

SCEK Project Profile

Project Name:	Moose Survey of Core Caribou Areas
Project Number:	BCIP-2013-02-01
Proponent:	Canadian Wildlife Capture, Ltd. Eco-Web Ecological Consulting Ltd. Wildlife Infometrics Inc.
SCEK Funding Envelope:	Boreal Caribou
Timeframe:	December 10, 2012 to March 31, 2013

Project objectives

The objective of this project is to determine the abundance of moose in and around core caribou areas. The survey will also produce a baseline of consistent and current inventory data on moose in these areas that can be used to track changes in moose populations and distribution.

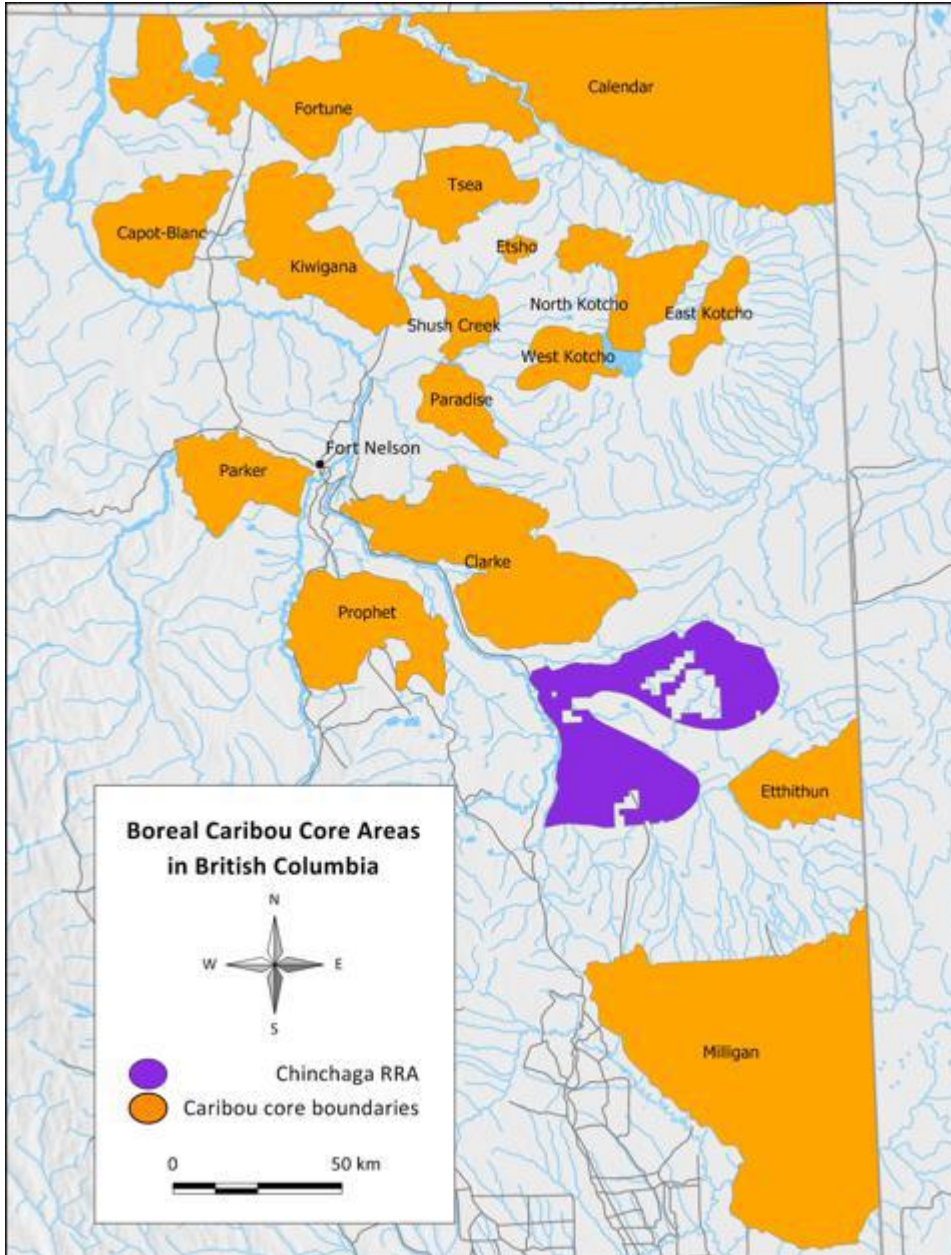
The survey will produce the following information:

- the density and population of moose within the caribou core areas, Resource Review Areas (RRA) and the entire survey area;
- age/gender structure of moose populations in caribou cores areas, RRA and entire survey area; and
- count of incidental species—primarily boreal caribou and wolves.

Project description

As part of this project, moose will be surveyed using the distance sampling method using helicopters. Approximately 13,000 km² of area will be surveyed in the winter of 2013, covering the following caribou core areas shown on the map below:

- North Kotcho;
- East Kotcho;
- Clarke;
- Prophet;
- Etsho;
- Etthithun;
- Milligan; and
- Chinchaga Resource Review Area (RRA).



Given the openness of habitat in the North East area of BC, the survey will use the distance sampling method. Under this method, transects will be flown in a helicopter at regular intervals and all moose observed will be recorded—including gender, age, and distance from transect lines. The distance data recorded will be used to calculate a density estimate based on a detection probability.

Project Background

The survey will complement a moose survey conducted in 2010 in the Horn River Basin. That survey was funded by the SCEK Fund and conducted by the Province of BC in conjunction with the Horn River Producers Group.

Project approach

The survey method includes the following activities:

1. stratify the survey area into survey units based on habitat types and geographic features (e.g., height of land, rivers, creeks) and roads;
2. determine survey altitude, speed and transect lines at 6 km intervals across the survey area;
3. fly transect lines and observe/record the necessary data listed below;
4. review the coefficient of variance and if too high (i.e., >20%), fly randomly selected transects at 3 km spacing until an adequate sample size (e.g., minimum 60-80 moose group observations) is reached; and
5. Analyze the data and prepare the final report.

The following information will be collected during this survey:

- Date of survey, survey unit and transect line;
- Age and gender of moose;
- Comments—such as the presence or absence of antlers;
- UTM coordinates and distance from transect line. The distance from the transect line data will allow a detection probability to be calculated and the derivation of density estimates; and
- Time of observation.

Project deliverables

The deliverables from this project include the following:

1. Final report—containing the following information:
 - Background information—including the survey area and survey units;
 - Survey method—including the number, linear length, and flight dates/times of transects (based on 6 km spacing of transects) in each of the survey units;
 - Distribution of moose across the survey units, caribou core areas and overall survey area ;
 - Density and population of moose by survey unit, caribou core areas and overall survey area. This includes the density estimate and the 95% confidence interval, population estimate and the 95% confidence interval, percent coefficient of variation and calf:cow and bull:cow ratios;
 - Analysis of findings—including the relationship between moose density and bull:cow ratios and calf:cow ratios; and
 - Incidental observations—other species identified (e.g., caribou, wolves) and reported by survey unit, core caribou area and overall survey area.