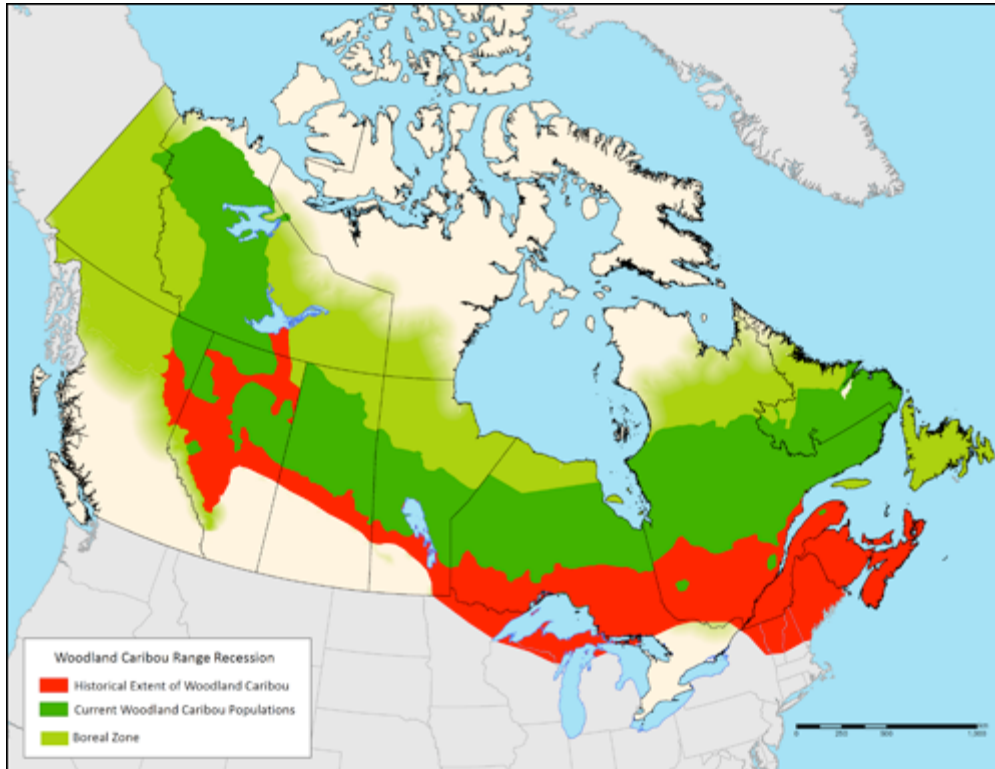


Summary of Woodland Caribou: State, Threats, and Future Planning

An Iconic Species in Decline

Caribou, celebrated on the Canadian quarter, are a symbol of Canada's deep and historic connection to the land. The relationship between people and caribou dates back thousands of years, and many believe the first indigenous peoples to enter Canada were following the abundant herds.



Woodland caribou have lost close to half of their historical range.

Credit: International Boreal Conservation Campaign

Woodland caribou, the forest-dependent form distinct from arctic barren ground caribou, were once widespread throughout southern Canada and the northern United States. However, they have declined in both population and range ever since the first European settlers set foot in their habitat more than 200 years ago. The expansion of cities and industrial development slowly extinguished southern populations to the point where today they have been wiped out of about 50% of their historical range, now almost exclusively occupying the northern, intact portions of the boreal forest. Their inability to coexist with extensive disturbances and need for older forests indicate that only by protecting remaining large, intact portions of their habitat will we be successful at reversing this troubling decline.

The Caribou Connection: Why it Matters

While the growing crisis of woodland caribou is concern enough to take immediate action, the story of its decline is a part of a larger story. Woodland caribou are widely considered to be an indicator species of the boreal forest—when caribou decline it is reflective of the decline in health of the habitat in which they live. Ensuring the survival of woodland caribou also ensures the long-term health of their boreal forest habitat and the countless species with which they coexist, many of which face similar declines.

A Unique Biology: The Importance of Space



Woodland caribou require large expanses of intact and undisturbed habitat.

Credit: D. Langhorst, Ducks Unlimited.

Woodland caribou are known for being shy and avoiding areas with extensive human presence. This is due to their unique biology and reproductive needs. Their feeding habits are focused on plants and lichens, which are very slow-growing and are spread out over large areas. An even more important determinant of their low density populations is predation risk. Even low levels of predation can threaten the viability of a woodland caribou population due to the species' low reproductive rate. Caribou avoid predation by spacing themselves out over the landscape and avoiding habitats that support large populations of moose and deer, which attract wolves and bear. For example, during the vulnerable calving period, females distribute themselves widely across the boreal landscape so that on average there is a one female per sixteen square kilometres. While other mammals may thrive in great numbers within a small range of habitat, caribou require large, expansive regions of undisturbed forest dominated by trees more than 50 years old.

Debunking the Myth: Predators vs. Pressure

Predators such as wolves, bears, and hunters are often blamed for the woodland caribou's decline, but predation is only a proximate cause. The ultimate causes of woodland caribou decline virtually all stem from the ramifications of industrial natural resource development activities. Younger forests that grow following industrial disturbance allow moose and deer populations to increase, which in turn support higher densities of predators such as wolves. At the same time, roads and other linear disturbances such as pipelines facilitate travel by predators and hunters. The end result is that predation exceeds sustainable levels, causing caribou populations to decline.

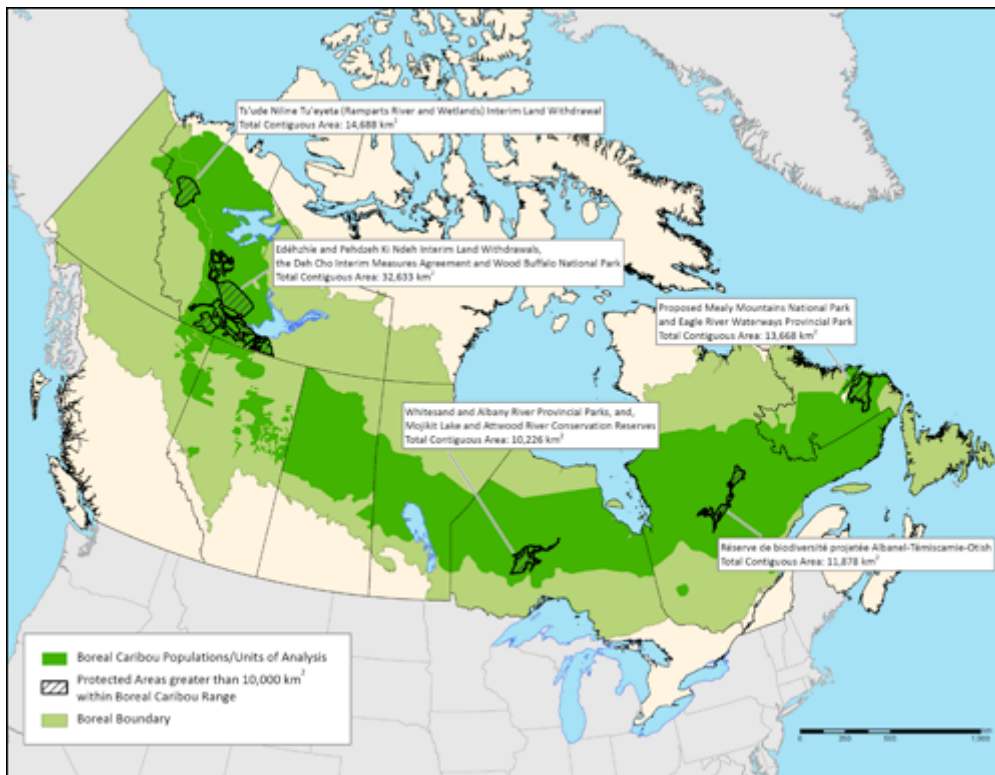


*Habitat loss from logging and other industrial activities poses by far the largest threat.
Credit: Jeff Wells, International Boreal Conservation Campaign.*

Viable herds almost exclusively reside in regions with little to no disturbances, whereas extirpated or declining populations are associated with high levels of human impact. While regulating hunting levels and predator control may be needed for some of the most threatened herds, it cannot overshadow the fact that habitat conservation and minimizing disturbances remain the only viable long-term measures for preserving woodland caribou.

Future Forest Planning: What is Sufficient?

The sensitivity of caribou to disturbance and their expansive range size (approximately 10,000-15,000 km² per herd) demands a large-scale planning perspective. A review of the status of boreal caribou herds across Canada determined that long-term viability of herds likely requires ranges dominated (approximately two-thirds) by forests that have not been disturbed by development or fire for at least 50 years. The pervasive influence of fire in boreal ecosystems leaves little room for industrial development if caribou herds are to remain viable. The consequences of large-scale industrial disturbance may also be permanent, given that there are no documented cases of woodland caribou successfully re-inhabiting ranges following extirpation. For caribou to persist, land use decisions must be made at the scale of herd ranges (i.e., 10,000-15,000 km²) and proactively consider cumulative industrial and natural disturbance relative to the species' habitat requirements. Monitoring of the species is also essential if we are to improve our capacity to balance development with caribou conservation.



Very few protected areas of sufficient size to sustain woodland caribou exist within their current range.

Credit: International Boreal Conservation Campaign

Saving the Last Woodland Caribou

While the future of woodland caribou across much of its historic and current range remains bleak, tremendous opportunities for conservation and long-term planning exist within the intact regions of their boreal forest habitat. To date, much of their northern habitat remains untouched. However, increasing pressure to log forests, dam remaining free-flowing rivers, and extract oil and minerals out of the boreal forest poses serious threats to the viability of woodland caribou and many of the other species with which they share habitat. Reactive management and restoration projects have proven inferior and often far more costly than proactive conservation measures, particularly with sensitive species such as caribou. Only by minimizing and carefully planning future development and, most importantly, creating large, interconnected protected areas within intact habitat will the full collapse of this species be avoided.

Specific recommendations to ensure the best chance of protecting woodland caribou include:

- Plan at an appropriate spatial scale for caribou, which, at 10,000 to 15,000 square kilometres, often exceeds the size of conventional management units;
- Ensure that cumulative industrial and natural disturbances do not exceed risk levels, which requires that at least two-thirds of a caribou population range remain older than 50 years;
- Plan for uncertainty and the potential for future natural and unforeseen disturbances within herd ranges;
- Consolidate industrial disturbances and protect remaining large, interconnected regions of intact forest habitat; and
- Avoid reliance on reactive mitigation measures that have proven to fail, and avoid unsubstantiated 'best-management practices'.