

Revelstoke Caribou Rearing in the Wild (RCRW) Society Findings from Year One of Maternity Penning in the Revelstoke Region



Kirbyville mother and calf from maternity pen - Feb 2015
Photo Credit: C. Legebokow

The objective for the Revelstoke Caribou Rearing in the Wild (RCRW) maternity penning project is to reduce the high mortality rate seen in young calves in the wild. Maternity penning in 2014 involved the capture of 10 adult female caribou and two 10 month-old calves in March 2014. Nine cows were pregnant and successfully gave birth. All cows, calves and juveniles were successfully released back into the wild July 23, 2014.

As of March, 2015:

- All 10 adult females are alive (100% survival)
- 2 of the 9 calves are confirmed alive (22% survival)
- 1 of the 9 calves was killed by wolves
- 6 of 9 calves are not at heel, and presumed dead; cause unknown
- 1 of 2 juveniles is confirmed alive, the status of the other is unknown

Snow conditions did not allow for a population census this winter. However, a recruitment census was conducted and indicates that wild

calf survival is approximately 21% this year; pen-born calves survival was 22%. The survival of penned adults was 100% compared to historical averages of 81% in the Columbia North subpopulation between 1992-2004.

Tracking and Technology: Eight of 10 adult collars are functioning well; we are able to locate the remaining two cows by air but not by satellite. All adult collars are scheduled to drop off in April, 2015.

Calf collars are designed to expand as caribou grow. However, the belting design did not fare well in the rugged Columbia Mountains and 4 of the collars fell off prematurely. Technology worked sporadically in several of the remaining collars, which made it difficult to confirm if there actually was a calf mortality when a collar stopped working.



Caribou released from pen – July 23, 2014
Photo Credit: RCRW

Timing of Mortality: Flights in October 2014, confirmed that 6 of 9 calves were alive (3 were unknown status). Wolves killed one calf in early November. Weather for flying was poor in December and January but by mid-February, 4 of 9 calves were not observed with their

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mother (known as “no longer at heel”). By March, 2015 7 of 9 were confirmed dead or no longer at heel, resulting in the current scenario of 2 of 9 calves alive (22% calf survival).

While the RCRW team had hoped for a higher survival rate for pen-born calves we understand the risks that are associated with such a project.

In the wild, we expect most calf mortality to occur in the first few weeks of life. As we anticipated, this was not the case for pen-born calves this year, however we did observe mortalities in older calves.

Weather: Typically the North Columbia’s alpine snowpack measures 3 meters by the end of March. These high snow levels provide caribou a platform to reach lichen in tall trees and creates a separation barrier between them and their predators in the valley bottoms.

This winter was not typical. A climate summary for the month of February, 2015 at Rogers Pass found some remarkable results. Compared with the 47 year average, temperature conditions in were 4°C warmer, the total snowfall was almost half (82 cm vs. 145.1cm) and total rainfall was 1364% higher (53.2mm vs 3.9mm). This impacted the normally high snow levels that caribou depend upon in the Columbia Mountains.

The reduced snowpack influenced caribou behaviour by increasing the amount of time spent in early winter low elevation habitat. Usually, southern mountain caribou migrate to and remain in the sub-alpine in late winter (January through March).

The unusual mid-winter rain events followed by cold snaps contributed to the formation of a crust layer on the snowpack. This stable surface may have facilitated predator movement into

the sub-alpine, where they could encounter caribou.

What We Could Do Better

The RCRW recognized there would be risks in undertaking this project. To mitigate risks we used established animal care protocols and best practices; we built a pen that was effective at predator exclusion; and we ensured that pilot year one used a small number of caribou in the event that the program was not viable. Yet there were outcomes we did not anticipate and that we are able to learn from.

While there is not much we can do about climatic factors such as warm winters, for year two we have sourced different collars that have been successfully tested on deer to ensure better tracking of calves.



Bischoff – Feb 2015. Photo Credit: C. Legebokow

What We Did Well

- We had 100% adult survival of captured cows. Historic adult survival in the wild is 81%.
- In the pen, there were no capture mortalities and 100% of pregnant cows birthed live calves.

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- 100% of captured animals and their calves were released back into the wild on July 23, 2014.
- Moving into winter, 6 of 9 caribou calves were confirmed alive.
- Questions around cow and calf behavior upon release were answered: cows with their calves re-integrated into the local caribou population post-release.
- No lethal predator control was required to protect the penned caribou. Cameras within a 1km radius of the pen captured images of grizzly bears, cougars, black bears, lynx, coyotes, wolverine and wolves. One wolverine did get a “shock” upon attempting to climb the electric fence surrounding the pen.
- Increased public awareness of caribou and their conservation needs.



Kirbyville Feb 2015. Photo Credit: C. Legebokow

A Big ‘Thank You!’

Volunteers and support from the community continue to be the backbone of this project.

Funding and other support from the Government of Canada, Shell Canada, Parks Canada, Columbia Basin Trust, Revelstoke

Community Forest Corporation, the Fish and Wildlife Compensation Program, Downie Timber Ltd, Golder and Associates, and the Province of B.C. ensure that this pilot project continues.

Please see our website for a full list of contributors.

What’s Next

In 2015 we plan to capture up to twice as many caribou as last year.

The project requires a minimum of 3 years, but ideally 5 years of results to be able to conclusively determine if maternity penning improves caribou calf survival in the wild in the North Columbia region. As demonstrated by this year’s surprisingly warm winter, an extended study time allows for the averaging of results on calf recruitment and survival over both typical and atypical years.

To download video and images, or learn more about Revelstoke Caribou Rearing in the Wild Society and maternity penning in the Revelstoke area, please visit:

RCRW website:

rcrw.ca

RCRW facebook page:

[facebook.com/RevelstokeCaribou](https://www.facebook.com/RevelstokeCaribou)

RCRW e-mail:

Rcrwsociety@gmail.com