



Maternal Penning to Enhance Survival of Caribou within the Klinse-Za Herd

External: Issued March 27th, 2020



Days in pen → 14

Days until release → 121

Penning capture results

The capture session this year (Mar 10th - 14th) went well, given the challenges we encountered. On the first day the helicopters were not able to take off because of very strong winds. On the second day we had mild temperatures and clear skies, and brought in seven adult cows and one yearling female. On day three there was snowfall throughout most of the day, making flying impossible. On the fourth day we were able to become airborne and the crew mobilized in the pen and in the air, but intermittent low fog and unpredictable winds kept the capture crew from being able to get the cows that were in the alpine and we wrapped up in the mid-afternoon. The final (fifth) day of the capture session saw cold, clear weather and we brought in six



Figure 1. Vectronic GPS radio collars were fit on all adult caribou. Note the rot-away section on the left hand side, ensuring that if a collar stops working, it will not be permanently fixed to the animal



more adult cows for a total of 14 penned animals (13 cows, 1 calf).

The health and handling of all animals was safe and successful with one very unfortunate exception; one adult cow, the second to be captured on day one, sustained severe injuries during net gunning and subsequently died early on in transport. Though things happen very fast during capture, it is our best interpretation of the situation that she got her antlers and legs simultaneously tangled in the net and jerked her head in such a way that her neck broke. The vet on

side administered CPR but her injuries were irreversible, and she passed very quickly. Our post-mortem investigation that evening (led by Dr. Helen Schwantje) confirmed this sequence of events. The cow's remains were sampled for routine health tests such as trace nutrient levels (liver and blood), age (teeth), and cortisol levels (hair). This regrettable and unfortunate occurrence was the first of its kind in 86 capture events on this 7th year of the project.



Figure 2 Caribou cow walks away after sedation is reversed.



Figure 3. Checking a captured cow's teeth for approximate age estimate.

All other animals were captured, transported and sampled with no incident. All body temperatures were within an acceptable range that allowed for full sampling except for the calf – as last year, the calves seem to reach higher temperatures during capture and transport than the adults. Based on body fat ultrasound measurements and palpation, Dr. John Cook noted that almost all cows were in poor body condition, with just a couple scoring 'fair'. This result is not unusual for the Klinse-za herd area. Nonetheless, the cows seemed otherwise healthy, without notable parasite loads, injuries, infections or

hair loss. Standard samples that were collected included blood, hair and fecal matter; skin was collected only for animals who hadn't been in the pen before.

The majority of cows captured this year were 'returning residents' to the pen; nine had been penned as adult cows before, and two were females who were born in the pen in 2016 and 2017. One cow was newly captured and penned for the first time, and one other cow was first captured and collared in March 2019 but had not been in the pen until now.



Video-collar deployment

This year we are piloting an exciting new method for understanding the dynamics of calving and calf survival in the Klinse-Za herd. On March 17, 2020, one of our teams deployed six video collars on adult cows across the Klinse-Za range. The collars have a small video recorder on the bottom side of the collar which records 10 second videos every 5 minutes. The main objective of this effort is to understand the discrepancy between calf production in the pen and in the wild – our hope is that the collars will record parutition (or abortion/stillbirth) events, and shed light on predation or any other factors that might be affecting early calf survival in free-ranging caribou.

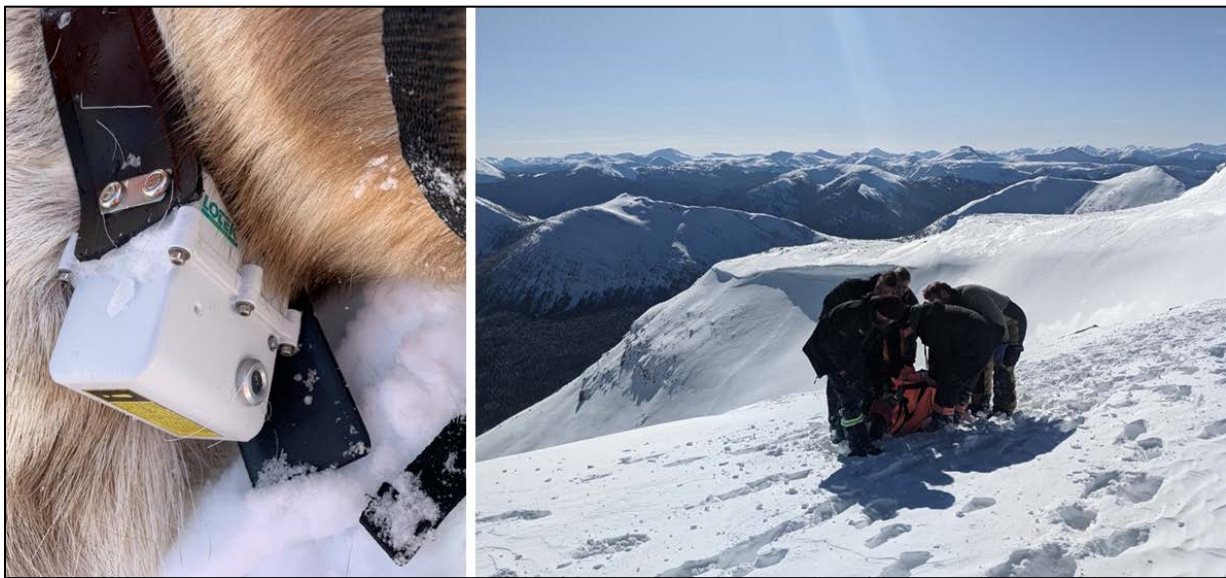


Figure 4. Video collars deployed on free-ranging caribou cows.

Pregnancy results

Blood was collected from all the adult cows to confirm pregnancy; tests have gone out and the results (determined by PSPB, a pregnancy specific protein) are still pending – we will report on pregnancy rate in the next newsletter.

Last year we had hopefully anticipated a higher number of female calves due to a larger proportion of young pregnant females; however, this prediction did not seem to bear out so we currently have no expectations around the sex ratios of the calves.

Current status

The 14 caribou in the pen seem healthy and content. The animals are generally spending time in one large group while feeding. A couple of the caribou move off together for the rest of the day – while most remain and bed together. They appear to be using the entire area of the pen, with tracks showing them moving around throughout the day. Their behaviour appears typical, C312K has taken over the



dominant position of the lead cow as has occurred in previous pen years. There is some aggression between cows, but nothing out of the ordinary. The cow calf pair stays together, but is always included with the rest of the group. C434S generally hangs out on the edges of the group – timid in the group dynamics.



Figure 5. Caribou in the feeding meadow after the first day of capture.

As per our usual protocol, they were exclusively fed lichen in the first three days following capture. After that, we started slowly introducing pelleted feed, increasing the amount by 10 kgs (half a bag) every other day. They have been eating all the food in the troughs. We currently have six troughs spaced throughout the feeding meadow to reduce potential for feeding-related dominance behaviours, and to help ensure all animals receive adequate nutrition. The caribou also really appreciate guardians felling dead trees full of arboreal lichen – they usually pick all the lichen clean in < 24 hours after the tree is felled.

Thank you to all those involved in the capture process, everyone working behind the scenes, and all those who make this project possible through continued funding!



Figure 6. The 2020 Klinse-Za penning capture crew



The teams:

- Nîkanêse Wah tzee Stewardship Society
 - West Moberly First Nations (Chief Roland Willson/Tamara Dokkie)
 - Saulteau First Nations (Estelle Lavis/Carmen Richter)
- Caribou Mat Pen Working Group¹
 - West Moberly First Nations (Tamara Dokkie)
 - Saulteau First Nations (Carmen Richter)
 - Wildlife Infometrics (Matt Erickson)
- Mat Pen Technical Advisory Team²
 - Revelstoke penning (Rob Serrouya)
 - FLNRO (Helen Schwantje)
 - FLNRO (Mike Bridger)
- Support teams – capture specialists, veterinarian team, shepherds, lichen collectors

Thanks to our sponsors³



¹ The Caribou Mat Pen Working Group is a committee appointed by the Nîkanêse Wah tzee Stewardship Society.

² The Mat Pen Technical Advisory Team is an ad hoc committee chosen by the Working Group to obtain technical advice.

³ Current and historic