

Study suggests indigenous hunters mistakenly blamed for caribou population decline in northern Canada

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A trio of researchers from the University of Alberta, Memorial University of Newfoundland and the University of Saskatchewan has

conducted a study of population trends for Caribou in the Northwest Territories (NWT) in Canada and has found evidence suggesting population declines are not due to indigenous hunting. In their paper published on the open access site *Science Advances*, Brenda Parlee, John Sandlos and David Natcher outline their research results and suggest population declines are actually due to mineral exploration.

Caribou have been living in herds in northern Canada and Alaska for many years—and indigenous people living in the same areas have been [hunting](#) them for much of their history. But within the past few decades, the numbers of [caribou](#) have declined sharply. Prior research has shown that as recently as 30 years ago, the Bathurst herd alone had a population of approximately 500,000—today that number is down to approximately 20,000. Biologists and officials with NWT have blamed the decline on hunting, and therefore banned hunting by non-indigenous people in 2010 and indigenous groups in 2014. In this new effort, the researchers suggest the decline is not due to hunting, but to mineral exploration, which they claim results in noise, dust in the air, roads and seismic lines. Taken together, they suggest changes to the environment have made life more difficult for the caribou.

To reach this conclusion, the researchers looked at harvest data for the years 1985 to 2000, and compared it with population levels for the four major herds that live in the NWT. They found that as the population levels naturally changed, so did the numbers killed. When populations dropped, hunters killed less, when they rose, they killed more. They noted that even as population levels rose, hunters still held back, making it possible for the herds to rebound to previous [population levels](#). They further note that [mineral exploration](#) began in earnest in the region in the early 1990s, and as it picked up steam, caribou populations began to drop. They conclude that the culprit is not the indigenous hunters, but mineral companies. They suggest that if land management officials are serious about protecting the caribou, they need to take a closer look at

the habitat changes that have occurred.

More information: Brenda L. Parlee et al. Undermining subsistence: Barren-ground caribou in a "tragedy of open access", *Science Advances* (2018). [DOI: 10.1126/sciadv.1701611](https://doi.org/10.1126/sciadv.1701611)

Abstract

Sustaining arctic/subarctic ecosystems and the livelihoods of northern Indigenous peoples is an immense challenge amid increasing resource development. The paper describes a "tragedy of open access" occurring in Canada's north as governments open up new areas of sensitive barren-ground caribou habitat to mineral resource development. Once numbering in the millions, barren-ground caribou populations (*Rangifer tarandus groenlandicus*/*Rangifer tarandus granti*) have declined over 70% in northern Canada over the last two decades in a cycle well understood by northern Indigenous peoples and scientists. However, as some herds reach critically low population levels, the impacts of human disturbance have become a major focus of debate in the north and elsewhere. A growing body of science and traditional knowledge research points to the adverse impacts of resource development; however, management efforts have been almost exclusively focused on controlling the subsistence harvest of northern Indigenous peoples. These efforts to control Indigenous harvesting parallel management practices during previous periods of caribou population decline (for example, 1950s) during which time governments also lacked evidence and appeared motivated by other values and interests in northern lands and resources. As mineral resource development advances in northern Canada and elsewhere, addressing this "science-policy gap" problem is critical to the sustainability of both caribou and people.

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