

New study reduces threat level for caribou in Alberta's oilsands country

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(Edmonton) A University of Alberta researcher has co-written an extensive study of the caribou population in the Fort McMurray oilsands region that show the animals' survival isn't as threatened as was perceived in the past. The study recommends efforts to manage human activity around resource development before resorting to the drastic measure of a wolf kill.

U of A statistical researcher Subhash Lele was part of the team that used specially trained dogs to find scat from caribou, moose and wolves in an area south of Fort McMurray. [Laboratory analysis](#) of animal scat gave the researchers a window into their genetics, health and diet. Included in the new diet information is the fact that wolves prefer to eat deer over caribou by a wide margin.

The researchers used resource selection statistics along with measurements of the animals' [psychological stress](#) levels, derived from their scat samples, to show the effects of local resource development. The researchers found that it is not merely the presence of roads and cut lines, but the intensity of human activity, such as [noise levels](#), that has the biggest effect on the animals.

Previous estimates of the caribou population in the area were largely based on professional opinion and estimates, but accurate visual counts were hindered by the thick [boreal forest](#) cover. Those early surveys put the caribou population at between 90 and 150. But this new study paints a different picture for the number of caribou in the McMurray oilsands

region. [Genetic analysis](#) of the scat, combined with the statistical capture-recapture methods, now puts the current number of caribou between of 209 and 389. The researchers say the population numbers for all animals in the study—caribou, moose and [wolves](#)—remained steady during the four-year research program.

This study is unique in its use of different approaches: population estimation, habitat selection, diet and physiological understanding. The corroborative evidence suggests that wildlife management officials should first try to control the human activity in the area before focusing on a wolf kill as the solution.

The research will be published June 22 in the online edition of *Frontiers in Ecology and the Environment*.

Provided by University of Alberta

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