

2011 Mountain Caribou Census in the North Cariboo Mountains and Narrow Lake

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Mountain caribou counts in the North Cariboo Mountains and Narrow Lake in 2010 suggested that both populations had experienced major declines since prior counts (Heard et al. 2010). Therefore, recounting these two populations in 2011 was a high priority to confirm this decline.

We counted mountain caribou within the North Cariboo Mountains in April 2011. We also include data collected by government biologists from the Cariboo Region in the Bowron portion of the population. No formal census of the Narrow Lake population was conducted, so we report on a minimum population count that was obtained during an aerial survey of snowmobile activity conducted in March 2011.

The caribou census followed the standard mountain caribou survey protocol of flying along the subalpine/alpine boundary in a helicopter searching for caribou tracks. When fresh tracks were located, the area was intensively searched to locate and count caribou. Caribou were classified as adults or calves. In a few situations where the caribou could not be found, the number of animals was estimated based on the amount of tracks. The flight route and caribou locations were recorded on a GPS receiver. We used a sightability correction factor of 83% to produce a population estimate that accounted for caribou that were not located during the survey (Seip 1990, Young and Roorda 1999).

NORTH CARIBOO MOUNTAINS

The Sugarbowl and Haggen census blocks were surveyed on April 6, 8 and 13. Cariboo Regional staff censused the Bowron census block on March 25. Survey conditions were good on April 6 and 13 with clear weather and recent new snow, but on April 8, conditions were only fair as there had not been any new snow for several days.

Results:

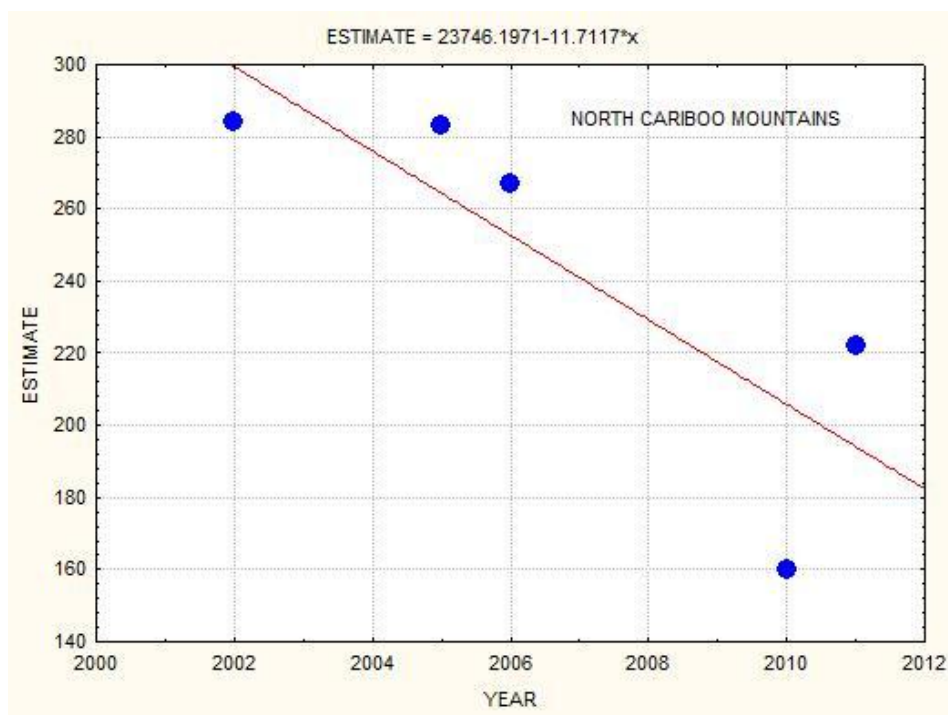
A total of 163 caribou was observed, including 15 calves and 148 adults (9.2% calves). An additional 21 caribou were estimated to be present in the survey area based on tracks for a total of 184. Applying a sightability correction of 0.83 provides a population estimate of 222.

Census block	Calves	Adults	Estimated From tracks	Total	Sightability Corrected
Sugarbowl	4	31	4	39	47
Haggen	7	64	10	81	98
Bowron	4	53	7	64	77
Total	15	148	21	184	222

Population Trend:

The Bowron block was not counted in 2010, so in the following Table an estimate of 56 was used, midway between the 2006 and 2011 count.

Year	Count	Population Estimate	% Calves
2002	236	284	9.3
2005	235	283	16.7
2006	222	267	17.7
2010	133	160	14.0
2011	184	222	9.2



Discussion:

The North Cariboo Mountains population of mountain caribou appears to be declining. The low count in 2010 was apparently an underestimate as more caribou were counted in 2011. If one ignores the 2010 estimate, linear regression fit is much tighter and still indicates a declining trend. The decline is only occurring within the Sugarbowl and Haggen census blocks, as the count within the Bowron census block is stable or increasing since 2006. In the 1990's, up to 235 caribou were counted in the Sugarbowl and Haggen blocks (Watts 1999), compared to the 120 counted within those blocks during the latest census. The Sugarbowl and Haggen blocks have a major legacy of forest harvesting within the adjacent valley bottoms, whereas the Bowron block is primarily within Bowron Lakes Provincial Park.

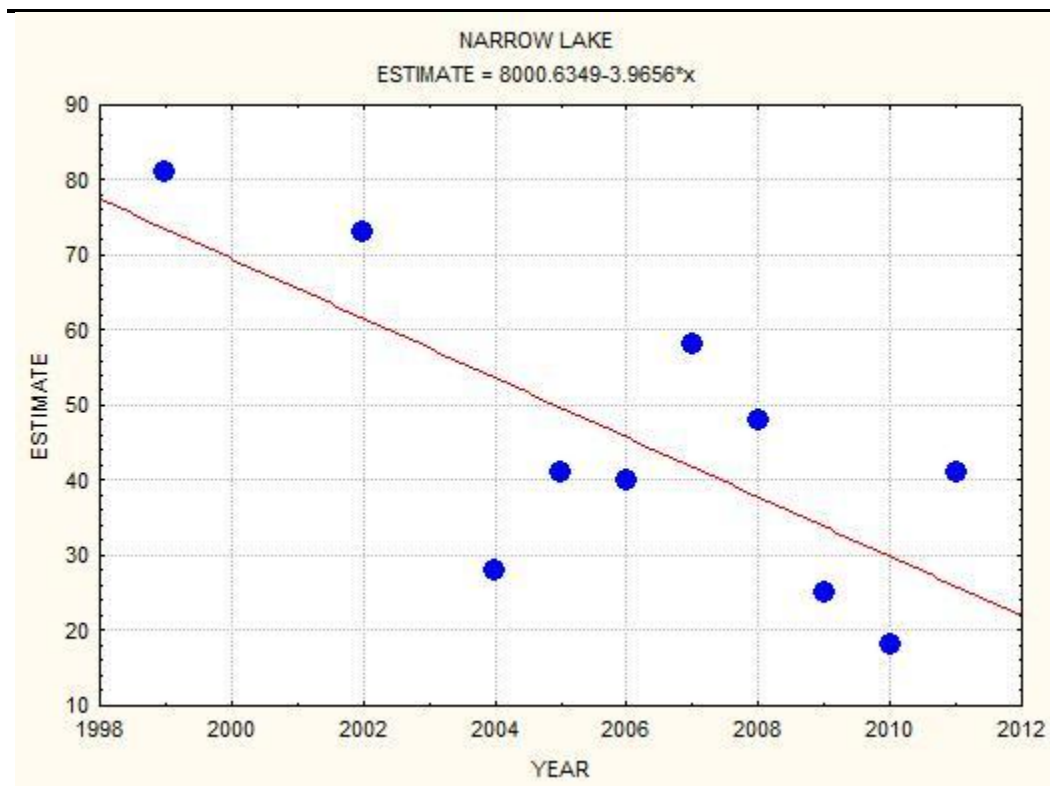
The relatively low calf recruitment (9.2%) in 2010-11 is indicative of a declining population. Calf recruitment during previous years has ranged from 9.3% to 17.7%, indicating that calf survival is adequate to maintain the population in some but not all years.

NARROW LAKE

On March 7, Adrian Batho, Bob Brade and Chris Ritchie conducted an aerial survey of snowmobile use on the Narrow Lake range and had incidental sightings of two groups of caribou estimated at 34. Assuming a sightability of 83% yields a population estimate of 41 caribou.

Population Trend:

Year	Count	Population Estimate
1999	67	81
2002	61	73
2004	23	28
2005	34	41
2006	33	40
2007	48	58
2008	40	48
2009	21	25
2010	8	18
2011	34	41



Discussion:

Although there was not a formal census of the herd in 2011, the minimum count of 34 caribou may be a fairly accurate count because the Narrow Lake caribou population are often concentrated into only 2 groups, one north of Narrow Lake and on south of the lake as was found this year. The population trend is difficult to detect given the variability between years although there does appear to be a decline since 1999, with the population declining from at least 67 to less than 50.

Acknowledgements:

Assistance with the surveys was provided by Chris Ritchie and Cory Williamson. Rob Altoft piloted the helicopter. Doug Wilson assisted with GPS data management and Elena Jones prepared the map. Funding was provided by the Province of B.C and administered by Resources North Association.

Literature Cited

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Figure Caption: Locations and waypoint numbers where mountain caribou were counted in the North Cariboo Mountains in 2011.