



## Caribou (Eastern Migratory population)



Photo: © Steeve Côté

**Scientific name**  
*Rangifer tarandus*

**Taxon**  
Mammals

**COSEWIC Status**  
Endangered

**Canadian range**  
Manitoba, Ontario, Quebec, Newfoundland and Labrador

### Reason for Designation

This migratory caribou population exists as four subpopulations from coastal western Hudson Bay to Labrador. The present population estimate of 170,636 mature animals indicates there has been an 80% overall decline in number over three generations (18-21 years). The decline is predicted to continue because of overharvest, and a decrease in habitat quality associated with climate change and development. Two declining subpopulations contain about 99% of the Eastern Migratory population; the George River has declined by 99% over 3 generations, and the Leaf River by 68% over

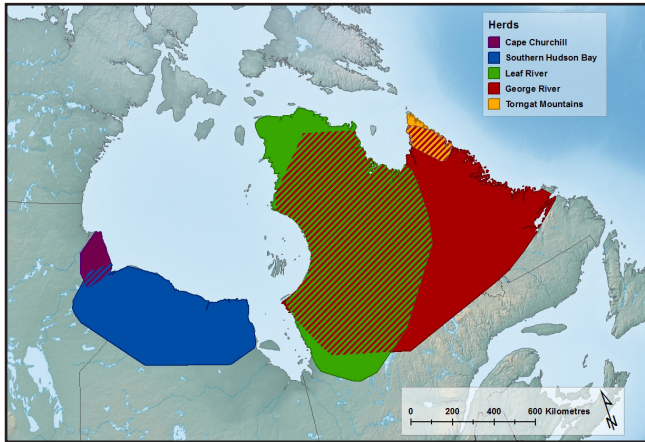
two generations. Although migratory caribou populations fluctuate in abundance, there is concern that recent and predicted threats will limit population growth in a population that presently is at its lowest recorded level. Threats appear to be less prevalent in the two western subpopulations which represent only about 4% of the existing total population. Most of the remaining caribou reside in the Leaf River subpopulation, which continues to decline.

### Wildlife Species Description and Significance

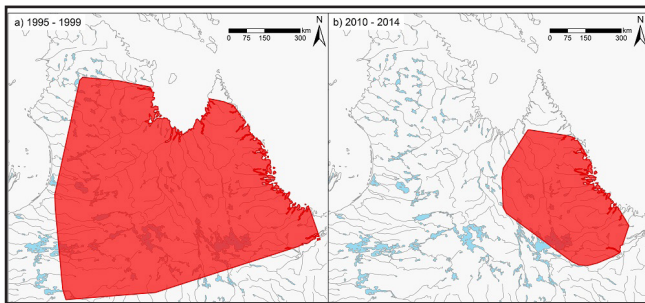
Caribou (*Rangifer tarandus*) are a medium-sized member of the deer family. Their relatively long legs and large hooves facilitate living in deep snow associated with northern environments. Caribou are central to the culture, spirituality, and subsistence of many northern Aboriginal communities, and are also important to non-Aboriginal people across Canada. Caribou exhibit high variability in morphology, ecology, and behaviour across their circumpolar range. In 2011, COSEWIC recognized 12 designatable units (DUs); this report assesses the Eastern Migratory population (EM; DU4), and the Torngat Mountains population (TM; DU 10).

### Distribution

The EM contains four subpopulations: Cape Churchill, which is found along the Hudson Bay coast at the Manitoba-Ontario border; Southern Hudson Bay, found in a similar area, but mainly further south and east into northern Ontario; Leaf River (in French; Rivière aux Feuilles), in northern Quebec; and George River (Rivière George), in Quebec and Labrador. The combined range is over 1.5 million km<sup>2</sup>. The TM Caribou exist as one population and occupy a range of approximately 28,000 km<sup>2</sup> in the Torngat Mountains in upper Labrador, Quebec, and Nunavut (Killiniq and adjacent islands).



Approximate distribution of the Torngat Mountain Caribou population and the four subpopulations of the Eastern Migratory Caribou. Hash lines indicate overlap of subpopulations. The George River subpopulation illustrates the past range (< 1999), before range retraction. Source: Pond *et al.* 2016, unpub. data from Caribou Ungava, Governments of Ontario, Québec, Newfoundland and Labrador. (Map created by A. Filion, COSEWIC Secretariat).



Range of the George River subpopulation in the late 1990s based on 100% MCP polygons of satellite-tagged animals, compared to range between 2010 – 2014, indicating a range decrease of approximately 85%. Source: Government of Québec, Government of Newfoundland and Labrador, Caribou Ungava.

## Habitat

Eastern Migratory Caribou mainly use tundra during calving and summer periods, and use taiga and mainly boreal forest during winter. The TM use alpine areas on mountain plateaus and adjacent valleys in the Torngat Mountains, and seashore areas. Caribou use hillsides, islands, and alpine plateaus for calving.

## Biology

Typical longevity in Caribou is < 10 years for males and < 15 years for females. Most females  $\geq 3$  years old give birth to a single calf annually, resulting in a lower reproductive rate than other North American Cervid species. Primiparity can occur at 2 years of age in good habitat conditions. Generation length is estimated as a range of 6 - 7 years.

## Population Sizes and Trends

The minimum population size for the EM is 227,513 Caribou of all ages, based on the most recent total estimates for the Leaf River (2016) and George River (2016) subpopulations, and most recent minimum estimates for the Cape Churchill (2007) and Southern Hudson Bay (2011) subpopulations. The estimated number of mature animals is 170,636. The population estimate for mature Caribou of the EM three generations (18 – 21 years) ago is 833,774 Caribou, suggesting a decline of 80% over three generations. ATK supports that a decline has occurred in the George River subpopulation.

The subpopulations in eastern EM range are known to fluctuate (based on ATK, and historical data) but it is unclear if the populations will increase again because of novel threats. Caribou in these DUs associate with lichen and grass-dominated tundra but the tundra landscape is changing due to climate warming. The number of George River subpopulation Caribou (until recently, the largest-sized subpopulation in the EM) is lower than previously recorded and threats are considered to be significant for the George River and Leaf River subpopulations.

The population of the TM was estimated as approximately 5,000 Caribou in the 1980s, and at 930 Caribou (698 mature animals) in spring 2014, an estimated reduction of >80% in approximately 35 years (approximately 4 – 5 generations). ATK supports that a decline has occurred. Data do not exist on population changes over a three-generation time period.

## Threats and Limiting Factors

Caribou are sensitive to disturbance. Industrial development, particularly mining and associated road networks, present threats to EM Caribou. Human overharvest of EM and TM Caribou is contributing to population declines. Populations generally are limited by food availability, but subsistence and sport hunting can be limiting at low population size, or in a declining population. A parasite, *Besnoitia tarandi*, became evident in the eastern subpopulations of the EM in the mid-2000s and may impact Caribou productivity. Climate change, through impacts on habitat quality and resource availability, also appears to be a threat for Caribou populations as the amount of shrubs increase on tundra landscapes. The threats calculator exercise concluded that the threat level was 'Very High to High' for the EM and 'High' for the TM Caribou.

## Protection, Status, and Ranks

COSEWIC assessed the conservation status of the EM Caribou (Endangered) in April 2017, and TM Caribou (Endangered) in November 2016. In 2016, the IUCN changed its assessment for the global population of Caribou from Least Concern to Vulnerable. The global NatureServe rank for Caribou is G5 (Secure; last updated in 2012) but ranks have not been determined for separate DUs recognized by COSEWIC. The draft 2015 rank for Caribou in Labrador (mainly the George River subpopulation) is S1S2 (critically imperiled to imperiled).

Source: COSEWIC. 2017. COSEWIC assessment and status report on the Caribou *Rangifer tarandus*, Eastern Migratory population and Torngat Mountains population, in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xvii + 68 pp.

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Cat. No.: **CW69-14/727-2016-1E-PDF**  
ISBN: **978-0-660-07300-2**

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