

NWRT Final Report

NWRT Project Number: 2-19-09

Project Title: South Baffin Island Caribou Spring Composition Survey

Project Leader:

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Summary:

Project not completed. Project cancelled due to Covid-19 pandemic.

Caribou are culturally significant to Inuit and provide an important source of food and thus their persistence and recovery is imperative to traditional life and food security on Baffin Island. Based on Inuit Qaujimagatuqangit (IQ) we know there are currently less caribou on Baffin Island than there has been in nearly 70 years. Figuring out whether the population is increasing, or decreasing is currently the most effective way to monitor this population, and to extend the utility of the 2014 population estimate. Calf: Cow ratios of 34:100 and 55:100 from spring composition surveys in 2017 and 2018 are positive indicators but Prince Charles Island showed signs of decline and experienced a number of winter die-offs, suggesting recruitment data is likely not representative of population trends in previous years. Ongoing monitoring is required so trends can be determined.

We require continuous monitoring the productivity of this grouping of caribou in order to determine when a recovery in abundance occurs so that new abundance surveys can be planned and Total Allowable Harvest (TAH) levels re-assessed. Due to the large extent of Baffin Island and the likelihood of multiple subpopulations of caribou, it is necessary to conduct this work in representative areas of South Baffin, as well as North and Central Baffin. Data from these surveys can be used to determine sustainable harvest levels in order to adjust the current TAH.

Project Objectives:

Five major objectives will be accomplished as a result of the 2019/2020 caribou spring composition/demographic surveys:

1. Determine the vigor of the population based on productivity and demographic composition; i.e. what proportion of the population are young bulls, old bulls, cows, yearlings, and calves.
2. Determine the trajectory of productivity of the population based on the demographic composition; and with spring composition results, determine if an index of calf productivity and overwinter survival suggests an increasing or decreasing trend.
3. Monitor bull ratios to ensure that the bull only harvest is not reducing bulls to a proportion that could interfere with rutting success.

4. Build a database with which to estimate the current population trend through demographic modelling, utilizing all demographic composition data to project a trend from the 2014 population estimate.
5. Inform on management discussions regarding current TAH levels.

Materials and Methods:

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These surveys will be conducted with rotary winged aircraft and consist of high grading areas where caribou are known to occur based on existing collar data, previous survey location data, and IQ. We proposed to complete 60 hours of rotary wing flight time to survey the South Baffin study area and provide appropriate coverage of the main aggregations of caribou in this region.

Survey flight paths and specific areas flown within the study areas will be heavily determined with the aid of local hunters and elders as wildlife observers in the aircraft. Standardized, pre-determined transects will not be flown. Instead biologists will be relying on the local advice and expertise to fly areas where there are expected to be caribou. The survey will occur in mid to late March and possibly into early April. The technique will require quick low-level flying and recording caribou sex and age while passing caribou groups, with the following age categories divided by sex; adult, yearling and calf. Observers will search for groups of caribou or fresh tracks that will lead them to caribou. Once caribou are observed, they will be approached at low level and image stabilizing 14x binoculars will be used to determine the age and sex of individuals. The use of binoculars further increases the distance observers can be from the caribou to reduce overall stress on the animals. The time required to accurately determine age and sex will depend on terrain and group size but normally this process is completed in less than 1 minute and is intended to place minimal stress on the animals. At each location where caribou are observed a GPS waypoint is taken and demographic survey data is recorded. Survey data will be analyzed and compared to current caribou demographics of mainland migratory herds until enough data has been collected to determine Baffin specific thresholds. For example, we will compare calf:cow ratios to that of similar herds in NWT and other regions where it is suggested that for increasing or stable populations, ratios were 70-90:100 at calving, 50-70:100 in the fall and 30-50:100 following winter.

Results:

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No results to provide since the project was not completed.

Discussion/Management Implications:

There are no potential management implications due to the results of the survey because it was not completed. However, there are potential management implications as a result of incomplete surveys. Without completing composition surveys in South Baffin we are unable to determine relevant trends in productivity associated with cow:calf ratios and are unable to include any data relative to this area for the 2020 spring season.

Reporting to communities/resource users:

Project not completed. Project cancelled due to Covid-19 pandemic.

Communities were consulted in early 2019 and support letters provided to NWMB. Additional HTO in-person consultations will occur in fall of 2020 and winter of 2021 to provide an update on the status of this project. No report will be provided to the communities since the project was not completed nor initiated.

References:

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No references to include.