

## Revelstoke Maternal Penning Project Winter Update 2017



Adult caribou drinking from the flow-through solar powered water system – May 2016

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 beginning its 4th year, of a 5-year pilot.

Maternal penning involves placing pregnant caribou in a nine (9.3) hectare predator-proof pen, from late March until mid-July. 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

The Columbia North herd has declined substantially since the 1990's from over 200 to fewer than 150 caribou. The population has been roughly stable since 2013, estimated at 147 in 2017, and 152 in 2013. Despite small numbers, this is the last stronghold for caribou in the region. It is the only herd in the Revelstoke-Shuswap area large enough to recover on its own; if conservation actions can successfully stop population declines.

In the first three-years of the project

approximately 7 additional calves have been added to the wild population. This represents an approximately 21% increase over survival of wild born calves.

A census of the Columbia North herd took place in April 2017. A census of this herd has not been completed since 2014. Results indicate the population is stable at approximately 150 animals.

### Year Four (4) Update – 2017 Caribou Cohort

On April 4<sup>th</sup>, 12 caribou cows and one juvenile were captured and transported to the pen for year 4 of the pilot program. Pregnancy results are pending. Caribou will receive the highest standard of care while they prepare to calve in the safety of the predator proof enclosure. These adult caribou have been radio-collared to monitor them, via satellite, when released.

### Year Three (3) Update- 2016 Caribou Cohort

In March 2016, 12 adult female caribou were captured. Eleven of the 12 cows were pregnant. In mid-July 2016, 7 healthy caribou calves and 12 cows were released back into the wild.

For 2016, a veterinarian was on-site to provide the best possible care for the penned caribou. The veterinarian intervened quickly when concerns arose, but unfortunately, there were four calf deaths in the pen. Three died shortly after birth, and one died at the Calgary Zoo where wildlife veterinarians attempted to repair a broken leg. While some level of calf mortality is expected, the RCRW team was saddened by these deaths. Thorough investigations took place to ensure that the project is providing the best possible facility and care for the caribou and to provide insight into additional threats that may impact newborn caribou in the wild.

Of the 7 calves released from the pen in July 2016, 4 were confirmed alive in March 2017, and the fate of one is unknown. Of known mortalities, one collared adult died as a result of wolf predation, and one collared calf perished as a result of collar malfunction. This penned calf survival rate to March (40%) is higher than the estimated rate for wild calves in this region for 2014-15 (20%).

## Year Two (2) Update -2015 Caribou Cohort

In March 2015, 18 adult female caribou and one 10-month-old calf were captured, 16 cows were pregnant and 15 calves were born in the pen. All caribou and calves were radio-collared to allow for post-release monitoring via satellite. In mid-July 2015, 17 adult caribou, one juvenile and 11 calves were released from the pen and moved into summer range.

In the fall of 2015, a cougar predated 2 cows and 2 calves. Nine of 11 calves survived to March 2016, when they are considered “recruited” into the local population. This represents a 60% survival rate for the year 2 pen cohort, and is more than double the estimated survival rate for wild calves in 2015-16 (22%). These results are an improvement from Year 1 and are in line with project objectives.

## Year One (1) Update- 2014 caribou Cohort

The capture of 10 cows, and 2 juveniles in 2014 resulted in 9 calf births and 100% survival in the pen. All were released back into the wild in mid-July 2014. However, only 2 of 9 calves survived to 10 months of age in March of 2015. This calf survival rate was similar to caribou born in the wild (~22% survival). 100% of penned adult caribou survived to March 2014.

## Learnings

This is a pilot project, and RCRW continues to adjust best practices based on experience, and the advice and assistance of wildlife veterinarians and biologists, to make maternal penning as effective as possible.

## *The health and welfare of caribou, from capture through release is our top priority.*

In 2017, the project will continue to:

- follow professionally reviewed protocols, building on the best standards for wildlife capture and care;
- have a veterinarian on-site during calving;
- minimize human contact with animals in the pen to reduce stress on cow/calf pairs;
- employ full time staff with training in animal husbandry to monitor caribou and patrol for predators;
- maintain the highest standards of care for husbandry including a flow-through water system, strict hygiene protocols, highest quality feed and on-call veterinary care;
- maintain the electric and physical barrier fence, solar powered water-system and facilities;
- recruit volunteers for our successful lichen harvesting program (175 kg collected by 20 volunteers in 2017; and
- support outreach on caribou ecology through education in west Kootenay schools. Approximately 125 students will be reached in 2017.

The primary objective of the 5-year pilot is to at least double calf survival over that of wild-born calves. If successful, the second objective is to increase population recruitment (with more new caribou added than the number lost in a year). Modeling indicates that a minimum of 20 healthy cows and calves would need to be released from the pen to increase population at the herd level.

## *What happens after release?*

The maternal pen offers protection to caribou cows and calves shortly after birth, when they are most vulnerable.

The five-year time frame of the pilot project allows for averaging the results on calf survival,

which will vary annually due factors such as weather, predation and accidents.



Calves and adults outside the pen on release day - July 2016

### **Acknowledgements**

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[rcrwsociety@gmail.com](mailto:rcrwsociety@gmail.com)