

Studying the Elusive Wolverine

A Threatened Species in Northern Ontario



by Dr. Matthew Scrafford
Wolverine Conservation Scientist

Matthew Scrafford is the Wolverine Conservation Scientist within Ontario's Northern Boreal Landscape program at WCS Canada. Matthew works with government, indigenous groups, and trappers to advance the understanding and conservation of wolverine in Ontario. Matthew has experience with the U.S. Forest Service as an ecological research assistant in the Greater Yellowstone Ecosystem on projects ranging from vegetation surveys, to beaver, grizzly bear, moose, wolverine, and snowshoe hare research. He received his MSc at Montana State University studying the ecology of reintroduced beavers north of Yellowstone National Park. After completing his MSc, he worked for Environmental Defense Fund on the effects of climate change on wildlife, the restoration of meadow wetlands in

the Sierra Nevada mountain range, and the restoration of wetlands within the Mississippi River delta. Matthew received his PhD from the University of Alberta with a research focus on the habitat selection, movement, foraging behaviour, and density of wolverines in industrialized habitats in the northern boreal forest of Alberta. This research required working closely with Indigenous

groups, trappers, and NGOs. During his PhD, Matthew received two fellowships, a W. Garfield Weston Foundation Fellowship from WCS Canada and an NSERC CREATE-EI.



Photo: Matthew Scraftord

A wolverine live trap used to capture wolverines.

then led my own radiotelemetry program for wolverines in Rainbow Lake and the Birch Mountains of northern Alberta as part of my PhD program. During this study, we would track wolverines to their feeding sites to understand what they were eating. On more than one occasion, a wolverine was living in a beaver lodge after he killed the beavers and growled up at us from within the lodge.

Wolverines (*Gulo gulo*) can be a challenging species to study in the wild. To illustrate, there might only be a few wolverines occupying an area twice the size of Thunder Bay, which makes it difficult to work with enough animals to learn much about the population. Wolverines also exist in remote areas that are hard for researchers to access; field activities are often conducted out of trapper cabins or remote field stations that require additional logistical planning and expense. Moreover, the best time of year to study wolverines is in the winter, when snow cover allows us to see tracks and move around on the landscape. However, cold temperatures and short periods of daylight make it challenging to achieve field-work goals efficiently. Ask a wolverine researcher what it is like to load 12-new batteries into a camera at -35°C !

In spite of all the challenges, wolverines also are very exciting to study. My first introduction to this animal was when I assisted on a radiotelemetry project north of Yellowstone National Park in the mid 2000s. When we captured our first wolverine in March, I was one of a select few field technicians that were chosen to sleep next to the trap at 8,000 feet to ensure the animal did not escape before the veterinarian arrived.

However, we didn't sleep much because of a pesky fox and a growly wolverine. I

I am now leading a radiotelemetry program for wolverines in northern Ontario as a scientist with Wildlife Conservation Society Canada (WCS Canada). This project has already had its fair share of adventurous days. In early April 2018, we tracked a female wolverine to her den site near the town of Red Lake. She was still inside when we arrived, so we quickly took some pictures and left the site. This was only the second wolverine den ever to be found during wolverine research activities in Ontario.

Ontario is home to the easternmost population of wolverines in Canada. While this animal was once found throughout most of the province, it is now largely confined to the far north region. So, what happened? Wolverines have low reproductive rates, which in tandem with their low population density, make it difficult for their populations to withstand additional sources of mortality from human activity. Trapping, human developments, and loss of prey have all contributed to wolverine decline over the last 100 years. WCS Canada and partners, including the Ministry of Natural Resources and Forestry (MNRF), have been working since 2003 to better understand the current distribution of wolverines in Ontario by searching for wolverine tracks in the snow. What we have found is that wolverines have expanded as far south as the area of commercial forestry and as far north and east as the Hudson Bay lowlands. However, there is still much work to be done until they can be considered recovered.

Wolverines are currently listed as “*threatened*” under the Endangered Species Act in Ontario because of their low population numbers. There is no commercial harvest of wolverines permitted in Ontario. Over the past 15 years, we have engaged in numerous projects to address research and management needs acknowledged by the Ontario government in the Wolverine Recovery Strategy. For example, wolverines can be killed in traps sets for other

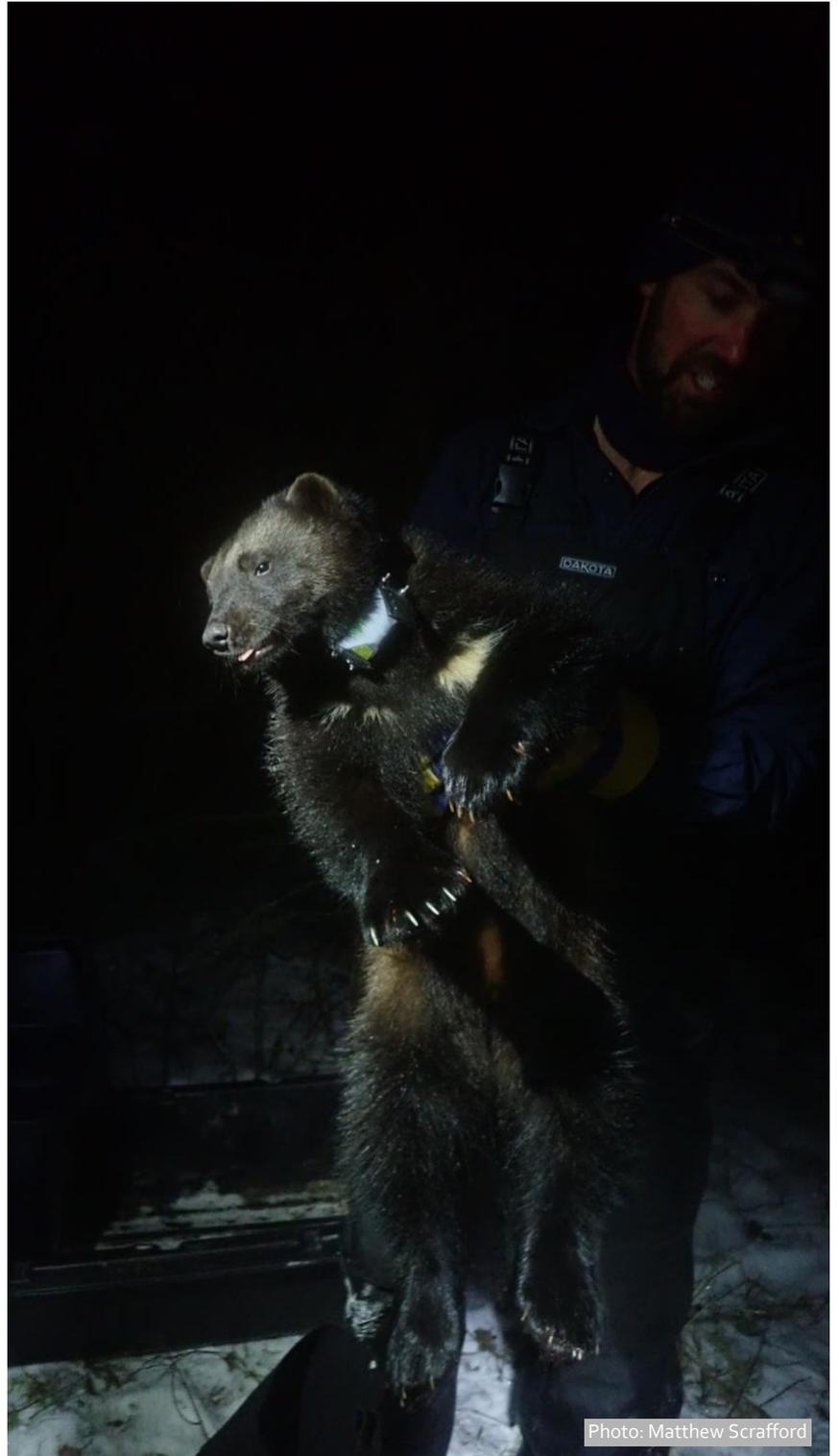
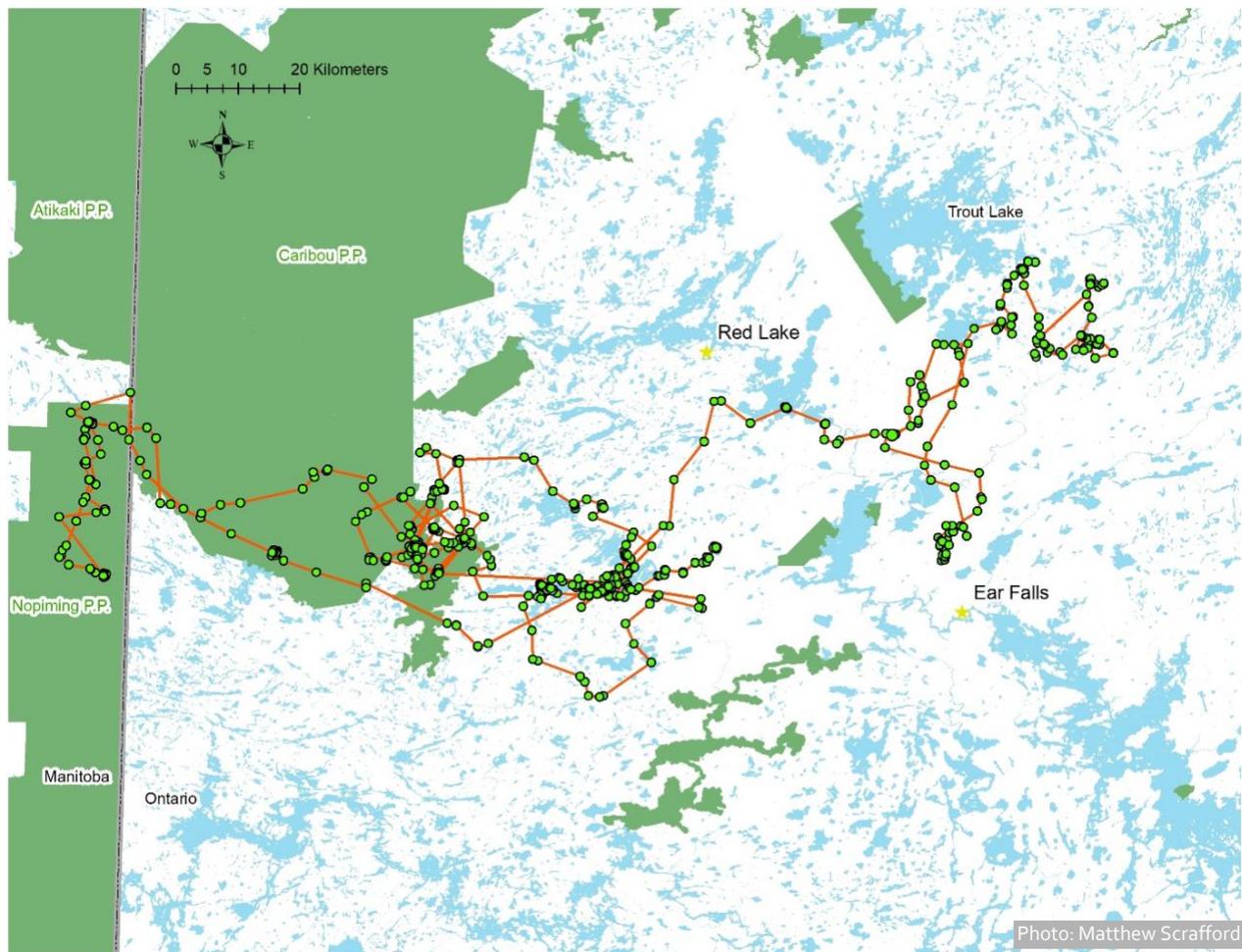


Photo: Matthew Scrafford

Matt Scrafford holding wolverine MO2 in Red Lake, ON

species, such as wolves, lynx, marten, and even otters, because they are often baited with meat that wolverines also are attracted to. We have worked with local trappers to explore methods for alleviating this conflict.

Now I am leading an effort in Red Lake to live trap and track wolverines with satellite radiocollars. Using these radiocollars, we were able to document a male wolverine moving 200 km from Red Lake into Woodland Caribou Provincial Park and Manitoba.



The figure above illustrates the movement path of wolverine MO1 using satellite radio collars. The wolverine moved more than 200 km from Red Lake and north near Trout Lake, westward into Woodland Caribou Provincial Park in Manitoba.

Information from this project will address many data gaps for wolverines in Ontario, including an estimate of how many of these animals occur in Ontario and the effect of forestry practices on wolverine use of the landscape. For example, the female wolverine we captured last spring was denning in an area of mature forest, which is likely preferred by this animal because the downed trees offer structure for wolverine dens. The local forestry company was planning to harvest in the area but the data we collected allowed us to protect some of the habitats that were important to her.

We are excited for the many challenges and exciting times yet to come with this project. We consider ourselves lucky to be working in beautiful and rugged northern Ontario and to be a voice for a such a fascinating species that needs a bit of help from us to stick around.