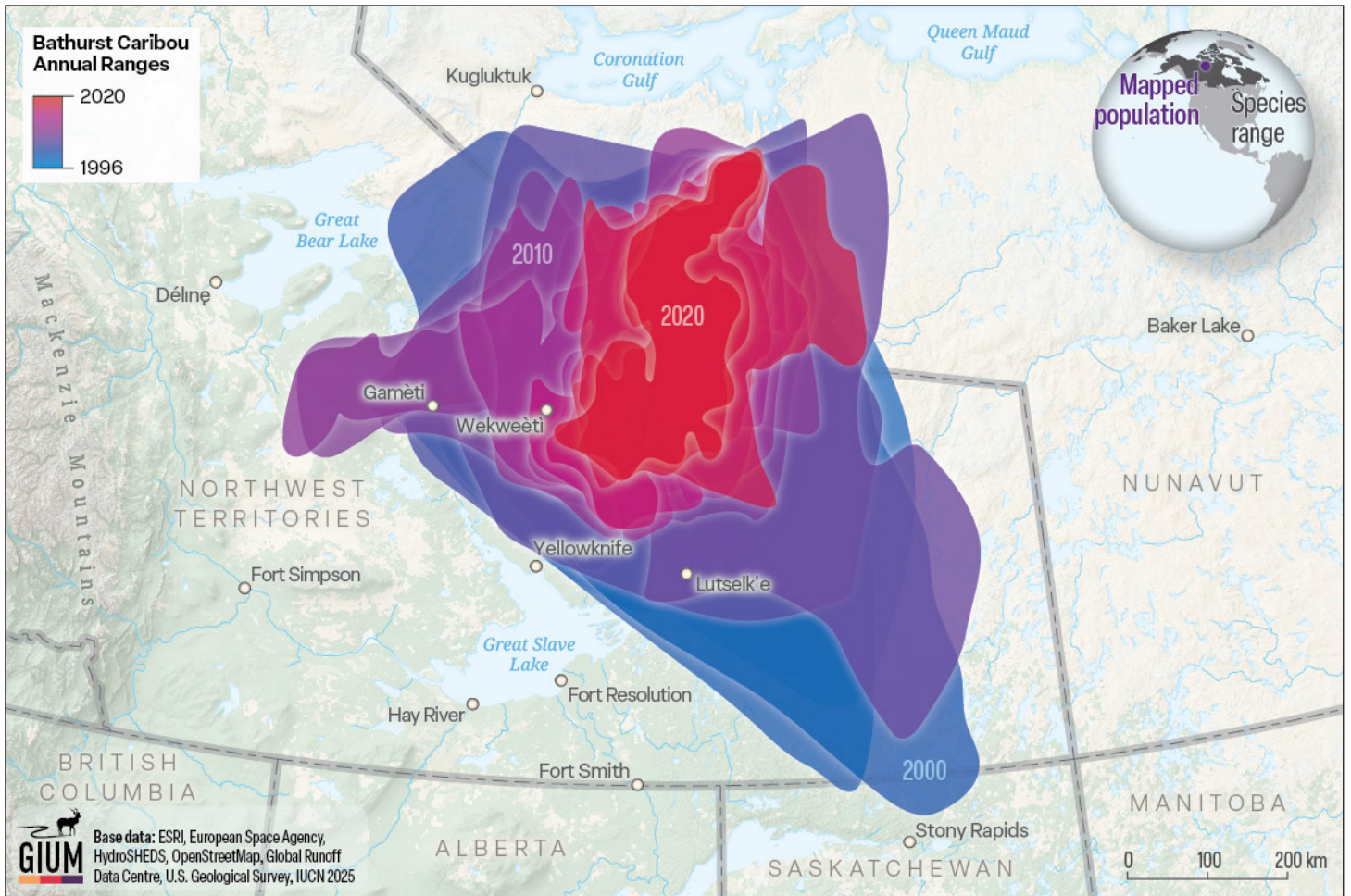


Fig. 1: The shrinking migratory range of the Bathurst caribou population. Arctic caribou live in an increasingly fragile ecosystem as climate change and escalating pressure from extractive industries alter the region. The Bathurst herd experienced a 98% drop as their numbers went from over 400,000 individuals to less than 4,000 over the last 30 years. Their dramatic decline, both in numbers and extent of their migratory range, illustrates the precarious position of this northern herbivore. It is difficult to attribute their decline to one clear factor, but infrastructure cutting through the caribou's core migration routes and seasonal ranges presents a serious threat to their long-term survival as a migratory population. Companies are exploring new mine sites within the Bathurst herd's range, and proposing to extend the length and operating season of the road system.



Historically, Bathurst caribou have spent the winter months south of the tree line, where open tundra becomes boreal forest. But now, rather than returning to areas at the southern extent of their range, the Bathurst herd winters further north near Wekweèti, along the tree line and out on the tundra, demonstrating how winter ranges have contracted and shifted as the herd declines.



The Convention on the Conservation of Migratory Species of Wild Animals (CMS), also known as the Bonn Convention, is an environmental treaty of the United Nations that provides a global platform for the conservation and sustainable use of terrestrial, aquatic and avian migratory animals and their habitats.



The Global Initiative on Ungulate Migration (GIUM) was created in 2020 to work collaboratively to: 1) create a Global Atlas of Ungulate Migration using tracking data and expert knowledge; and 2) stimulate research on drivers, mechanisms, threats and conservation solutions common to ungulate migration worldwide.



View and Download
Map Data from the
GIUM Migration Atlas

Brose, A. and E. Gurarie. 2025. Caribou: Bathurst, Northwest Territories, Canada. Global Initiative on Ungulate Migration, editors. *Atlas of Ungulate Migration*. Convention on the Conservation of Migratory Species of Wild Animals.