

Trails, roads put caribou at greater risk: study

Paths give wolves easier access to woodland herds

BY CATHY ELLIS, FOR THE CALGARY HERALD AUGUST 26, 2011

Recreational trails and roads are giving wolves easy access into critical woodland caribou habitat, where the cunning carnivores are hunting struggling herds, a new study has found.

Mark Hebblewhite, one of the study's authors, said this is the first report to clearly demonstrate the strong link between trails and the increased chance of wolves crossing paths with caribou.

"This is as smoking a gun as you can ever get that roads and trails, even in national parks, facilitate wolf predation on threatened caribou by increasing the probability that wolves can find and encounter caribou," said Hebblewhite, a biologist at the University of Montana who has studied caribou for 20 years.

"These results have very important implications for human use management in the national parks, and even bigger implications in the foothills and boreal forests of Alberta where other 'trails' like roads and cutlines likely have an even greater impact on caribou habitat security."

Caribou numbers have been dwindling throughout Alberta for several decades and some scientists believe they could be gone entirely from this province within the next 70 years.

It is now thought that national parks alone will not be able to provide a haven for caribou, where herds are also experiencing concerning declines.

In Banff, a herd of between 25 and 40 caribou a century ago dropped to less than 10 by the mid-1990s. The last four animals were wiped out in an avalanche north of Lake Louise in the spring of 2009.

The protected federal land of Jasper National Park is home to an estimated 250 caribou within two different populations - and their numbers are also declining.

On neighbouring Alberta provincial land, where there is intensive oil and gas development and forestry, most caribou populations have been fragmented and continue to dwindle.

Limited patches of high-quality habitat, wolf predation, climate change and direct and indirect effects of human activity, including industrial development, are all cited as factors in the decline.

Last week, a scientific committee advised the provincial government to declare woodland caribou an endangered species, and the report is now in the hands of the province.

This most recent study on trails and roads and their effects on caribou survival was published earlier this month in the Journal of Applied Ecology.

Dave Ealey, a spokesman for Alberta Sustainable Resource Development, said there are no real surprises in this most recent study.

"We know the importance of reducing any new linear features and recovering old features, and those are two integral parts of our caribou policy," Ealey said.

"We've recognized habitat issues and that's certainly part of what we're trying to address with the caribou policy and our work we can do with various industry in specific caribou ranges."

The study's researchers analyzed data from GPS radio collars from 35 adult caribou and 37 wolves from 11 different packs in Banff and Jasper over the past 10 years.

Eight of the 11 packs - or 28 of the 37 wolves - had home ranges that overlapped with caribou territory. Twenty-three radio-collared caribou died, of which at least 12 were killed by wolves.

Jesse Whittington, a Parks Canada biologist who led the study, said when caribou hang out near roads or trails, they have a 95 per cent chance of encountering wolves during the year.

On the other hand, he said, if they are far from roads and trails, caribou only have a 65 per cent chance of crossing paths with wolves.

"When you're travelling in the backcountry, you'll often find that wolves use these trails like highways and the trails are covered with wolf tracks," said Whittington.

"Wolves are incredibly smart animals. The trails provide an easy route across their territory, which makes a big difference when they are covering 30 kilometres a day."

Researchers discovered wolves prefer low elevations, especially during winter and spring, but their preference to travel on roads and trails increases the higher up they go.

They found in winter, wolves liked to travel more on trails, as deep snow is difficult, and packed ski and snowmobile trails are attractive.

"These results show that if you create a trail, road or other linear feature into caribou range, it will increase caribou risk of predation," said Whittington.

"By the same token, the removal of trails or roads from caribou range should increase caribou chance of survival."

Whittington said the biggest concern on Parks Canada-managed land is snow-packed winter trails that allow wolves to travel into caribou range.

"In winter, when we punch a trail up a long, linear valley, we'll often find that wolves cruise up that trail within a week," he said.

Whittington said this study is just one of many being used to examine the feasibility of reintroducing caribou to Banff and/or boosting the Jasper population.

Until a decision is made on the best translocation option, he said Parks Canada is focusing efforts on developing a captive rearing program.

"We are working out the details in terms of where we will obtain caribou, how many caribou we will require, what time of year we should release them and how much the program will cost," he said.

"When we have caribou ready for translocation, we will evaluate all analyses to determine where translocations will have the highest probability of success and where they will have the greatest conservation value amongst the mountain parks."

CATHY ELLIS IS A REPORTER FOR THE ROCKY MOUNTAIN OUTLOOK

© Copyright (c) The Calgary Herald