

2013

BC Boreal Caribou Implementation Plan:

**Mortality Investigation Summary Report No. 6:
October 03-04, 2013,
November 10-14, 2013, and
December 18-19 and 31, 2013**

BACKGROUND

During the winter of 2012-13, 164 adult female boreal caribou were radio-collared in British Columbia's boreal caribou ranges as part of the *British Columbia Boreal Caribou Implementation Plan* (BCIP). Caribou collaring activities were administered and funded through the Science Community Environmental Knowledge Fund (SCEK).

The VHF signal status of each active collar is monitored monthly during regular fixed-wing telemetry monitoring flights and incidental associated surveys. In addition to the SCEK collars, active caribou and wolf collars from other programs, known to be present within each caribou range, are also monitored for approximate location and mortality status. These include caribou and wolf collars deployed by MFLNRO, as well as collared caribou that have entered BC's boreal caribou ranges from adjacent jurisdictions.

Upon detection of a suspected mortality event, through VHF signal status or transmitted GPS/satellite data, a ground-based mortality investigation is conducted to determine the cause and approximate date of death, collect biological samples, and recover the collar for redeployment during the upcoming winter capture season. Adult mortality information is used in conjunction with juvenile recruitment data to estimate population trend.

As no caribou mortalities were detected during the October 03-04 and November 10-14, 2013 monitoring flights, this summary report (#6) encompasses the October through December 2013 fixed-wing telemetry monitoring period.

METHODS

Mortality sites are typically accessed by helicopter from the Fort St. John airport, in the case of the Milligan and Etthithun cores of the Chinchaga Range, and from the Fort Nelson airport in the case of the Chinchaga RRA and all other ranges and cores. Information recorded for each confirmed mortality site includes: animal ID, collar frequency, collar condition, GPS coordinates, photodocumentation, condition of remains, and other evidence relevant to suspected cause of death. Where available, and when the stage of decomposition allows, biological samples are collected (e.g., leg bones (femur or humerus), lower jaw, tissue samples, and internal organs). Mortality investigation numbers are assigned based on the date of detection, not the date of the ground investigation.

RESULTS

No caribou mortalities were detected during the October 03-04 and November 10-14, 2013 monitoring flights. During the December 18-19 and 31, 2013 monitoring flight, 1 boreal caribou mortality (BC1024; VHF) was detected, with the mortality site investigation conducted on December 22.

BC1024 was collared by MFLNRO in February 2010. The caribou was last known to be alive on November 21, 2013, when it was observed without a calf during the SCEK fall calf survey. The cause of

death was confirmed as wolf predation. The carcass was consumed and no samples were available (Table 1; Appendix I). The VHF collar was damaged by wolves.

Two wolf mortalities occurred between October and December, 2013. BW013 (West Clarke pack; Iridium) was detected transmitting a mortality signal during the November 10, 2013 flight; the collar was retrieved on November 20, 2013. One wolf mortality was detected during the December 2013 monitoring flight. BW015 (Snake pack; Iridium) was detected on December 19, with the site investigation and collar retrieval conducted on December 22.

West Clarke pack female BW013 was last located alive on October 03, 2013. The VHF was transmitting normally at this time, however the collar had not logged GPS data since June 30, 2013. The collar was found intact, approximately 20 m from a ploughed road (UTM 10.515727.6506427). It is suspected that the animal was shot and the collar discarded.

Snake pack female BW015 was last located alive on November 11, 2013. On December 22, the frozen, intact carcass was located approximately 100 m from the remains of a moose kill. The site is west of the Fort Nelson River (UTM 10.525841.6545515), within the territory of the Tsimeh pack. There were no obvious injuries to the wolf, although signs of scavenging were evident. The cause of death was undetermined; it is possible that internal injuries were sustained during the attack on the moose.

First Nation Contractors

Eva Needlay, of Fort Nelson First Nation, participated in the November 20 mortality site investigation for wolf BW013 and December 22 mortality site investigations for caribou BC1024 and wolf BW015.

Table 1. Summary of SCEK and MFLNRO radio-collared boreal caribou mortality investigations conducted from October through December 2013, northeastern British Columbia ($n=1$).

Mort Invest #	Caribou ID	Range ¹	Collar Type	Date Collared	Core ² Collared	Core Died	Date of Death	Date Last Known Alive	Date Investigated	Cause of Death ³	Comments
047	BC1024	MAX	VHF	24-Feb-10	FRT	FRT	Unknown	21-Nov-13	22-Dec-13	Wolf kill	Kill site on cutline through open black spruce forest/bog habitat, approximately 450 m from a small lake; 30 cm snow depth on cutline

¹MAX - Maxhamish

²FRT - Fortune

APPENDIX I: Caribou Mortality Investigation Report

Mortality Investigation #047, BC1024, December 22, 2013, report and photos.

Mortality Investigation #	047
Caribou ID	BC1024
Range	Maxhamish
Date Detected	18-Dec-13
Date Investigated	22-Dec-13
Collar Type	VHF
Frequency	
Date Collared	24-Feb-10
Core Collared	Fortune
Capture Site UTM	10.537964.6633256
Core Died	Fortune
Date of Death	Unknown
Date Last Known Alive	21-Nov-13
Mortality Site UTM	10.538664.6632006
Cause of Death	Wolf kill
Samples	None available
Collar Condition	Damaged - webbing chewed through
Photos	2857-2863
Investigators	Brad Culling, Diane Culling, Eva Needlay
Site Investigation Comments	Confirmed wolf kill; carcass consumed and collar webbing chewed through; kill site on cutline through open black spruce forest/bog habitat, approximately 450 m from small lake; 30 cm snow depth on cutline; last see alive on 21 Nov 2013 fall calf survey - no calf.



Plate 1. Mortality Site Investigation #047: BC1024 (VHF), Maxhamish Range, (UTM 10.538664.6632006), December 22, 2013. (1/2)



Plate 2. Mortality Site Investigation #047: BC1024 (VHF), Maxhamish Range, (UTM 10.538644.6632006), view from mortality site along cutline to small lake, December 22, 2013. (2/2)