

2015

BC Boreal Caribou Implementation Plan:

**Mortality Investigation Summary Report No. 21:
May 2015**

EXECUTIVE SUMMARY

As a component of the *British Columbia Boreal Caribou Implementation Plan* (BCIP), 224 individual boreal caribou were radio-collared in British Columbia's boreal caribou ranges between December 2012 and April 2015. The fate of these animals, as well as all boreal caribou previously collared by the Ministry of Forests, Lands, and Natural Resource Operations (MFLNRO), is monitored monthly to track adult survival.

One hundred fifty-five boreal caribou collar frequencies were scanned during the monthly fixed-wing telemetry monitoring flight conducted on May 22-23, 2015. During the flight, Snake-Sahtaneh caribou SCEK110B (Lotek LifeCycle) was confirmed dead, following GPS data notification. The mortality investigation was conducted on May 25; cause of death was confirmed as wolf predation. No additional caribou mortalities were detected during the May flight.

Twenty-seven wolf collar frequencies were scanned during the May monitoring flight; no wolf mortalities were detected.

Seventy-eight radio-collared boreal caribou (71 SCEK, 7 MFLNRO) died from natural causes between the commencement of BCIP monitoring in December 2012 and the end of May 2015. Fifty-one caribou mortalities were confirmed wolf kills (65%), with an additional 7 cases of suspected wolf predation, 3 cases of wolverine predation, and one accidental death. Three caribou died of apparent poor condition. Cause of death for the remaining 13 animals could not be determined.

BACKGROUND

During the winter of 2012-2013, 164 adult female caribou were radio-collared in British Columbia's boreal caribou ranges as part of the BCIP. The sample size was augmented during the winters of 2013-2014 and 2014-2015, with a total of 224 individual boreal caribou collared by April 1, 2015. Caribou collaring activities were administered and funded through the Science and Community Environmental Knowledge Fund (SCEK). The fate of all SCEK-collared caribou, as well as boreal caribou previously collared by MFLNRO, is monitored to track adult survival.

The VHF signal status of each active radio-collar is monitored monthly during regular fixed-wing telemetry flights, as well as during associated incidental surveys and field activities. In addition to the SCEK collars, active caribou and wolf collars from other programs, known to be present within BC boreal caribou ranges, 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. Adult mortality information is used in conjunction with juvenile recruitment data to determine population trend.

This summary report pertains to mortality signals investigated during the May 2015 monitoring period.

METHODS

For the Milligan and Etthithun cores of the Chinchaga Range, mortality sites are accessed by helicopter from the Fort St. John airport. Access is from the Fort Nelson airport for 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, habitat, and other evidence relevant to suspected cause of death. Where available, and when the stage of decomposition allows, biological samples are collected (e.g., long bones, lower jaw, tissue samples, and internal organs). Samples of predator scat from the mortality site are collected when available. Mortality investigation numbers are assigned based on the date of detection, not the date of the ground investigation.

RESULTS

One hundred fifty-five boreal caribou collar frequencies were scanned during the May 22-23, 2015 telemetry monitoring flight, including 150 SCEK collars (5 ATS Iridium, 61 Vectronic Vertex, 12 Lotek LifeCycle, and 72 Lotek VHF), 3 previously-deployed MFLNRO VHF collars, and 2 Alberta VHF collars. One caribou mortality was confirmed during the flight, following GPS data notification the previous week. Snake-Sahtaneh caribou SCEK110B was killed by wolves in relatively intact black spruce peatland

(bog) habitat in the North Kotcho Core. No additional caribou mortalities were detected during the May flight. Details of the mortality site investigation for SCEK110B are presented in Table 1 and Appendix I.

Twenty-seven wolf collar frequencies were scanned during the May 2015 monitoring flight, including 20 SCEK collars (12 Lotek Iridium, 1 Vectronic Vertex, 7 Lotek VHF) and 7 Lotek Iridium collars deployed on behalf of Nexen Inc. No wolf mortalities were detected.

First Nation Sub-contractors

William Needlay, of the Fort Nelson First Nation, participated in caribou mortality site investigations during the May 2015 monitoring period.

Table 2. Summary of SCEK and MFLNRO radio-collared boreal caribou mortality investigations conducted in May 2015, northeastern British Columbia ($n=1$).

Mort Invest #	Caribou ID	Range ¹	Collar Type	Date Collared	Core Collared ²	Core Died ²	Date of Death	Date Investigated	Cause of Death	Site Investigation Comments
087	SCEK110B	SNS	Lotek LifeCycle	12-Dec-14	ESK	NRK	13-May-15	25-May-15	Wolf kill	First collared Feb 25, 2013 (south of Kotcho Lake), recaptured in East Kotcho Core on Dec 12 2014 to replace ATS Iridium collar; kill site in black spruce bog.

¹ SNS - Snake-Sahtaneh

² ESK - East Kotcho

APPENDIX I:

MAY 2015

CARIBOU MORTALITY INVESTIGATION REPORT

Mortality Investigation #087: SCEK110B, May 25, 2015, report and photos.

Mortality Investigation #	087
Caribou ID	SCEK110B
Range	Snake-Sahtaneh
Date Detected	23 May-15 (confirmed)
Date Investigated	25-May-15
Collar Type	Lotek LifeCycle
Date Collared	12-Dec-14
Core Collared	East Kotcho
Capture Site UTM	10.632755.6557031
Core Died	North Kotcho
Date of Death	13-May-15
Mortality Site UTM	10.605012.6567647
Cause of Death	Wolf kill
Samples	Winter ticks on piece of hide
Collar Condition	Damaged - belting chewed in half
Photos	P1010352, P1010394
Investigators	Brad Culling, Ted Euchner, William Needlay
Site Investigation Comments	Mortality detected by GPS data, confirmed during May 2015 telemetry flight; first collared on Feb 25, 2013, south of Kotcho Lake (ATS Iridium 149.444); recaptured in East Kotcho on Dec 12, 2014 and recollared with Lotek LifeCycle collar; kill site in black spruce bog in relatively intact habitat (i.e., no cutlines or leases within 1 km)



Plate 1. Mortality Site Investigation #87; SCEK110B (Lotek LifeCycle), Snake-Sahtaneh Range (UTM 10.605012.6567647), May 25, 2015. (1/2)



Plate 2. Mortality Site Investigation #87; SCEK110B (Lotek LifeCycle), Snake-Sahtaneh Range (UTM 10.605012.6567647), May 25, 2015. (2/2)