



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

External: Issued March 22nd, 2023



Figure 1. C341K, an 8-year-old cow born in the 2015 Bickford pen, walks away after being released into the new Bickford pen.

Days in pen → 14

Days until release → 132

Penning capture results

The 2023 Klinse-Za maternity pen capture session at Mt. Bickford was among the best we've ever had. A total of 22 cows were captured in only two days, the highest number of animals in the history of the project. Captures occurred on March 7th and 9th, commemorating the 10th year of this project. Our full-size crew of 23 people made a significant difference in our ability to bring multiple caribou into the pen



at a time. On day one we brought in a record high of 12 cows, and on the final day we were able to bring in ten more. Twenty of the 22 caribou caught had previous pen experience; 11 having been born while penned in either the Bickford or Rochfort pens.

This year, C311K, likely the oldest cow in the herd, is joined in the pen by one of her previous calves from 2016 - C356K. As it turns out, C356K is with one of her previous calves from 2019 - C441K. For the second year in a row we have three generations of caribou in the pen, and in a few months time we hope a fourth will be on the way.



Figure 2. Crew members process two-caribou (C465K and 462S) prior to release in the pen. Both caribou are three-year-olds born in 2020 at the Rochfort pen.

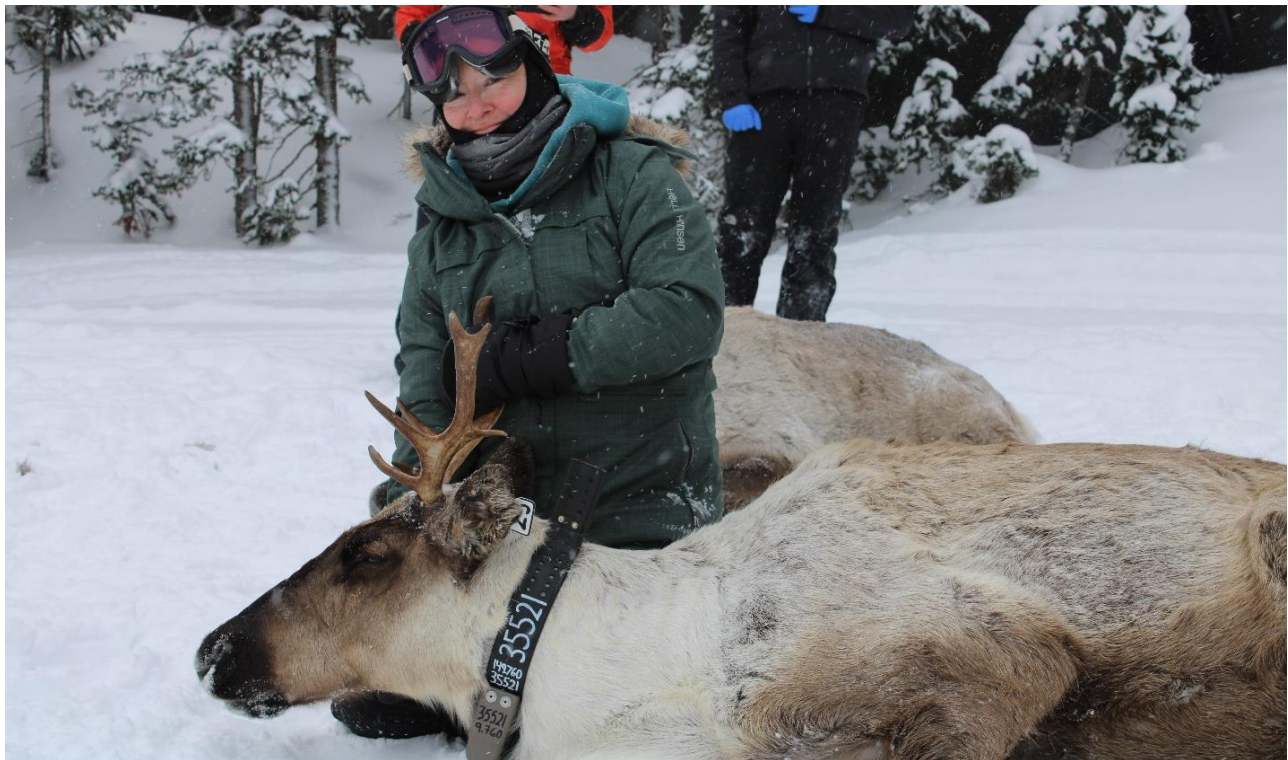


Figure 3. North East Caribou Team Lead Joelle Ward supports the head of C378K while the immobilization drug is reversed.

All animals were captured, transported, and sampled without incident. Most of the cows were in poor to fair condition as expected for this time of year and their weights ranged from 105kgs up to 151.5kgs. In a few weeks, following bleeding testing for Pregnancy Specific Protein B (PSPB), we should have pregnancy results to give us an estimate of just how many calves we can expect in spring.



Among the samples collected during captures, photos of each caribou teeth are taken (see sidebar pictures). We can then use the photographs to get an approximate age or age class of each animal (young, young adult, adult, old adult) based on the tooth wear, although the estimate is not always accurate because it depends on what they're eating. Younger caribou incisor teeth usually have sharper looking ridges on the biting surface. As they age, this surface becomes more rounded and eventually flattens out until their teeth wear to their gum line. Usually a caribou that has worn its teeth to the gumline is at least 10 years old. Likely the oldest cow in the herd, C311K (Figure 4-bottom), is at least 14-years-old and her front incisors are worn to the gumline while her remaining incisors are mere stubs. Though she is old for a caribou, in the last nine years we know she has produced 8 calves, a testament to the amount of energy caribou devote to reproduction regardless of age and condition.



Figure 4. The caribou in the top photo is a known 5-year-old, while the caribou in the bottom photo (C311K), is known to be at least 14 years old but is likely older.

A lot of preparation work is put in a head of time to ensure a smooth process during captures. In early February, the maintenance crew of 6-7 workers spent 7 days setting up the electrical fences around the 1.56km perimeter, repairing any damage from fallen trees and shovelling snow to remove any high snow drifts. In the weeks leading up to captures, all the collars, the sample kits, and countless gear/equipment items are gathered, cleaned, tested, and organized. Once organized, all the gear gets packaged up to be taken first by vehicle, and then by snowmobile on an 11-km unmaintained road to reach the pen site.



Figure 5. Capture gear being organized prior to getting package up prior to being package up for the journey up to the pen site.



Current status



Figure 6. C311K makes her rounds at the feeding troughs. Even though she is the oldest caribou at the pen, she looks healthy, and we hope she is carrying another calf again this year.

As per protocol, once in the pen, the caribou were exclusively fed lichen in the first few days following capture. After that, we started slowly introducing pelleted feed until they get use to their new high nutrition diet. Since they arrived, they have been eating all the lichen or pellets put 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. As an added precaution, Guardians cut up small blocks of wood and put them in the troughs with the pellets to help slow their access to the food preventing individuals from consuming pellets too quickly which could cause complications with digestion due to the change from low- to high-quality diet.

Though all precautions were taken during captures to ensure the best possible care for the caribou at all times, including three wildlife veterinarians on-site, unfortunately just six days after captures had finished, one of the cows died from what we suspect was a pneumonia infection. Though Guardians had seen

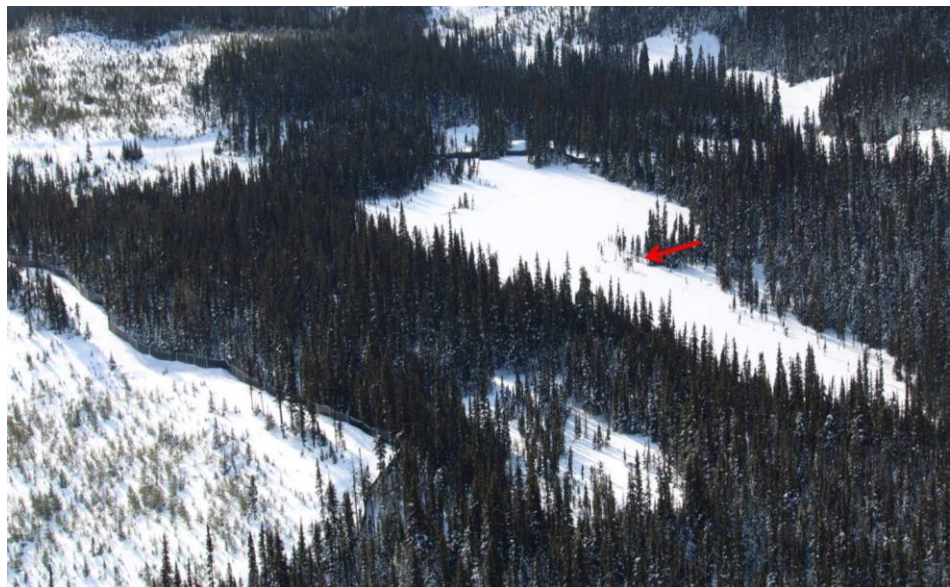


Figure 7. Aerial photo of the Bickford maternity pen after the maintenance team completed work on the fences. The red arrow indicates the main observation tower Guardians use to keep tabs on the caribou once in the pen.



this cow daily, she displayed no outward or obvious signs of distress to cause any concern. Her death was extremely unfortunate, though we know that with 21 caribou remaining in the pen, the effect of this years penning efforts on caribou recovery in the Klinse-Za herd will be significant and we look forward to what the calving season brings.

Population Survey

During our annual population survey, we observed 132 caribou up 18 animals from last year and the largest increase since recovery began! Similar to the previous year, most of the caribou (approx. 60 animals) were found around Mt. Rochfort, highlighting the importance of the area to caribou even in the absence of penning in the area. During our survey, we also got the chance to check on the orphaned calf 38.



Figure 8. A group of cows and calves on Mount Bickford. Red arrow indicates calf 38.

Though he is smaller than the other calves, he appears healthy and is fitting well with the herd. While he has occasionally wandered off with bulls in the nearby area, he has mostly stayed with his cohort of pen calves and cows on Mount Bickford.

During our survey we also opportunistically observed two wolverines travelling in the alpine. One was traveling on a ridgeline not far from a group of cows and calves. During the last two years of monitoring calf production and survival, wolverines have been the leading cause of caribou calf mortality, often killing calves during the first two weeks following birth. Our annual video collar deployment to investigate calf production and survival for the coming year is scheduled for the end of the month where we will fit 10 video collars on cows to record calving events and investigate calf production.

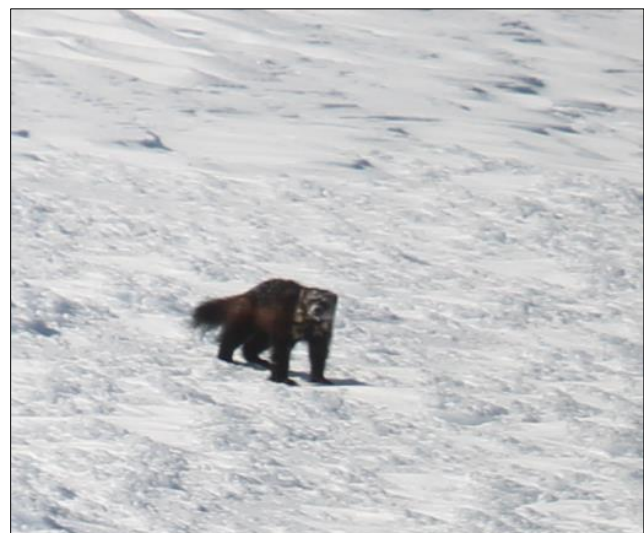


Figure 9. One of two wolverines seen in the alpine during the population survey.



We would like to extend a big 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 support!



Figure 6. The 2023 Klinse-Za maternity pen capture team. Back row – left to right: Kendall Davis, Drayden Field, Corbin Brown, Ken Latreille, Caeley Thacker, Bryan MacBeth, Shari Willmott, Blake Spencer, Ben Berukoff, Clayton Lamb, Jordan Smaldon, Owen Slater, Scott McNay, Tyler Hadland, Russell Vickers. Front row: John Cook, Chris Addison, Ted Euchner, Joelle Ward, Starr Gauthier, Line Giguere, Landon Birch, Danica Hoffart.



The teams:

- Níkanêse Wah tzee Stewardship Society
 - West Moberly First Nations (Chief Roland Willson/Tamara Dokkie)
 - Saulteau First Nations (Estelle Lavis/Naomi Owen-Beek)
- Caribou Mat Pen Working Group¹
 - West Moberly First Nations (Tamara Dokkie)
 - Saulteau First Nations (Naomi Owens-Beek)
 - Wildlife Infometrics (Scott McNay)
- Mat Pen Technical Advisory Team²
 - FLNRO (Caeley Thacker)
 - FLNRO (Mike Bridger)
- Support teams – capture specialists, veterinarian team, Guardians, lichen collectors

Thanks to our sponsors³



¹ The Caribou Mat Pen Working Group is a committee appointed by the Níkanêse 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