



*Yellowstone ecosystem wolverine project strives to increase our understanding of one of the rarest and least understood carnivores in North America.*



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**The Absaroka-Beartooth Wolverine Project** began this past January in the eastern portion of Yellowstone National Park and on the Shoshone and Gallatin National Forests. The project, which is a cooperative effort developed by Yellowstone National Park and the Forest Service’s Rocky Mountain Research Station, is designed to increase our understanding of one of the rarest carnivores in North America. Prompted by elevated public concerns regarding the presence, abundance, and status of wolverine across the northern Rocky Mountains, researchers hope to aid management by clarifying the wolverine’s dependence on habitats in Yellowstone National Park and surrounding National Forest lands. The project will study wolverine distribution and movements, habitat and food associations, and population indices such as survival rates, birth rates, and dispersal movements. Also, we seek to clarify the wolverine’s relationship with other carnivores in the Yellowstone ecosystem.

Wolverine will continue to be live-trapped using log box traps and instrumented with implant transmitters, and in some cases, GPS collars capable of col-



*Chessie Thacher, Yellowstone Park Foundation Grants Manager, holding immobilized male wolverine M1.*

lecting high precision, fine-scale information on wolverine movement and habitat use. The project is designed to operate in and around Yellowstone National Park through a 4-year study period with primary funding support provided by the Yellowstone Park Foundation and the Forest Service.

*Trapping Summary:*

- *Duration of trapping: 1/16 to 4/1/2006*
- *Number of trap lines: 4*
- *Total traps: 27*
- *Total trap nights: 1827*
- *Wolverine captures: 3 captures of 2 adult males*

*Absaroka-Beartooth wolverine project kicks off first trapping season by capturing and instrumenting 2 adult male wolverine.*

Twenty-seven log box-traps border the rugged Absaroka-Beartooth and Gallatin Mountain ranges in northern Wyoming and southern Montana. The traps are designed to lure the rare and elusive wolverine to the promise of a fresh meal of beaver and venison. The wolverine inhabits the most rugged, inaccessible country in

the western United States. Its lifestyle demands that it remain in almost constant movement in search of a food source that is rarely predictable and often little more than hide and bones—a situation researchers hope to exploit with their well-stocked bait sites. Wolverine occur at naturally low densities (generally about 1 wolverine/150 km<sup>2</sup>) and

exhibit a tenacious adherence to daily foraging routines. This makes wolverine trapping a tenuous undertaking. “Wolverine captures will be rare and unpredictable with success requiring diligence and constant attention to detail,” says Jeff Copeland, Rocky Mountain Research Station

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Rick Yates

The log box-trap is an effective and safe means to capture wolverine.

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biologist and co-principal investigator on the project.

In early 2006, four trap lines operated for a total of 1,827 trap nights that produced 71 red fox, 41 American marten, and 2 wolverine captures. Both wolverines were adult males; M1 was captured on the Gallatin Forest just north of the park, and M2 was captured near Sylvan Pass on the eastern interior of the park. Both individuals were implanted with a VHF transmitter and fitted with a GPS collar. Unfortunately, both individuals have since shed their collars due to apparent collar malfunctions. However, data collected and stored on the collars has been

retrieved, providing insight into the daily movements of both individuals. VHF implant transmitters will provide continued contact with the animals through aerial and ground-based telemetry, which will continue throughout the year.



Jim Wood

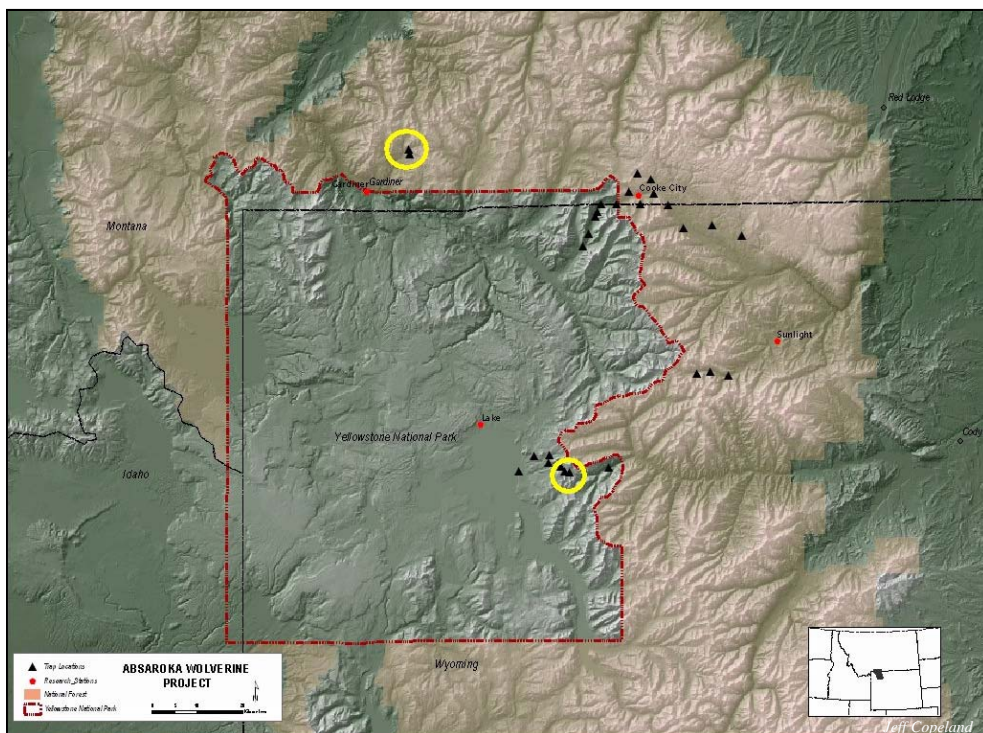
Jeremy Zimmer, Raphael Notin, and Becky Summerer dig out a log box-trap as part of their routine rounds in the Absaroka Range.

Numerous cooperators are contributing time, effort, and resources to this project, including the Gallatin and Shoshone National Forests, Yellowstone National Park, the USDA Forest Service Rocky Mountain Research Station, The University of Montana, Montana Fish, Wildlife & Parks, Wyoming Game & Fish, the Rocky Mountain Cooperative Ecosystems Studies Unit, and the Yellowstone Park Foundation.

Almost 4,000 pounds of bait was used over the 2005-2006 capture season!

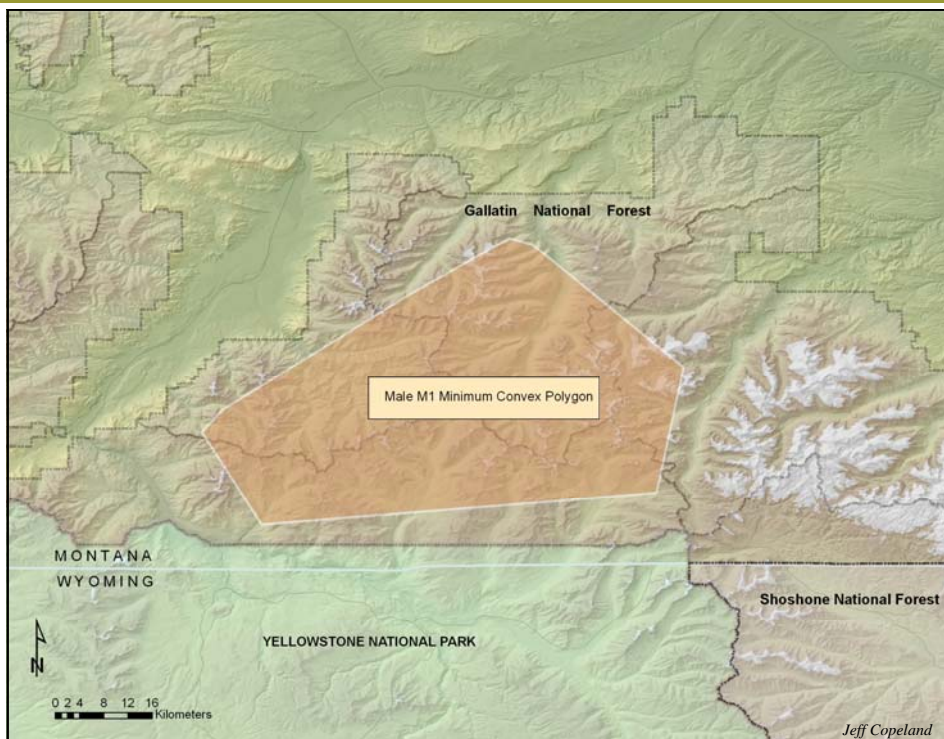


“Wolverine captures will be rare and unpredictable with success requiring diligence and constant attention to detail,” Jeff Copeland, Rocky Mountain Research Station



Wolverine trap sites (black triangles) occur primarily along the east and north border of Yellowstone National Park and in the Shoshone and Gallatin National Forests. Yellow circles denote trap sites in which wolverine were captured.





*Home range of M1 in the Absaroka Range based on preliminary GPS collar data collected March 23-April 18, 2006.*

*Male M1 travels over 450 kilometers across his Absaroka home range.*

Male M1 was instrumented with a GPS collar on March 22. His collar began collecting data early on the morning of March 23. Over the next 26 days his collar collected 194 locations as he traveled 453 kilometers across the Gallatin National Forest.

The collar was programmed to attempt a GPS fix every 2 hours, which would have tallied 308 locations for this period. The 194 locations collected represents a fix success rate of 63%. While he was on the move, M1 traveled at a rate of 1.4 km/hour. During one particular 2-hour foray on March 31, he moved 9.1 kilometers.

**The almost insatiable need to be on the move is the hallmark of the wolverine.**



*Collaboration with WCS will provide a better understanding of wolverine ecology in the greater Yellowstone Ecosystem.*

The Wildlife Conservation Society (WCS) has been studying wolverine in the Madison and Teton ranges since 2000, collecting information about the impacts of recreation in addition to identifying important wildlife travel corridors, demographic trends, population size, and habitat use. The spatial requirement of the wolverine is as large as any carnivore in North America, with individuals using home ranges in excess of 500 square miles. Our collaboration with the Wildlife Conservation Society’s Greater Yellowstone Wolverine Project will fill a spatial gap as we capture and mark wolverine in and around YNP, and benefit both studies as sample sizes increase from the combined efforts of both studies.



## Outreach

An essential component of our work is to educate the public about wolverine ecology in the Yellowstone ecosystem. Five wolverine study day camps are scheduled at Yellowstone gateway communities this summer in cooperation with the Yellowstone National Park Division of Interpretation. Numerous additional talks and outreach activities are scheduled.

## Thank You!

Many people contributed time and effort to this project. We would like to extend our thanks to the following individuals for their assistance and interest.

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**GIS Specialist** Cheryl Copeland

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**Yellowstone Park Foundation** Chessie Thacher & Lisa Diekmann



Volunteer Dylan Brown with M1

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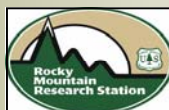
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