

Revelstoke Maternal Penning Project Summer Update 2018



Adult caribou moments after release into pen - March 2018

The Revelstoke Caribou Rearing in the Wild (RCRW) project was launched in 2014 to conduct maternal penning and is a collaborative, community-led, not-for-profit society. The program is in its 5th season of a 5-year pilot, ending March 2019.

Maternal penning involves placing pregnant caribou in a 9.3 hectare predator-proof pen, from late March until mid-July, allowing newborn calves to gain strength and agility. At this time of year, both adult and calf mountain caribou are at higher risk of predation outside the pen. In July, the animals are released back into the wild.

Population Update - The Columbia North subpopulation has declined substantially since the 1990's from over 200 to 147 caribou, as of the 2017 census, but has been stable from 2004 to 2017.

Why all the effort? The Columbia North subpopulation is the largest and most stable herd within the Revelstoke-Shuswap recovery planning unit. The small sizes of other subpopulations in the planning unit reduce their likelihood of recovery success.

Program Overview- Annual penned calf survival rate for the past 4 years has been 41.3% which is one and a half times the survival rate of calves born in the wild (26.4%, varying between 20 - 31% over the past four years). As a result, six calves were added to the population over four years.

The primary objective of the 5-year pilot is to double or triple calf survival over that of wild-born calves, measured annually through a recruitment census at 10 months of age. The second objective is to increase population size.

The five-year time frame of the pilot project allows for averaging calf survival results, which vary annually due to factors such as weather events, predation and accidents.

Annual Summaries:

Year 1 (2014 – capture in late March)

Captured: 10 cows (9 pregnant); 2 young of last year (YLY)

Released: 10 cows, 2 YLY, 9 calves

Calf Survival to March 2015: 2

Cow Survival to March 2015: 10

Penned Calf Estimated Survival Rate over Wild Calves at 10 months of age: 22% vs 20%.

Year 2 (2015 – capture in late March)

Captured: 18 cows (16 pregnant); 1 YLY

Released: 17 cows, 1 YLY, 11 calves

Calf Survival to March 2016: 9

Cow Survival to March 2016: 15

Penned Calf Estimated Survival Rate over Wild Calves at 10 months of age: 60% vs 22%

Year 3 (2016 – capture in late March)

Captured: 12 cows (11 pregnant);

Released: 12 cows, 7 calves

Calf Survival to March 2017: 4/5

Cow Survival to March 2017: 11

Penned Calf Estimated Survival Rate over Wild Calves at 10 months of age: 36% to 45% vs 27%

Year 4 (2017 – capture in early April)

Captured: 12 cows (11 pregnant); 1 male YLY

Released: 12 cows, 9 calves, 1 male

Calf Survival to March 2018: 4

Cow Survival to March 2018: 11

Penned Calf Estimated Survival Rate over Wild Calves at 10 months of age: 36.4% vs 27%

Year 5 Final Year (2018)

Captured: 20 cows (17 pregnant)

Released: 17 cows, 11 calves

Calf Survival to March 2018: TBD
 Cow Survival to March 2018: TBD
 Penned Calf Estimated Survival Rate over Wild Calves at 10 months of age: TBD

In 2018, 3 cows died during or soon after calving, and 2 calves were euthanized after sustaining injuries. These events followed record high temperatures in May that averaged above 25°C. All animals were released sooner than anticipated to mitigate the potential for any additional mortalities. Details regarding related necropsy results and conclusions will be presented in the final report, which is expected in mid 2019.

Learnings

This pilot continuously improves upon health and welfare protocols. The RCRW continues to adapt best practices based on recommendations from wildlife veterinarians, caribou shepherds and biologists. Starting in year three, RCRW hired a veterinarian to live on site throughout the May and June calving period.

Protection from predators is another top priority. The robust electric fence constructed around the pen has effectively kept predators out. Wildlife cameras allowed us to detect predators and delay releases until none were known to be in the vicinity.

Kids and adults love to help caribou! Since the beginning of the 2017/18 penning season, over 208 volunteer hours have contributed to picking 175 kg of lichen for caribou to eat during their first 10 days in the pen. The RCRW outreach team has provided education on caribou ecology to ~450 students in west Kootenay schools since 2015.

The projects' penning activities over the past 4 years have contributed:

- Beneficial information on the operation of a maternal penning facility,
- Development of protocols and techniques for the capture, health testing, monitoring and care of wild caribou,
- Insights into the nutritional requirements of caribou during penning, and
- Engineering requirements for effective

husbandry, penning and electric fence infrastructure.

A final report will be released in the fall of 2019, indicating the overall results, recommendations and proposed next steps for this conservation tool.

Land-use and wildlife managers need to continue applying a suite of conservation tools that further recovery efforts. This will ensure the long-term survival of deep snow mountain caribou.

Recovery measures for the Columbia North herd include:

- Habitat protection,
- Predator and prey management,
- Closure of critical winter habitat to snowmobiling
- Implementation of Best Management Practices by the heli-skiing industry,
- A moratorium on new commercial recreation operations within critical caribou habitat
- The RCRW caribou maternal pen,
- Research and monitoring,
- Habitat restoration and,
- Increased compliance and enforcement.

Federally, a [protection assessment](#) and protection study of caribou herds in BC is underway in conjunction with the province.

The RCRW supports all methods of caribou recovery where and when appropriate, to ensure that southern mountain caribou remain on the landscape for the long term.

Next steps and the future of the RCRW - As the program draws to a close, the RCRW reflects that this programs' success is a direct result of strong engagement from diverse stakeholders and active community participation. We have increased our knowledge about how calves survive in the wild, and have bolstered awareness and education on mountain caribou in Revelstoke and beyond.

RCRW have continuously learned about the requirements of wild caribou. We will continue to learn more as we investigate the feasibility of building a pen site at a higher elevation, and as we conduct a holistic assessment of local caribou herd health with DNA and other analyses on blood, tissue and hair samples of caribou that have been archived as a result of this project.

RCRW will be directly contacting funders and supporters to inform them that the RCRW Society will conclude its 5-year pilot, in March 2019, as originally intended. We will actively engage with various levels of government and the Splatstsin to encourage the exploration of new potential project leadership in the near future. The RCRW will ensure a thorough transfer of knowledge to other organizations or stakeholders interested in applying maternal penning as a recovery method to augment the Columbia North or other southern mountain caribou herds.

In the event that there is no interest in furthering the pilot project, directors of the RCRW will ensure that project information and data are made available to the public via our website and other information platforms, and will proceed with disposing of assets, with eventual (2+ years from last capture date) dissolution of the society.

The RCRW Society is extremely proud of our accomplishments and will compile complete findings in a final report. The RCRW knows that with the increased prominence of the Columbia North herd, and recent resources committed to caribou recovery, that both the provincial and federal governments are in a strong position to meet their mandate and obligation to carry out recovery of this endangered species.

Acknowledgements - We are grateful to the many funders, our many partners and dedicated volunteers of all ages that make this project possible. To see a full list of supporters and board members please go to rcrw.ca/contributors.



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Rcrw.ca

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