

# Studying Bobcats in Lynxland

A research scientist tracks common wild cats rarely found in deep-snow habitat.

BY TIM GIBBINS

**Early on a cold January** morning, research biologist Roberta Newbury loads packs, shovels, snowshoes, radiotelemetry equipment, and other gear onto a pull-behind sled, while her research assistant, Jodi Berg, starts two snowmobiles. The two then mount their snow machines and head up a snow-packed U.S. Forest Service road into the predawn darkness.

And so it has gone for Newbury over the past four years, morning after morning, across the Flathead National Forest near Whitefish. At first her search was for Canada lynx tracks as part of a PhD research project at the University of British Columbia Okanagan. But after two winters and more than 3,000 miles back and forth across the Tally Lake Ranger District on snowshoes, snowmobiles, and skis, she didn't find a single set of lynx tracks (though lynx were reported elsewhere in the Flathead National Forest). What Newbury unexpectedly found instead were bobcat tracks nearly everywhere she went. "Deep snow is supposed to be the domain of lynx, not bobcats," she says. So Newbury switched gears. She is now studying the smaller felines, focusing on their movements and daily energy requirements in deep snow.

Bobcats are a common wild cat found throughout Montana, though typically not in the forested mountains of the state's northwestern region. They weigh 15 to 35 pounds, about twice the size of a house cat, with gray or reddish fur marked with black spots and a bobbed tail black on top and white underneath. Canada lynx, a federally threatened species, are found primarily in the state's western mountain ranges. They average

around 25 to 40 pounds and are characterized by large paws that act as snowshoes, long legs, a large facial ruff, and a completely black bobbed tail.

Tim Thier, Montana Fish, Wildlife & Parks wildlife biologist in the state's northwestern corner, says FWP and other conservation agencies in the Northern Rockies will use Newbury's field data to better understand bobcat movement and home ranges and improve management of the species. "Other than what we get from annual winter track surveys and information required from trappers, not much data has been gathered on bobcats over the past 25 years," he says. "As far as I know, a study of bobcats in deep snow has never been done, so this is some really important work."

Newbury's research requires her to live-trap bobcats and outfit them with collars containing GPS satellite transmitters. Every three hours, the collars record the date, time, location, and direction the bobcat is traveling. "This data gives us a better idea of how bobcats use their home range and how they interact with their landscape," she says.

Thier, who helps Newbury on the bobcat study, says the satellite technology allows scientists to learn about the movement and behavior of bobcats and other wildlife far more quickly than in years past. "Using older radiotelemetry, we'd be lucky to obtain 20 to 30 locations from a captured animal over the course of an entire field season," he says. "Now Roberta is getting that many locations in two or three days. She's able to learn how big their home ranges are, and



**WHERE, KITTY?** Research assistant Jodi Berg using a radiotelemetry receiver to track a radio-collared bobcat north of Whitefish.



**WHAT ARE YOU DOING HERE?** Little is known about bobcats in deep-snow environments, not usually their domain. Over the past few winters, doctoral candidate Roberta Newbury (right, with tranquilized bobcat) has tracked the wild cats to study how the animals use snowy habitat. She has also analyzed stomach contents of carcasses brought in by licensed trappers to see what the cats eat.

even record where a bobcat is at night, which was pretty much impossible before GPS technology came along." Thier adds that Newbury and researchers still use radiotelemetry to locate animals in real time.

Bobcat populations in western Montana have been thriving over the past two decades, despite increasing interest by trappers to harvest the animals, whose pelts now fetch up to \$600. One reason for the abundance, Thier says, is that Montana manages the wild cats conservatively, erring on the side of bobcat populations when setting regional trapping harvest quotas. In addition, regional trapping districts are closed as soon as a quota is reached—which in recent years has been within the first three weeks of the two-month season that begins December 1. "In the 1980s and early 1990s, trappers had a tough time finding bobcats," says Thier. "Maybe our restrictive quotas and season closures are, in the long run, providing for a healthier population."

*Tim Gibbins is a writer in Portland, Oregon.*

In addition to tracking bobcat movements and habitat use, Newbury is conducting the first scientific assessment of the bobcat's winter diet in northwestern Montana. She analyzes bobcat scat and conducts necropsies of bobcat carcasses collected from local trappers during the winter trapping season to examine stomach contents. So far, she has found mostly the remains of squirrels and woodrats, as well as some snowshoe hares, which lynx prefer.

On this winter morning, Newbury and Berg are checking box traps to see if any hold a bobcat. The first is empty except for the roadkill deer leg used as bait, but they have another eight to check along a 15-mile loop of U.S. Forest Service roads. After testing the trap mechanism to ensure the door shuts when triggered, they fire up the snowmobiles and move on.

As they reach the seventh trap of the day—coming up short on the other six—Newbury peers in and shouts, "We got one!" The bobcat hunkers at the back of the cage until approached, then lunges at the door, showing



its fangs and puffing up its face fur to appear larger. It turns out Newbury knows this cat. She'd been tracking the young male since capturing it as a kitten two years earlier. Just two weeks ago she had removed the bobcat's radio collar. "We have all the information we need from this fellow," she says, opening the trap door so it can escape. The cat remains in the cage until the researchers back away. Then it dashes from the trap entrance, jumps over a frozen creek, and climbs the timbered slope. After looking over its shoulder once, it melts into the snow-covered forest. 🐾