

Executive Summary

Distribution and abundance of Peary caribou and muskox on central Ellesmere Island, March 2017

We flew a survey of central Ellesmere Island (Fosheim Peninsula, Raanes Peninsula, and Svendsen Peninsula), Nunavut, between March 8th and 20th, 2017 to update the regional abundance estimate for Peary caribou (*Rangifer tarandus pearyi*) and muskox (*Ovibos moschatus*). This survey was intended to be the second portion of three consecutive surveys that together would cover the entirety of Ellesmere Island. The southern portion was surveyed in 2015 and the northern portion was planned to be surveyed in 2018, however the survey did not occur due to logistical and financial constraints. Before 2017 the most recent survey of central Ellesmere Island was in May 2006 (which included northern Ellesmere Island).

Muskoxen were most abundant north of the Sawtooth Range on the Fosheim Peninsula with moderate densities of muskoxen found on the northern portion of Raanes Peninsula and the southern portion of Svendsen Peninsula. A total of 2,153 muskoxen were observed, and we estimated $6,902 \pm SE 1,036$ (95% confidence interval [CI] = 5,134-9,278, coefficient of variation [CV] = 15%) across central Ellesmere Island. The previous estimate for the area (from 2006) was 8,115 (95% CI 6,632 – 9,930) but also included northern Ellesmere Island. A separate population estimate for central Ellesmere Island was not calculated from the 2006 survey.

Fourteen Peary caribou were seen on transect during the survey, and we estimated a population of $32 \pm SE 25$ (95% CI = 8-127, CV = 79%). The few observations provided for a very imprecise estimate. Peary caribou were observed on the north portion of Raanes and Svendsen Peninsulas, and one group was seen at the south end of Fosheim Peninsula.