

Alberta Wolverine Experimental Monitoring Project

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PROJECT SUMMARY

The wolverine (*Gulo gulo*) is a large member of the family Mustelidae that inhabits boreal, montane, alpine, and tundra ecosystems. Wolverines are scavenging carnivores - they rely mostly on carrion for food, but hunt opportunistically. Wolverines occur in low densities and have very low birthing and recruitment rates. The wolverine once exhibited circumboreal distribution, but the eastern population has been nearly extirpated. The distribution of the western population has decreased dramatically; the Canadian Committee on the Status of Endangered Wildlife in Canada (COSEWIC) has listed this population as Special Concern.

In the Province of Alberta, wolverines inhabit the foothills, alpine, and boreal plain, but in low numbers. Management of wolverines in Alberta is hampered by the paucity of data on wolverine distribution and abundance in the Province. Population trend data are limited to harvest records. There is an urgent requirement for data on wolverines' distribution and relative abundance. This project was initiated to (1) assess different wolverine monitoring techniques and (2) provide preliminary pilot data on wolverine distribution and relative abundance. This project will ultimately form recommendations for a Province-wide Wolverine Monitoring Program.



Every winter since 2002 researchers at the Alberta Research Council have been installing ca. 60-70 remote wolverine monitoring stations in



the foothills of Alberta over a linear transect greater 500 km long. These stations consist of infrared-triggered remote camera systems, and baited hair-snagging traps. Hair samples collected are genetically identified to species. Those samples identified as wolverines are subjected to microsatellite analysis to identify individuals and gender. These data allow us to estimate wolverine density in sampling areas, and indicate where wolverines occur and where they do not.

To date, many montane and boreal mammal species have been detected, including grizzlies, cougar, lynx, fisher, marten, and ermine. Wolverine detections were low in 2002/2003, with one photo in each year. In 2004/2005, five wolverines were detected via hair capture and genetic ID. Three of these are suspected to be a mother with kits. These same five individuals were detected in 2005/2006, but had moved due to habitat disturbance. Detection rates across the last two winters were similar at ~10%, suggesting wolverines occur at very low densities in this area.

These data are currently being analysed to estimate wolverine density and detection probabilities for future monitoring, and create a landscape model of habitat selection in the Alberta foothills. This information will be used to assess the feasibility of, and design parameters for, a Provincial wolverine program for Alberta. It will also be used to guide a status assessment for this species, and as a basis for future conservation efforts.

[The Alberta Wolverine Experimental Monitoring Project - 2006-2007 Annual Report](#)

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[The Alberta Wolverine Experimental Monitoring Project - 2005 Annual Report](#)
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