

# MAINTENANCE OF MOOSE COLLARS TO SUPPORT UNBC RESEARCH PROJECT

**MOOSE ID: 15-5628 COLLAR ID: GSM18290**

***Moose Mortality Investigation #3, June 1, 2016***

***Report by: Sonja Leverkus PhD RPBio***

***Shifting Mosaics Consulting, Fort Nelson BC Canada***



# MOOSE MORTALITY GSM18290/15-5628

June 1 2016



## SUMMARY

Moose ID: 15-5628

Collar number/ type: GSM18290 Vectronics

Sex: Male

Area found: Chinchaga area (57°50'45.77"N/121°10'19.99"W)

Frequency: 152.540

Cause of death: Not confirmed - no evident predation by carnivores

Date of death: ±May 25 2016 with mortality signal picked up by B. Culling on May 31<sup>st</sup> 2016

Date of investigation: June 1 2016

Investigation team: Sonja Leverkus, Harrison Dickie, Marty Wells, Zonk Dancevic

## ANIMAL BACKGROUND

- Initial notification of potential death by Caslys Consulting Ltd.: on May 25 2016.
- Movement for this collar appeared normal but the last received location data was on May 25 2016.
- The transmissions on May 26 and 28 2016 did not contain any location information.
- No information had been received after May 28.
- The moose and its collar were found 430m north of the last known location.



Figure 1. Final movement patter for moose GSM18290/15-5628 as per Caslys Consulting Ltd.

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- There was a collared female moose on the way back to Fort Nelson in the Clarke area (GSM18342/ 15-5596) located at N58.62201/W122.14131 adjacent to the powerline and cutblock where Mort #1 was located.
  - The cow had two calves old enough to keep up with her as she ran estimated at 1 month old.
  - The cow's coat was white on the shoulders.

### **METHODS**

The last known point of the collar was used to provide location to travel to via helicopter from Fort Nelson. Aerial telemetry techniques were used to determine the location of the collar. A GPS point was taken in the air to navigate towards on the ground. The team followed the BC Moose Research Mortality Investigation Form from Ministry of Forests, Lands, and Natural Resources sampling protocol to obtain samples from the remains of moose GSM18290/15-5628. The entire team attended the investigation using the best safety practices, walking together along the cutline to best access the GPS location taken while in the air.

### **RESULTS AND DISCUSSION**

The intact carcass of moose 15-5628/GSM18290 was found in a thick willow and alder complex at 57°50'45.77"N/ 121°10'19.99"W, 150m west of a seismic line. It was +25C to +32C and snow had been absent from the site for a number of weeks. The carcass was found lying on its left side and it is appeared that there was a struggle prior to death as there is evidence that shows the moose was kicking and thrashing on its side. It had disturbed approximately 3inches of soil with its hooves and legs and had marked a birch tree adjacent to its hind foot. There was a dead alder hanging overtop of the moose carcass. There understory was comprised of white spruce, willow, alder, prickly rose, raspberry, nagoonberry and other muskeg vegetation. The mosquitoes, horseflies, and other insects were plentiful.

It is estimated that the moose died 4 to 5 days earlier as the carcass appeared in fresh condition and was not emitting a strong smell. It was in poor general body condition with hips and backbone prominent, missing some hair. The animal appeared to be skinny, and had ticks covering 10-15% of the body with the focus location around the chest and neck area of the carcass having the highest amount of ticks. The moose was thin around its shoulder and the hide was missing some hair (hair was easy to remove), had presence of ticks, abscesses, and potential warts and lice. There was no discharge or blood at the mortality site, however, there were feces at the rear end of the moose. There was discharge from the anus and

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normal pellets located at the mortality site. The hoof and bone condition seemed normal. The bones, legs, joints, mouth, and teeth appeared in normal condition.

The internal investigation of moose 15-5628 found that the lungs, trachea, heart, liver, kidney, spleen, stomach, intestines, and skull were removed but appeared in normal condition to the naked eye. A tooth was extracted and the head was removed from the body.

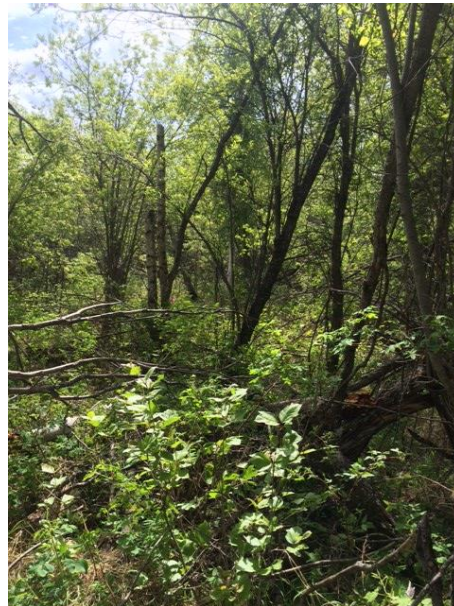
The cause of death was not able to be determined based on the evidence at the mortality site. There was no evidence of predation (wolf, bear, raven). The collar was retrieved and bagged.

## FIGURES



**Figure 2. Moose GSM18290/15-5628 was discovered to the centre of the alder-willow-aspen complex over 400m north of the last recorded location. A sedge meadow with mineral lick was located approximately 250m to the northwest.**





**Figure 3. The surrounding matrix of the mortality site included willow, highbush cranberry, rose, and alder.**



**Figure 4. The male moose was found under and adjacent to woody shrubs (alder, willow, rose, young spruce) approximately 2m in height.**



**Figure 5. The head was removed for sampling and a tooth was collected.**



**Figure 6. Moose GSM18342/15\_5596 was observed in the Clarke Lake area with two young calves in close proximity to mortality site #1.**



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**APPENDIX A - INVESTIGATION MAP**

