

On Thin Ice: The Story of Dolphin and Union Caribou

Based on the species status report and assessment of the NWT Species at Risk Committee (April 2023)

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ABSTRACT

In April 2023, Dolphin and Union caribou became the first species to be assessed as Endangered under Northwest Territories species at risk legislation. The migration of this species twice a year across the frozen Arctic Ocean sets it apart from other caribou in the Northwest Territories and around the world. Impacts of climate change and ship traffic through the Northwest Passage are making the crossing more dangerous and numbers of Dolphin and Union caribou have plummeted since the 1990s. This is a summary of the current biological status of Dolphin and Union caribou and the findings of the NWT Species at Risk Committee that led to an assessment of Endangered in the Northwest Territories.

THE SPECIES

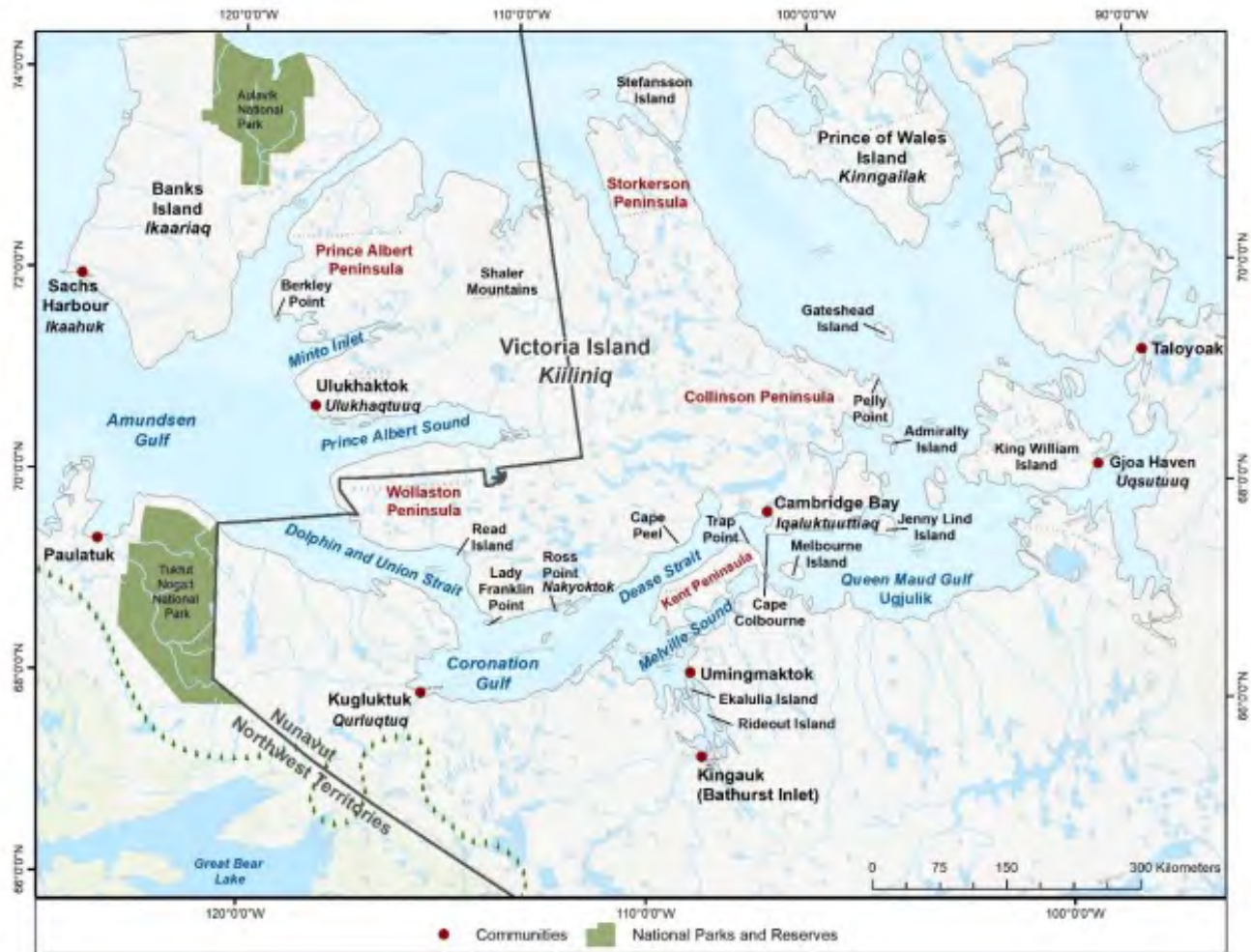
"My father and mother used to do a lot of hunting. In late summer, people used to harvest caribou when the fur was nice and thick. People would move to the narrow channels and people would wait for the caribou to cross. They would hunt for their food and for their clothing. We survived..."

- Lena Kamoayok [Umingmaktok] in Golder, 2003

Dolphin and Union caribou are named for the Dolphin and Union Strait they historically crossed twice a year in their seasonal migration between Victoria Island and the mainland. They are only found in the Northwest Territories and Nunavut and are often called 'island caribou' in nearby communities of Ulukhaktok, Kugluktuk and Cambridge Bay. Dolphin and Union caribou are slightly darker and larger than Peary caribou, which live on the Arctic islands to the north, and smaller than barren-ground caribou to the south.

Caribou and caribou cycles are inherently linked to Inuvialuit and Inuit identity and wellbeing and provide important country food for the communities within their range. Hunters from the NWT communities of Ulukhaktok and Paulatuk, and from the Nunavut communities of Cambridge Bay, Kugluktuk, Umingmaktok and Kingauk (formerly Bay Chimo and Bathurst Inlet, respectively) harvest Dolphin and Union caribou.

However, access to Dolphin and Union caribou has varied considerably over the years. In the last few decades their main migration route across the sea ice has shifted east, with caribou now crossing to and from Victoria Island at the Coronation Gulf, Dease Strait or Queen Maud Gulf.



Map of the Northwest Territories and Nunavut showing communities, protected areas, and features relevant to Dolphin and Union caribou (place names from Kuptana 2022). Map from the Species Status Report for Dolphin and Union Caribou in the Northwest Territories (2023).

THE MIGRATION

In the fall, Dolphin and Union caribou gather on the south coast of Victoria Island before crossing the sea ice to the mainland where they spend the winter. When the ice takes too long to form, or when population numbers are low, some Dolphin and Union caribou may abandon the migration and remain on Victoria Island during winter.

In the spring, pregnant cows lead the northward migration from the mainland to their calving areas on Victoria Island. When the calves are strong enough, the cow and calf join the rest of the caribou in their twice annual migration.

The journey between Victoria Island and the mainland is inherently dangerous. Some caribou die breaking through the ice while crossing to the mainland. Late freeze-up is occurring more often and affects not only the timing of the migration but also food availability, as caribou must wait longer on the south coast of Victoria Island to cross.

Caribou require at least 10 cm of sea ice to cross. In addition to the uncertainties of climate change, a projected increase in shipping traffic in the Northwest Passage is a concern for caribou as well as for harvesters. Passing ships may prevent or delay the formation of ice, increasing drownings and affecting the timing of caribou migration as well as compromising the safety of harvesters traveling on the ice.

THE ASSESSMENT

On April 18-21, 2023, the Northwest Territories Species at Risk Committee met to assess the biological status of Dolphin and Union caribou. This was the second time this group of experts had met to consider how Dolphin and Union caribou were doing—and a lot had changed.

When the Committee first assessed Dolphin and Union caribou in 2013, the most recent survey information available was from 2007. Results indicated there were about 27,800 caribou. This population estimate was lower than the 1997 estimate of 34,600 Dolphin and Union caribou. Considering this species only occurs in Canada's north and that Dolphin and Union caribou are vulnerable to sea ice changes and extreme weather events such as freezing rain—the Committee assessed Dolphin and Union caribou as a species of Special Concern. This assessment meant the species was showing signs of trouble and we should keep an eye on it. Dolphin and Union caribou were legally listed in 2015 under the *Species at Risk (NWT) Act* and a management plan was released in 2018.

Under the management plan, which was developed by partners in wildlife management on both sides of the NWT-Nunavut border, much work has been done to support Dolphin and Union caribou. Additional population surveys in 2018 and 2020 confirmed a serious decline was underway. Management actions were introduced, with harvest of Dolphin and Union caribou reduced in both Nunavut and the NWT and a voluntary ban on spring hunting in Ulukhaktok. Communities across the range are in regular communication with each other over the state of the caribou and ongoing management actions. Cambridge Bay has taken the lead on a number of measures to reduce threats from ship traffic, including an annual notice to mitigate the risks of icebreaking to people traveling on ice and caribou. Research and monitoring are underway, including community-based harvest sampling and reporting, collaborations with university partners on caribou health and distribution, and research on impacts to the population from climate change.

Despite all efforts, so far it has not been enough to halt the population's steep decline. The last aerial survey in 2020 estimated the number of Dolphin and Union caribou at about 3,800. That represents a decline of 89 per cent since 1997.

In assessing a species, the Species at Risk Committee looks at all the best available information from Indigenous and community knowledge and science to form its assessment. Looking at the information in different ways, and fully considering each kind of knowledge, the Committee reached the conclusion: Dolphin and Union caribou are in serious trouble.

The Committee assessed Dolphin and Union caribou as Endangered (by definition, a species facing imminent extirpation or extinction). It was the first time the Committee had assessed a species as being so close to the brink of disappearing since the inception of the *Species at Risk (NWT) Act* in February 2010.

The NWT assessment of Dolphin and Union caribou as an Endangered species aligns with an assessment by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC)—the national equivalent to the NWT Species at Risk Committee. In 2017, COSEWIC assessed the Dolphin and Union caribou as Endangered in Canada and proposed a federal uplisting from its current status of Special Concern on Schedule 1 of the federal *Species at Risk Act*.

THE RECOMMENDATIONS

"You know, in the fall time [...] it's starting to freeze, but it also rains and when it rains it goes on the ground and it freezes over their feeding ground or the food that they eat [...] They don't have nails to scratch, and they have flat feet and then to try and break the ice is difficult for them. So they go through great hungering at those times."

- Elsie Klengenber (translated) from Hanke and WMAC (NWT), 2023

While the reasons for the continued decline are complex, the Species at Risk Committee identified the impacts of climate change as a major force in the decline and future risk to the population. Unstable sea ice conditions, freezing rain preventing caribou from accessing their food, and extreme weather are all expected to increase.

Other threats, including ship traffic, can be managed or controlled. Industrial activities and other human disturbances are other limiting factors for Dolphin and Union caribou. Local knowledge indicates an increase in grizzly bears, a new predator establishing itself on Victoria Island. In recent years, much research has focused on the state of Dolphin and Union caribou health and the prevalence and impact of diseases and parasites on individuals and populations of caribou.

The wellbeing of Dolphin and Union caribou is a serious concern for local communities. In 2021, Ulukhaktok implemented a voluntary maximum harvest of 50 Dolphin and Union caribou per year and a voluntary closure in the spring to allow pregnant cows to migrate and calve. Strict harvesting limits for Dolphin and Union caribou have also been implemented in Nunavut. These restrictions have a significant impact on the traditional and cultural connections to the land and to caribou for all communities sharing the range of this species and were main factors in the Committee's assessment of Endangered.

"When their numbers were higher and they were very healthy, [I'd harvest] anywhere from 15 to 20 [DU caribou], no higher. Last year was the first year I didn't shoot one. Since I've seen the number going down steadily... I haven't harvested over 10 [DU caribou] in the last 10 years... I've been avoiding hunting DU caribou... I saw them, but I didn't shoot them. Why? I was brought up by my parents and my grandparents to manage and help sustain wildlife. We were told that if you know that they're not in a healthy state, don't harvest them... because they'll come back... so I also heed and listen to those words and just abide by them."

- Elder Allen Niptanatiak from Hanke et al., in review

The next steps for Dolphin and Union caribou are up to the Inuit and Inuvialuit partners, hunters and trappers organizations, the Wildlife Management Advisory Council (NWT) and governments of NWT, Nunavut and Canada, which together manage for wildlife in the region.



In the NWT, public consultation is currently being completed on whether to list Dolphin and Union caribou as an Endangered species on the NWT List of Species at Risk.

If Dolphin and Union caribou are uplisted to Endangered, a recovery strategy will be required within one year of listing. This document will provide guidance to management partners and overall coordination to support the conservation and recovery of Dolphin and Union caribou.

The future of Dolphin and Union caribou will depend on a number of factors, many of which are complex and interconnected. To give this species the best chance of success will require significant commitment and collaboration of many different groups and jurisdictions at all levels of government. Communities are already taking action to reduce harvest and monitor ice crossings. All Canadians are invited to join in supporting the recovery of Dolphin and Union caribou for the benefit of the species, Canadian society as a whole, and the Indigenous communities that rely on the caribou.

With its assessment, the Species at Risk Committee provided a number of recommendations for the conservation and recovery of Dolphin and Union caribou:

- Implement and enforce protection measures for calving areas.
- Enforce ice breaking restrictions during migration periods.
- Improve communications on ship traffic and shipping management amongst data providers, NWT communities and organizations.
- Encourage and support communities to continue harvester education based on cultural teachings of Elders.
- Implement harvest sampling, monitoring, and reporting. Improve sharing of information between jurisdictions.
- Support monitoring and financial incentives for predator harvesting.
- Canada and the NWT must uphold and, if possible, exceed international climate change agreements including reducing greenhouse gas emissions at the local level. Climate change in the NWT must be addressed by implementing the 2030 NWT Climate Change Strategic Framework and Action Plan.



REFERENCES

Information in this article is summarized from the 2023 Species Status Report for Dolphin and Union Caribou (*Rangifer tarandus groenlandicus* x *pearyi*) in the Northwest Territories. Specific references for the knowledge cited in this article can be found below.

For more information on species at risk in the Northwest Territories, visit: www.nwtspeciesatrisk.ca.

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