

## **Alberta Conservation Association 2015/16 Project Summary Report**

**Project Name:** Effect of Industrial Disturbance on Wolverine and Lynx

**Wildlife Program Manager:** Doug Manzer

**Project Lead:** Robert Anderson

**Primary ACA staff on project:**

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### **Partnerships**

Alberta Environment and Parks

Alberta Trappers' Association

Animal Damage Control – A Division of Bushman Inc.

ATB Financial

Bildson Realty Ltd.

BRE-JON Enterprises Ltd.

Daishowa-Marubeni International Ltd.

Hinton Trappers Association

Richard D. McCabe Professional Corporation

Rocky Mountain Wilderness Society

Stojan's Motor Sports

Trapper Gord Homestead & Survival

University of Alberta

Individual Donors: P. Bumstead, L. Elias, L. Hommy, R. Kantor, G. Kruger, G. Macmillan,

L. Marciak, D. Middleton, S. Otto, D. Pilon, A. Pollock, R. Reed, B. Smith, J. Sorenson,

W. Sullivan, N. Tait, D. Ukeniek, S. Wilson and M. Zapach

### **Key Findings**

- 19 female and 23 male wolverines have been radio collared over the past three years.
- During the current winter (2015/16), spatial location data are being collected by 16 wolverines.
- Adult male wolverines typically have home ranges of 500–700 km<sup>2</sup>—about the size of the city of Edmonton!
- In addition to feeding on carrion of large ungulates like caribou and moose, wolverines were found to also hunt snowshoe hares and beavers.

## **Introduction**

We are working in partnership with the Alberta Trappers' Association (ATA) to identify where wolverines (and other furbearers) occur in the province and to determine the major factors influencing their distribution. In 2012, we expanded our partnership to include the University of Alberta and worked with them to engage a PhD student (Matthew Scrafford) to study the effects of industrial disturbance on wolverines in Alberta's boreal forest. As part of this work, ACA staff have been assisting with efforts to attach radio collars to wolverines and then following them to determine what they eat and where they den.

## **Methods**

We provide project support and share data with Matt's study wherever possible. Matt's field studies began during the winter of 2013/14, and ACA staff have been working closely with him since that time. In 2015/16, ACA staff were responsible for live capture, collaring and recapture of wolverines, including uploading collar data and maintaining live traps throughout the winter season near the Birch Mountains. ACA staff also investigated clusters of data points to determine what wolverines eat and where they rest or den.

## **Results**

A total of 42 wolverines have been captured during the study in the Rainbow Lake and Birch Mountains study areas. Sixteen wolverines were wearing radio collars for at least a portion of the winter of 2015/16. Following tracks in the snow and visiting clusters of data points where wolverines spend a lot of time revealed that wolverines were not only feeding on the carrion of large ungulates such as caribou and moose, as has been found in other areas, but they were also actively hunting snowshoe hares and beavers. In several cases, wolverines had cached beaver carcasses earlier in the year and returned in late winter to eat them. Resident adult male wolverines typically have a home range between 500 and 700 km<sup>2</sup>, which is about the size of the city of Edmonton.

## **Conclusions**

The partnership between ACA and the Alberta Trappers' Association was strengthened by involving a student to investigate wolverine ecology at a finer scale. The data collected by trappers at their run poles across the northern half of the province complements the data collected by radio collars in this study and provides a broader geographic context in which to consider the detailed findings from the collared animals. Several trappers have helped with the radio-collaring work by providing assistance in the field, providing bait for the live traps, or contributing funds to help purchase the expensive satellite radio collars.

## **Communications**

- Public presentation on wolverines at the Peace River Museum, Archives and Mackenzie Centre, Peace River, Alberta, February 10, 2016.
- Documentary on wolverines on *The Nature of Things*, CBC Television, February 25, 2016.

## Photos



Alberta Conservation Association biologist Mike Verhage peers ever so carefully into a wolverine trap to determine if this is a new animal or one that has already been handled and can simply be released. Photo: Robert Anderson



Alberta Conservation Association biologists Mike Jokinen and Roy Schmelzeisen work quickly to collect information on a new wolverine and fit it with a radio collar before it starts to wake from sedation. Each animal is weighed, measured, assessed for general health and given supplementary fluids before being released. Photo: Robert Anderson





Wolverines are opportunistic scavengers and benefit from kills made by wolves or hunters. Wolverines have an excellent sense of smell to help them find dead animals and parts buried under snow. The bone marrow from this moose leg provides a nutritious meal for a wolverine. Photo: Corey Rasmussen



Wolverines may carry scavenged items a considerable distance to get them to a safe and convenient place to cache them. Alberta Conservation Association biologist Mike Verhage came across this backbone and partial pelvis from a fresh moose kill, which a wolverine had picked up and carried for well over a kilometre before setting it down. Photo: Robert Anderson





Following tracks in the winter allows us to determine the daily habits of wolverines. We have been surprised at the importance of snowshoe hare in the wolverine's diet in winter. This photo shows rabbit (left) and wolverine (right) tracks weaving through the conifer forest. Photo: Corey Rasmussen