

---

# Project Caribou

## An Educator's Guide to Wild Caribou of North America

### Project manager:

Remy Rodden, Yukon Renewable Resources

### Consultants:

Darielle Talarico, Arctic Vision, Whitehorse, Yukon

### Principal writer:

Kirsten Madsen, Whitehorse, Yukon

### Original illustrations:

Jennifer Staniforth      Doug Urquhart      Tanya Handley

Cover: Joyce Majiski

### Editing and production:

Walker LeBrun Creative Services, Whitehorse, Yukon

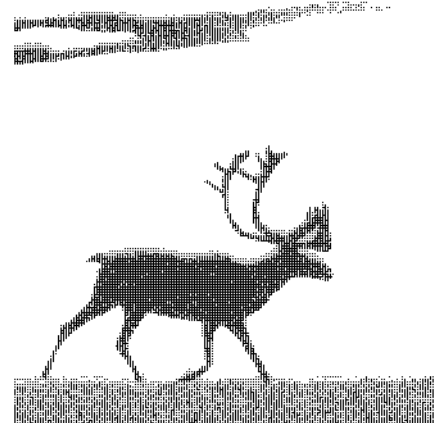
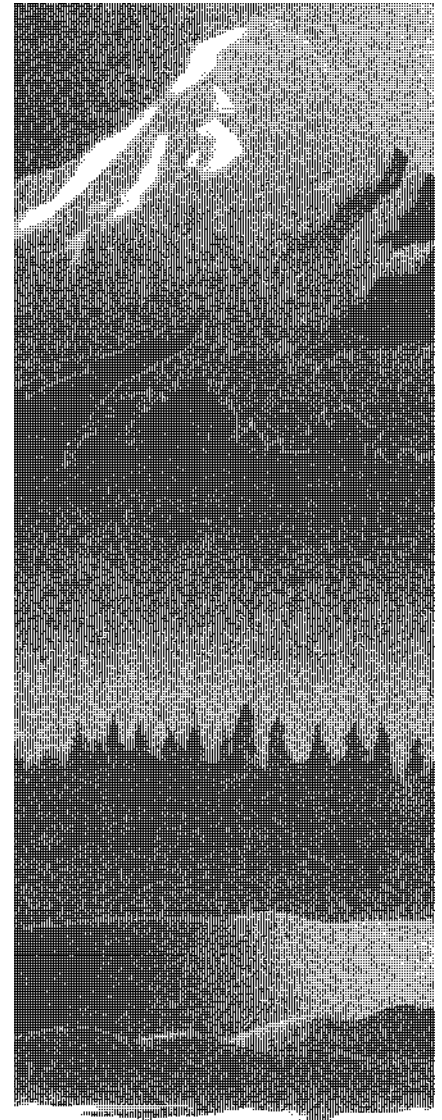
For more info: [www.projectcaribou.org](http://www.projectcaribou.org)

Conservation Education Coordinator  
Yukon Department of Environment  
Conservation, Protection and Public Education Branch  
Box 2703, Whitehorse, Yukon Y1A 2C6  
(867) 667-3675 or 1-800-661-0408  
fax (867) 393-6206  
[remy.rodden@gov.yk.ca](mailto:remy.rodden@gov.yk.ca)



**Environment Canada (Canadian Wildlife Service—Yukon)**

**Beverly and Qamanirjuaq Caribou Management Board**



## Case Study

# Telkwa Caribou Herd: B.C.'s Hinterland Herd

Prepared by Ian Hatter and Kerrie Post

The Telkwa Caribou Herd is a woodland caribou of the northern ecotype. Its range is found 15 km from the major transportation corridor of Highway 16 near Smithers, Telkwa and Houston, B.C. Historically, caribou were once widely distributed throughout most of the mountainous areas surrounding the Bulkley Valley. Evidence of antlers, reports from Elders of the Wet'suwet'en First Nation and historical sightings of caribou are consistent with reports that caribou were once found throughout the area. Large numbers of caribou in the Telkwa Mountains support the suggestion that the Telkwa represent an important area of caribou habitat.

Based primarily on behaviour and habitat use characteristics, including distribution and migration patterns, the woodland caribou of British Columbia are classified into three ecotypes: mountain, northern and boreal. The Telkwa caribou are part of the northern ecotype. They live primarily in the mountainous part of northern and western central B.C. The Telkwa Caribou Herd spend most of their time at or above tree line, but use forested areas in response to winter snow glazing and crusting in alpine areas. These caribou normally winter either on windswept mountain ridges or in pine forests at low elevations.

### Unique characteristics

The three ecotypes of woodland caribou look similar but behave differently. The ecotypes differ by occupying different parts of the province, utilizing different habitats, and having different feeding habits and migration patterns. The differences are also thought to relate to the interactions of a variety of environmental conditions, including the amount and duration of snow cover, food types and availability, topography/terrain, predation. Genetic differences are possible as well.

### Cultural and social significance

The Telkwa Caribou Herd represents a particularly valuable resource to the people of British Columbia due

to its proximity to the urban centres of Smithers, Telkwa and Houston and because of the importance of maintaining genetically viable populations of caribou in the face of increasing urban developments and habitat fragmentation.

While caribou aren't easily found, there are some viewing opportunities. Snowmobiling is a popular recreational activity that can promote use and appreciation of wilderness areas, but its practice within caribou range is not without concern. While caribou may tolerate low levels of snowmobile use, harassment by high levels of unregulated snowmobile activity can displace caribou from preferred winter habitats, which may ultimately lead to increased mortality and population declines.

Caribou are hunted by most northern First Nations, except during the rutting season, when the meat acquires an unpleasant strong taste. Because of its high insulative quality, caribou provide one of the warmest hides available. Besides clothing, tanned hides were also used to make containers for storage and transportation. Sinews were sometimes used as thread for sewing and as twine, and strands of caribou hide were used in snares. Caribou antlers and some bones were used to make arrow points, knives, scrapers, digging sticks and tool handles.

Caribou have less capability for sustaining high hunting levels than do other members of the deer family. Low calf recruitment, migratory habits, dependence on critical seasonal habitats, and the vulnerability of mature bulls during the rut necessitate greater restriction of hunting opportunities than for moose, elk and deer. In the past, liberal hunting regulations combined with predation resulted in caribou population declines. Current management goals include restoring and maintaining appropriate sex and age ratios, monitoring population levels, and maintaining compulsory inspection of all caribou hunted.

### Historical and current status

Of all the woodland caribou in British Columbia, the northern ecotype, which includes the Telkwa herd, continues to be threatened by a combination of impacts from human activities. Northern caribou are considered vulnerable in some locations within the Central Interior, where they have been singled out for special

management attention through various forestry and local and regional resource management plans. The Telkwa and other northern caribou are yellow-listed in British Columbia, meaning they are not at risk, although still of conservation concern.

The earliest population estimate of the Telkwa herd was in 1949 when a two-week horseback survey provided the basis for an estimate of 60 caribou. However, it is difficult to compare ground inventory to aerial surveys that covered larger areas over shorter periods of time.

### **Estimates of the size of the Telkwa Mountain Caribou Herd**

It is suggested that the Telkwa herd has increased at an annual rate of 3% after being nearly extirpated in 1966 and 1967. It has slowed since 1984. Recent data indicate that the Telkwa Caribou Herd continues to decline in numbers despite a complete closure on hunting after 1973. To avoid imminent extinction of the herd, the B.C. Ministry of Environment transplanted 12 caribou (11 females and 1 male) from the Sustut-Chase herd to the Telkwa Mountains in November 1997.

### **Current and future threats**

Population declines in the past were the result of an increase in forestry and mineral exploration activities in central British Columbia, which led to increased availability of helicopters in the Smithers area. At that time, it was legal to use helicopters to place hunters near wildlife and to transport wildlife with helicopters. Additional causes for population decline of the Telkwa Caribou Herd may include high mortality rates due to predation, movements of caribou out of the area, and/or range abandonment due to disturbance from human activities. The greatest future threats to herd growth in the near future are low population size and the effects of increasing recreational access and predation.

Predation of caribou by wolves has the potential to extirpate the Telkwa Caribou Herd given that current wolf numbers may be largely determined by densities of moose and goats, and that the Telkwa Caribou Herd is currently at a very low population level. Caribou calves are extremely vulnerable to wolf predation throughout the summer, and all age and sex classes of caribou are vulnerable to wolf predation throughout the year. Bears, wolverine, golden eagles, coyotes and lynx have also

been documented as predators on caribou. All are present in the Telkwa Mountains at low densities.

There has been a complete closure on caribou hunting in the Telkwa Mountains since 1973. However, there are unconfirmed reports of some poaching (illegal hunting) occurring in the Telkwa Mountains right into the 1990s. Poaching is unlikely to result in a significant degree of adult mortality unless access to alpine areas improves and the level of human activity increases, but given the current population level of caribou, any poaching could seriously jeopardize the recovery effort.

The recreational use of snow machines in the Telkwa Mountains represents a serious impact on the Telkwa Caribou Herd and may result in winter range abandonment. Snowmobiles have the potential to impact large areas of winter range, disturbing the animals and causing energy loss at a time of negative energy balance or through direct injury. Snowmobile use compacts the snow, increasing the mobility of wolves and other predator activity. All-terrain vehicles (ATVs) and motorized dirt bikes can also affect caribou in ways similar to snowmobiles.

Hikers and their dogs may cause both direct disturbance to caribou and in range abandonment, particularly if dogs are allowed to chase adult caribou and calves. However, there is less potential to impact large areas. Three areas within the Telkwa recovery zone that are popular for summer hiking activities include Hunter Basin/Camel Humps and Webster and Hankin Plateau. Skiers have the potential to cause many of the impacts described above for motorized access, but generally skiers cover less area and there is less potential for direct disturbance to animals.

Land alienation from urban development and agricultural encroachment has fragmented forested areas of the Telkwa Caribou Herd range. Forest harvesting practices contribute significantly to habitat fragmentation unless carefully planned and conducted in accordance with a sustainable watershed-based perspective. Timber extraction and associated road developments can lead to further habitat fragmentation and increased public access. Support by the forest industry for access management measures and for incorporating caribou protection measures into

harvesting plans will reduce the relative liability associated with forest harvesting.

Other threats include loss of habitat if a proposal to develop a coal mine south of the Telkwa River receives approval, and if mining proceeds. Recent forest harvesting practices and the policy of extinguishing all natural fires, with minimal consideration to mimicking natural disturbance patterns and rates, have changed the natural pattern of forest succession. The long-term impact of this on the Telkwa herd is unknown; however, the impact of changes in natural succession patterns is probably minor at the present time compared to the impact of habitat fragmentation and degradation.

Potential impacts of aerial harassment associated with low-level overflights for ecotourism, access to winter skiing areas, helicopter pilot training in the Telkwa Mountains, and survey and radio-collaring programs are similar to those described for activities associated with motorized access. Aerial harassment from low-level overflights, notably from helicopters (which are more intrusive than fixed-wing aircraft) can cause direct harassment leading to increased energy expenditure. As well, there is the potential for injury and range abandonment. Although the potential for aerial harassment to impact large areas of the Telkwa Mountains is great, the current low level of aircraft activity and lack of impact on snow compaction reduces the relative liability below that of activities associated with winter and summer motorized access.

Finally, with increasing habitat fragmentation, degradation and alienation, the potential for interchange between the Telkwa Caribou Herd and the nearest population of caribou in Tweedsmuir Park is reduced. Therefore, the potential for genetic effects on the long-term sustainability of the Telkwa Caribou Herd is increased. In general, the long-term impacts on genetic viability of small, isolated populations of caribou throughout British Columbia are poorly understood. However, studies elsewhere have documented that the likelihood that small, isolated populations of vertebrates will persist over the long-term is reduced as a function of the size of the gene pool and distance from other populations.

## Management and study

Protecting the Telkwa Caribou Herd is important to the residents of the Bulkley Valley. Direction on how to protect the herd was provided through recently completed public planning processes and consultation associated with the Telkwa Caribou Recovery Plan, and reflects the value people place on maintaining wildlife populations in the face of increasing pressures on natural resources in the Bulkley Valley and throughout British Columbia.

The Telkwa Caribou Recovery Plan proposes management actions designed to:

1. Reverse recent declines in the size of the Telkwa Caribou Herd by augmenting the population with caribou from other populations.
2. Increase understanding of factors influencing population growth rates by frequent monitoring of radio-collared caribou.
3. Protect caribou habitat by modifying industrial activities and reducing potential disturbance to caribou arising from increased human access into and recreational use of the Telkwa Mountains.

Management actions, access management and habitat protection measures may change over time as we better understand the population ecology of the Telkwa Caribou Herd, obtain better information on the seasonal movements, distribution and habitat use of the herd, obtain better information on how caribou respond to various human activities, and better comprehend the long-term impacts on caribou habitat of current forest practices.

For further information:

Wildlife Branch  
Environment and Lands Regional Office  
Ministry of Environment, Lands and Parks  
2- 3726 Alfred Ave  
Smithers BC V0J 2N0

Wildlife Branch  
Ministry of Environment, Lands and Parks  
PO Box 9374 STN PROV GOVT  
Victoria BC V8W 9M4  
Web: [www.env.gov.bc.ca:80/wld/](http://www.env.gov.bc.ca:80/wld/)