Finding shared solutions for moose and caribou management in B.C.

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Moose, caribou and wolves have a unique predator-prey relationship that has been significantly influenced in many areas by natural and human-caused habitat alteration. The Province of B.C. is striving to find shared solutions that allow all three species to persist on the landscape.

Moose are integral to British Columbians

Moose are an iconic part of British Columbian landscapes. As the largest member of the deer family, they are a key food source for other wildlife, and their presence on the landscape is highly valued by both Indigenous and non-Indigenous peoples.


PHOTO: D. HODDER

Moose populations are declining in many parts of the Province. Given their ecological, cultural, and economic importance, these declines are a source of significant concern for Indigenous peoples, stakeholders, and the broader public. There is a pressing need to better understand the factors causing this decline and find ways to achieve desired population goals.

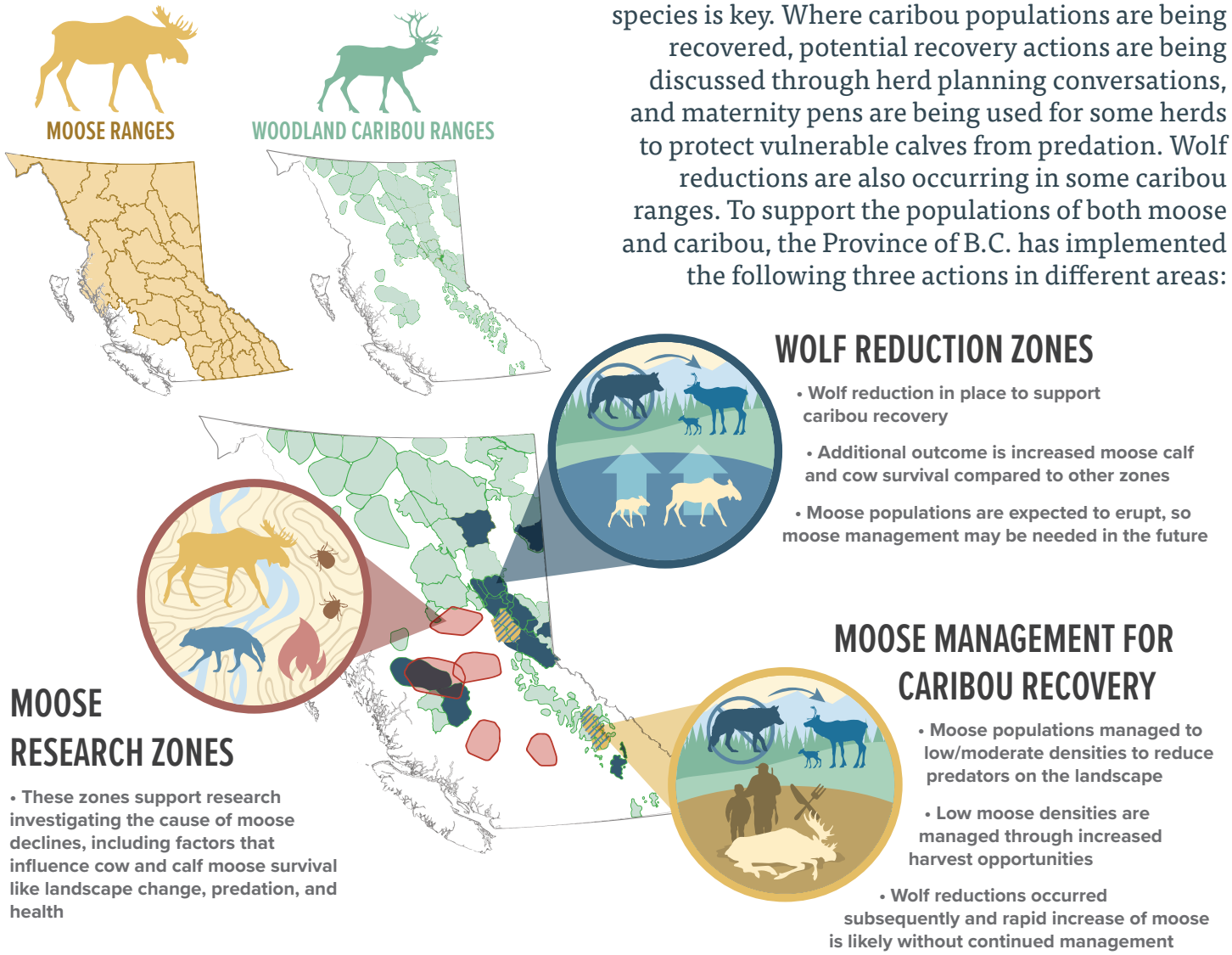

PHOTO: PROVINCIAL CARIBOU RECOVERY PROGRAM 2017/18 REPORT

Caribou: a key conservation challenge

Woodland caribou are also an iconic Canadian species. As a high-profile species at risk, caribou population recovery is one of the Province's highest priorities. Herds in Southern B.C. have been listed as Endangered by COSEWIC, at least five herds have been recently extirpated, and an additional six herds are assessed as being under imminent threat of extirpation by the federal government. Like moose, caribou are of cultural significance to Indigenous communities and are a key part of the Province's rich biodiversity.

Different strategies in different regions

Historically, caribou and moose ranges did not overlap extensively. However, habitat alteration has increased the overlap between moose and caribou. Maintaining spatially separated, and high-quality habitat for both species is key. Where caribou populations are being recovered, potential recovery actions are being discussed through herd planning conversations, and maternity pens are being used for some herds to protect vulnerable calves from predation. Wolf reductions are also occurring in some caribou ranges. To support the populations of both moose and caribou, the Province of B.C. has implemented the following three actions in different areas:



1. Moose Research Zones: Examining the Cause of Declines

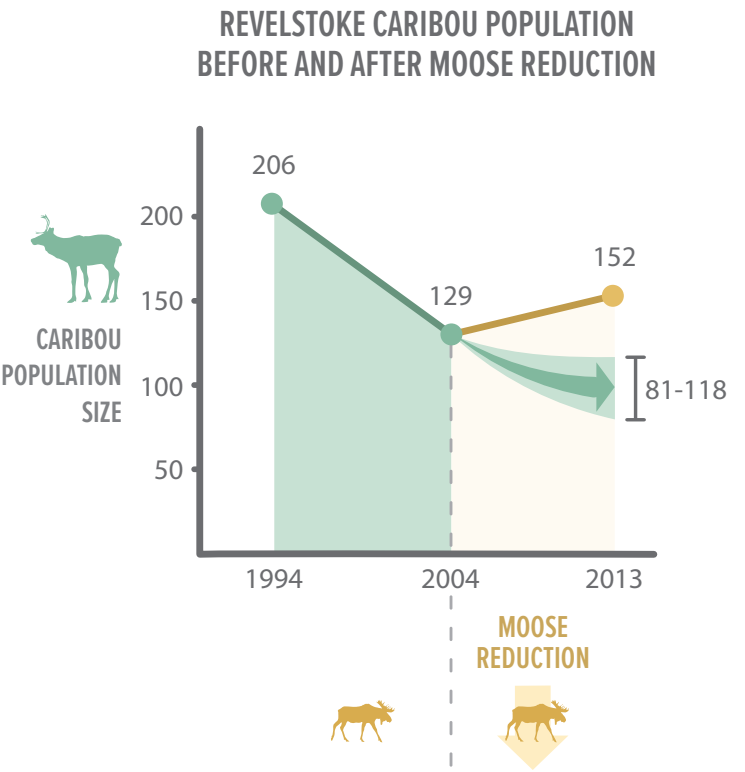
Landscapes altered by resource development can affect moose populations in a variety of ways. In some areas of B.C., altered landscapes may have caused significant moose declines, while in other areas habitat alteration creates favourable habitat conditions for moose. Scientific information is being gathered in five study areas where moose are declining. This research examines three key issues:

1. Factors that influence cow and calf moose survival,
2. The effect of landscape changes on moose survival, and
3. Habitats that are important for moose.

Learning more about how these factors influence moose populations will help inform management decisions that will support the long-term sustainability of moose throughout the Province.

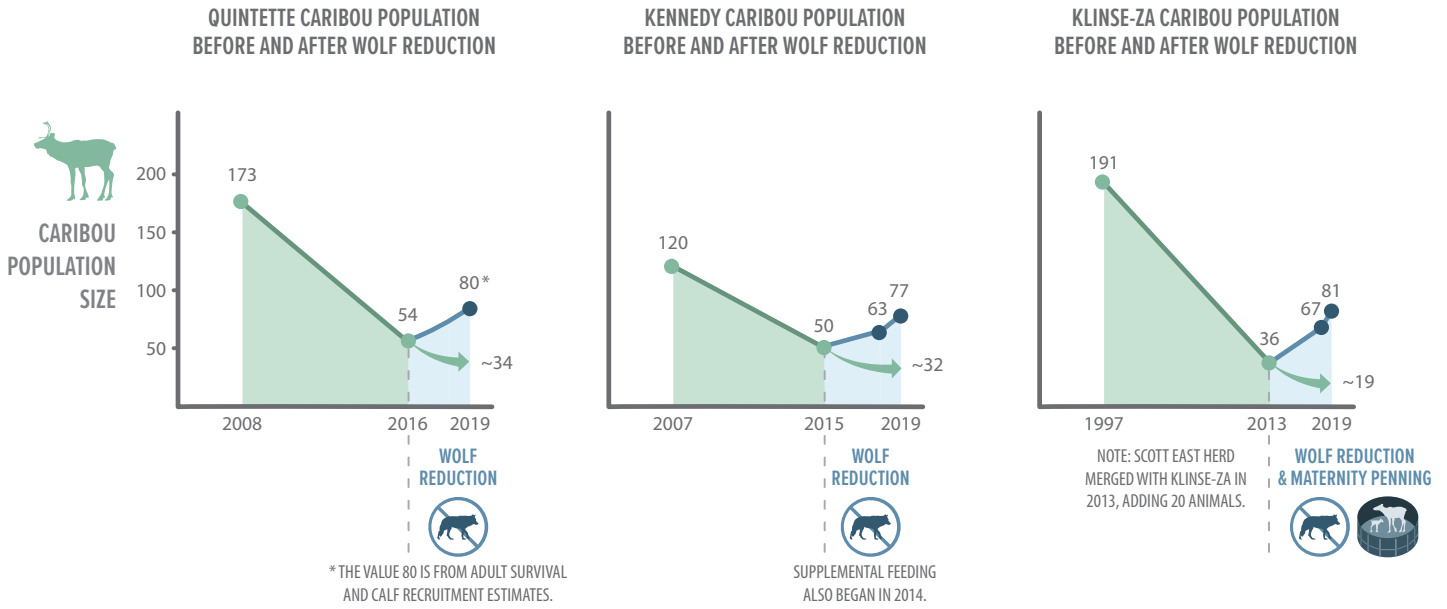
2. Moose Management for Caribou Recovery

In two areas of the Province, Parsnip and Revelstoke, attempts were made to lower moose populations using increased hunting opportunities to support caribou recovery. Reducing moose numbers may help to keep wolf numbers low, which relieves predation on caribou. **In the Parsnip, this strategy did not appear to benefit caribou, but in Revelstoke moose were reduced by 80% and caribou numbers stabilized for the largest herd, whereas two very small herds continue to decline.** Without the moose reduction, it was projected caribou would have continued to decline significantly.



3. Wolf Reduction Zones: Supporting Caribou Recovery

Caribou have declined steeply in areas with high levels of habitat alteration, and elevated wolf numbers have resulted in high caribou mortality from predation. Wolf reductions are therefore an important tool to support caribou recovery alongside habitat protection and restoration.

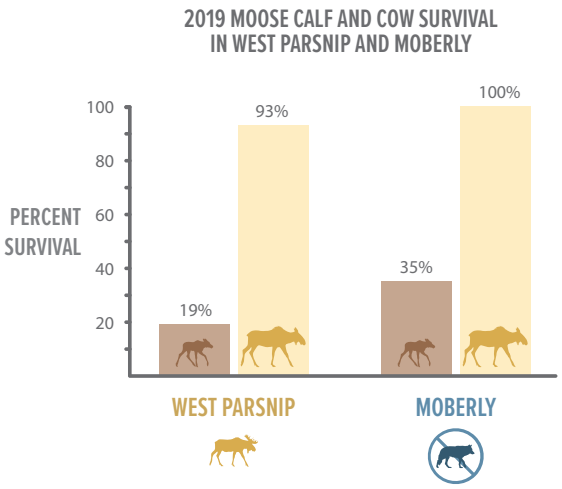


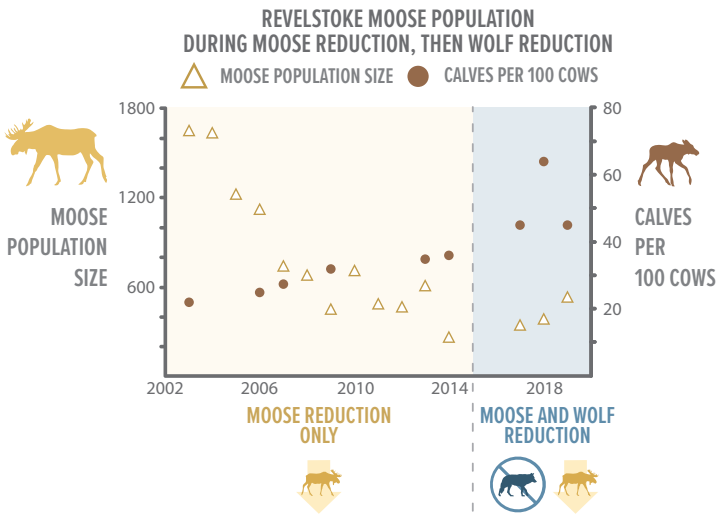
Wolf reductions for caribou: effects on moose

In the Peace region, wolf reductions to help recover the Klinse-za caribou herd may have resulted in greater cow and calf survival in the overlapping Moberly moose population relative to the nearby West Parsnip moose population. Results from 2017 and 2018 did not show an increase in moose survival, but results from 2019 suggest some preliminary evidence of increases (next page, bottom left).

In Revelstoke, moose reductions by licensed hunters began in 2003, which in turn reduced wolves and stabilized the caribou decline for the Columbia North herd. In 2017, direct removal of wolves began as an additional caribou recovery measure. Since these wolf reductions began in combination with increased harvest of moose, caribou numbers have increased by about 4% per year, though these are early results. Additionally, the moose population has grown by 20% per year and the ratio of calves to cows have increased rapidly (bottom right).

As wolf reductions for caribou recovery continue, **there may be some outcomes where caribou populations increase and moose hunting opportunities will likely increase for both Indigenous and non-Indigenous harvesters.** However, continued careful monitoring is needed to determine this possibility.





For additional details on these results, please see:

Sittler, K.L. 2019. Moose Limiting Factors Investigation: Annual Report 2018-19. Wildlife Infometrics Inc. Report No. 678_Wildlife Infometrics Inc., Mackenzie, British Columbia, Canada.

Coordinated Management

Ensuring the resiliency of B.C.'s moose and caribou populations is of critical importance. Getting there won't be easy and will require a holistic approach that doesn't focus on just one species, habitat, or management strategy. Through continued research and an adaptive approach to management, the Province of B.C. hopes to improve the long-term persistence of caribou and maintain healthy moose populations in the Province in collaboration with First Nations and stakeholders.

References: *Pelletier, A. and D. Seip. 2019. Population Status of Central Mountain Caribou Herds in British Columbia, and Response to Recovery Management Actions. Ministry of Forests, Lands, Natural Resources Operations, and Rural Development.*

BRITISH COLUMBIA
Ministry of Forests, Lands, Natural Resource Operations and Rural Development