

PROPOSAL REVIEW

Project Number: 2-14-04

Applicant: Morgan Anderson

Title: Peary caribou landscape genetics: Critical habitat and population structure in the High Arctic

Funding Requested: Single Year Funding - \$36,000 for 2014-2015

Rank: 6 / 18

Total Score 82.29 /100
(no deductions)

Scoring Breakdown: NWMB Priority: 17.50 / 17.50
Regional Priority: 7.50 / 7.50
Quality: 29.00 / 35.00
Consultation: 10.50 / 15
Funding: 17.79 / 25

Project Summary:

The primary objective of this project is to determine movement patterns, corridors and barriers, and relatedness among Peary caribou in the High Arctic Archipelago by: 1) describing dispersal and movement of Peary caribou; 2) determining genetic relationships of Peary caribou; 3) providing insight into movement dynamics; and 4) delineating main population units.

Project Contributions:

Requested from NWMB	\$ 36,000	16%
Other Contributions	<u>\$189,000</u>	<u>84%</u>
Total	\$225,000	100%

NWMB Staff Evaluation:

NWMB Priority: #1 - Contributes to the establishment, modification or removal of levels of Total Allowable Harvest (S 5.6.16 to S 5.6.18) for stocks or populations where there is believed to be a conservation concern or that are priority species for harvest by Inuit.

Regional Priority: #1 Baffin – Caribou: Research on recent migration routes

Project design:

This project will combine samples and data from previous studies with samples collected by local hunters and samples collected by field crews deployed to less accessible areas. DNA will be collected from tissue samples as well as fecal pellets and hunters will be compensated for submitting fresh-frozen samples. DNA samples will be analyzed at Trent University and various computer programs will be used to analyze the genetic structure and gene flow, including spatial scales and patterns, of samples. By identifying regional trends and local hot spots, this project will relate the spatial pattern of caribou genetic variation to landscape attributes and identify those attributes that facilitate or impede movement through correlation analysis.

Application of results:

Results of this project will supplement existing knowledge in development of policy for caribou conservation and management. This includes a territorial management plan as well as the federal Recovery Strategy, under the *Species at Risk Act*, for Peary caribou, a species listed as Endangered in 2011. Results of this work are also anticipated to be helpful in determining land use practices, including mineral and petroleum extraction, the proposed Napartulik Territorial Park, and the proposed Qausuittuq National Park.

Community involvement / consultation:

Pre-project consultations with the Grise Fiord and Resolute Bay Hunters and Trappers Organizations were conducted between May 2013 and January 2014. The project proposal indicated that support has been obtained from both Hunters and Trappers Organizations; however a letter of support has only been obtained from the Resolute Bay Hunters and Trappers Organization. Annual in-person updates with the community are planned as well as final in-community reporting of results.

As per the NWRT policy, if the project is funded by the NWRT the project is required to: (1) provide a letter of support from all affected communities by June 30th, 2014; **OR** (2) provide a letter of support from a majority of the affected communities by June 30th, 2014 and provide evidence that the research has done a “conscientious” job of consulting; **OR** (3) provide the required information to demonstrate that “conscientious” consultation has been conducted by June 30th, 2014.

Recommendations: If this project is funded, the following conditions should apply:

1. Funding should be conditional on other funding, as identified in the proposal, being approved. This should be confirmed in writing; and
2. Funding should be conditional on meeting the consultation requirements identified as per the NWRT policy.

Prepared By: Danica Crystal, Wildlife Management Biologist, NWMB

Consultations: Peter Kydd, Wildlife Management Biologist, NWMB