PROTECTING A PREDATOR

RECENT STUDY CREATES GROWING CONCERN FOR THE ELUSIVE WOLVERINE

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PHOTOS BY MICHAEL FRANCIS

An adult wolverine walks along a river bottom.

About five years ago, Rus Willis of Noxon was in the Cabinet Mountains at the end of hunting season. The snow was deep. Most animals had moved on. Willis made a last visit to a favorite lake and happened on wolverine tracks. Curious, he followed them. The tracks turned and vanished straight up a nearby peak. Willis peered after them through fog. **"Dude,"** he wondered, **"where are you going?!"**

Willis was puzzled because even hikers know the dear cost of straight ascent, especially in snow. However, last year Willis saw a documentary called *Wolverines: Chasing the Phantom*, part of the TV series *Nature*, which explored new research on one of the least-known animals on the planet. "Now, I know that's normal for wolverines," Willis says. "They head for the high country, and have the claws, legs, and wherewithal to do it." Other than tracks, Willis, a former outfitter, has never seen a wolverine. That's not unusual. Glimpsing a wolverine is a rare piece of luck, and for many, the moment passes in confusion: What is that? A bear? Then it's gone.

The animal has a reputation for fierceness and curmudgeonly solitude. Is it justified? Because the wolverine population is sparse and its territory, high, remote and huge, they've been difficult not just for lay-people to get to know, but also scientists. New technology as well as growing concern for the species' wellbeing is bringing new interest and understanding.

The species is *Gulo gulo*—that's double "glutton" in Latin. Wolverines occupy a wintry band around the top of the planet—they're not just North American—and they don't hibernate like bears. Instead, they're out all winter, usually at 6,000 to 8,000 feet in elevation, traveling great distances for meals, territory and mates. Wolverines are the largest member of the weasel family; "superweasels," biologist Joseph Grinnell called them. Their pelt is thick and shaggy like a bear's, but they're lower to the ground, only about 3 feet long, with the humped shape of a skunk and a blunt, longish tail.

Veterinarian Dan Savage of Kalispell volunteered with a recent five-year study of wolverines in Glacier National Park. His role, surgically implanting GPS devices, meant close contact with 26 of the animals.

"I couldn't get over their small body mass. Females in Glacier were often under 20 pounds, males under 30. Their hair makes them look more formidable." It also insulates wolverines so well that snow doesn't melt beneath them. With claws like crampons, they tackle icy peaks; researchers in Glacier clocked one wolverine's ascent of 4,900 feet in 90 minutes—in January. Wolverines' feet are large for a small animal, and like snowshoes, allow them to stay on top of snow and excavate

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Top: Two young wolverines at about 10 weeks old. Below: An adult male scrambles up a high mountain scree slope.

deep into it. In winter, when game is scarce, wolverines rely on winter- and avalanche-kill, which they can smell as much as 20 feet under snow. Females also make dens in the snow that will last into May. The deep, labyrinthine lairs foil predators and keep litters of one to three kits warm. Later, moms bring young out to cache sites. The snow is "a convenient deep freeze that keeps meat frozen and hidden," explains Jeff Burrell, program manager with the Wildlife Conservation Society, which studies wolverines in Yellowstone National Park.

In summer, wolverines hunt fawns and elk calves, mountain goats and bighorn sheep. Marmots are a mainstay. Come winter, they're mainly scavengers, eating stuff most critters turn their noses up at, including bones, teeth, and hair—sources, nonetheless, of fats and oils. "Glutton" in *Gulo gulo* may be less about quantities of food than the ability to eat anything—very thoroughly.

Wolverines' reputation for fierceness is deserved. They're known to chase grizzlies and wolves from kills, though they don't always prevail, and some fall prey themselves. If wolverines find moose or other grown ungulates in weakened condition, they attack. Veterinarian Savage confirms the small carnivores "do everything they can to make you think they're coming through you."

But anti-social? What first hooked Savage on wolverines was chancing upon a mother and two kits playing near Avalanche Lake in Glacier Park. For 20 minutes, repeatedly, they climbed up and slid down a snowfield. "Play is universal," says Savage, and wolverines show as much appetite for it as most species. New research reveals that for about a year, kits stay with or near Mom. Unusually, Dad also takes them for long rambles.

New forensic-type genetic techniques reveal important aspects of wolverine life and history. The only wildlife genetics lab in the Forest Service, located on the University of Montana campus, has retrieved a trove of knowledge from wolverine hair, feces and vomit. DNA from samples allows researchers to identify individuals, parentage, age, gender and more, and better understand wolverine numbers, where they are, where they go, who they mate with and why they die. Also testing of wolverine skulls from an extinct population in California, distinct from Rocky Mountain wolverines, indicates that the Californians perished from genetic isolation. "Natural selection doesn't work as well in smaller populations," explains Mike Schwartz, lead genetics researcher. "So you see genetic problems and survival decline."

Thrillingly, much of the wolverine TV documentary, which had record numbers of viewers, took place in the forbidding winter world of Glacier, a wolverine stronghold. Montana is part of the southern edge of the animals' habitat, which extends into Canada and Alaska; Yellowstone is a second stronghold, neighboring central Idaho a third. Between these main areas, island ranges like the Pioneer, Bitterroot and Big and Little Belt Mountains also harbor individuals. They're important genetic way stations, giving young wolverines places to disperse to and from, away from close relatives. In the million-acre Glacier, the number of wolverines is estimated at about 45; in and around 2.2 million-acre Yellowstone, it's 60 to 80. In all, Montana may have as many as 500 wolverines, but it's probably closer to 250. In contrast, about 1,000 grizzly bears roam the state.

Last year, the U.S. Fish and Wildlife Service recognized that wolverines deserve endangered-species protection, though it did not list them. The resource-strapped agency prioritizes species according to immediate need, and other species edged wolverine out—for example, in Montana, Arctic Grayling, a fish, and Sprague's Pipit, a bird. Ironically, wolverines are actually doing better south of Canada than they have in 50 years after trapping and poisoning almost extirpated them. But their sparse population and reproduction, their need for safe passageways through increasingly human-used landscapes and especially, the threat of climate change on their medium of survival, snow, all spell trouble.

Trappers are the one group of people who have known wolverines. Besides providing pelts (the frost-resistant fur has lined parka hoods), wolverines are perceived as troublemakers who can locate and devour bait and prey right up a trap line. If snared, they're athletic enough to sometimes free themselves and smart enough to avoid traps from then on. Montana is the only state other than Alaska that still allows wolverine trapping. In the volatile fur market, wolverine pelts have fetched several hundred dollars, yet Larry DiLulo of Havre's Pacific Hide and Fur hasn't seen a wolverine pelt in years. "If people get one, they keep it," he believes. His company's most recent link to wolverines was supplying the Glacier scientists with frozen beaver for their live wolverine traps.

Montana has lowered the number of wolverines that trappers can take to five statewide. "The lower quota came from the science," says the Wildlife Conservation Society's Burrell, who hopes future state-level decisions can keep wolverines from having to be on the endangered species list. "From our perspective, when species go on that list, it's a sign of failure. Society didn't do enough," he says.

Montana Fish, Wildlife and Parks employee Bob Wiesner values the trapping ethic. "Trapping itself is sustainable," he maintains. "But other factors affect habitat, and species become vulnerable." Today's devastating forest fires, he says, for example, render acres of habitat unusable for wolverine and other species.

People are another factor, including extreme sports enthusiasts reaching sensitive den sites during winter. And then there's climate change. Within 30 years, models predict more rain than snow during Montana winters—bad news for creatures that survive on winterkill and den in snow. Effective wilderness corridors that allow wolverines to move, scientists say, will be key to their survival in the lower 48. In cooler climes north of the border, *Gulo gulo* will be fine, at least for a while. It looks like the future of wolverines in Montana may boil down to a question of will. How important is it to us—will we sacrifice, if needed—to have them here? M

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