





# Where the *Wild Cat* ROAMS

A 2009 live-capture study will reveal the mysterious movements of New Hampshire's bobcats.

BY LINDA SAUCERMAN

If you've ever walked in the forests of southwestern New Hampshire, there's a good chance that a pair of yellow eyes was watching your every move.

"I suspect that people are walking by bobcats all the time in the woods and not even knowing they are there," says Kent Gustafson, a wildlife biologist for the N.H. Fish and Game Department.

With the heavy snowfall last winter, though, this elusive cat seemed to come out of hiding.

"Bobcats are generally shy and retiring, but we had a lot of snow on the ground last winter, and they aren't good diggers like foxes or coyotes," says Gustafson. "When they are hungry, they tend to be more worried about filling their bellies than about being around people and houses. So when they are having a tough time, it's not uncommon for bobcats to try to hunt for squirrels around birdfeeders."

Bobcats aren't just visiting the backyards of rural homes on the outskirts of town, though. In the last few years, the felines have made themselves known in areas of New Hampshire that have dense human populations, such as the Seacoast.

"We've had calls about bobcat sightings in Portsmouth, Barrington, Rochester and even a car dealership in Stratham," says Patrick Tate, furbearer project leader for N.H. Fish and Game. "When people call us, they are fascinated by how beautiful the bobcat is and how confident and relaxed it seems."

## FUR FASHION TAKES A TOLL

The jump in sightings has led to speculation that the number of bobcats in the state is on the rise. This is quite a change from 20 years ago, when the outlook for this cat was quite bleak. For more than 160 years, hunters and trappers had collected a bounty for every bobcat killed in New Hampshire, and many states throughout the U.S. had similar incentives. In the 1980s, the bounty program was overshadowed by fashion, when demand for the bobcat's spotted fur increased in Eastern Europe and Asia. At the height of the market, a bobcat pelt could fetch \$200 to \$300.

By the mid-1980s, the desire for coats made from bobcat fur was taking a toll on the species' population in some areas. There was concern because this cat is found only in North America,



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## NORTH AMERICAN BOBCAT (*LYNX RUFUS*)

A stubby tail gives the bobcat its name, but here are the other features of this North American wildcat:

- 🐾 The average weight is 15 pounds for females; 26 for males.
- 🐾 The average length is 31 inches for females; 34 for males.
- 🐾 It has ear tufts that are shorter than one inch and also tufts of hair around its cheeks that give its face a squarish appearance.
- 🐾 A bobcat's hind legs are longer than its forelegs, helping it to pounce and catch cottontail rabbits, snowshoe hare, mice, squirrels, groundhogs, birds and even porcupines. It also will catch prey as small as insects – or as large as white-tailed deer.
- 🐾 Litters can range from one kitten to as many as 6, but the average litter size is 2 or 3.
- 🐾 Tracks meander in a formation similar to one that a housecat would leave, but the tracks are bigger: 1¾ to 2½ inches long and 1¾ to 2½ inches wide in dirt; 2½ inches long and 2¾ inches wide in snow. Claw marks are not visible.



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from southern Canada to central Mexico. Increasing pelt prices and fear of possible overharvest resulted in the listing of the bobcat on Appendix II of the Convention on International Trade in Endangered Species (CITES). This ensured that international trade would not harm the survival of the bobcat as a species. Oversight responsibility ultimately fell to the U.S. Fish & Wildlife Service, which worked with states to protect the bobcat from overharvest, while allowing states to keep some form of hunting and trapping if appropriate. New Hampshire decided to close the bobcat season and make it illegal to hunt or trap bobcats, because there were so few in the state.

“Around 1984 is when we were seeing a population decline in New Hampshire, to the point where only about two dozen bobcats a year were being hunted or trapped,” says John Litvaitis, a wildlife ecology professor at the University of New Hampshire. “The population had reached such a low point that tracking a small harvest would mean a lot of effort for the state.”

“Bobcats are an odd duck, so to speak, in that they are not listed as an endangered species, but they still have a fair amount of federal oversight,” Litvaitis says. The N.H. Wildlife Action Plan lists bobcats as a species of greatest conservation need in the state – mostly because of a decline in available bobcat habitat, and in part because their current population numbers are not known.

### TRACKING THE CATS

In early 2009, trappers will have a chance to see these beauties up close if they participate in a live-capture research study being conducted by N.H. Fish and Game and the University of New Hampshire. Litvaitis says that involving people who are already knowledgeable about trapping seemed a natural fit for this research.

“Trapping a bobcat is more of an intellectual challenge of matching wits than it is with a coyote or a fisher,” says Litvaitis, who will head the research team for N.H. Fish and Game. “Getting a bobcat to step into your trap is a real talent and a lot of luck.”

Along with luck, the trappers will learn the research protocol for catching bobcats using modified, padded leg hold traps, which are a type of trap listed by the U.S. Department of Agriculture for wildlife relocation efforts. These have been successfully used for bobcat

*Bobcats exhibit short black ear tufts; retractable claws; and white patches of fur behind the ears.*

research in other states and are adjusted to prevent an animal from struggling and injuring itself.

The traps will be checked within 24 hours of being set and, if a bobcat is caught, the trapper will call N.H. Fish and Game out to the location. The trapping will take place in southern Grafton County and in what is called the “four corners” area of Cheshire, Sullivan, Merrimack and Hillsborough counties.

After the research team sedates the sharp-toothed cat, they will check to make sure that it is uninjured and in good physical condition. Then, they will gather information such as its weight and length and take a blood sample. The main chunk of knowledge about a particular feline will come from a radio collar that the team will place around the animal’s neck. These collars have global positioning system (GPS) technology to pinpoint the bobcat’s movements over several

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weeks or months. The study is expected to last four years, with some collars having a feature that will enable researchers to remove the collar remotely from the bobcat by simply pressing a switch.

### WHERE DO THEY WANDER?

New Hampshire is at the northern end of bobcats’ natural range. Previous bobcat population estimates were based on bounty payment records, which don’t tell us much about where and how bobcats travel through the Granite State – though we do know that the largest populations are found south of the White Mountains. (This is most likely because of the bobcats’ feet, which sink in the snow, making it hard for them to travel and pounce on their prey in winter.)

Bobcats are solitary; each one stakes out about 12 to 30 miles of territory for itself. The radio collars will show for the first time in New Hampshire how these animals move within those territories, what types of habitat they use during their travels and what adjustments they may make when they run into human development.

To wildlife biologist Emily Brunkhurst of N.H. Fish and Game, that’s an exciting part of the new research: what it reveals about how bobcats really use the landscape. “One thing we’re working on for the N.H. Wildlife Action Plan is determining the best



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Bobcat habitat is home to many wildlife species, including (top to bottom) the yellow-rumped warbler, ring-necked snake and black bear.



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ways that we can connect habitats,” Brunkhurst says. “Through their movements, the bobcats will help us understand what they – and other animals with similar habitat requirements – really need in terms of space and connectivity.”

Like humans creating a well-worn path, bobcats most likely have regular routes they use to get to hunting and breeding grounds. When new infrastructure such as roads and buildings are built on or near these bobcat paths, researchers want to learn how well the animal adapts.

“Coyotes and other predators seem to respond and adapt to human development, but bobcats just don't seem to get the idea, and they end up crossing roads more often,” says Litvaitis. “If we want a healthy bobcat population in New Hampshire, we have to be much more earnest in finding and setting aside the important travel connections that they use.”

Such habitat connections may be found within the proposed Quabbin-to-Cardigan Conservation Collaborative, which is an effort by 23 public and private partners to create 100-plus miles of conservation lands stretching from the Quabbin Reservoir in central Massachusetts up to the White Mountains. All of the counties targeted for the bobcat study fall within the Quabbin-to-Cardigan project, so Litvaitis says that identifying bobcats in this area could “add an important dimension” to both the bobcat study and the land conservation initiative.

### GENETIC CLUES

Along with collaring and tracking bobcats, the research team will be on the lookout for those tell-tale signs that even the domestic cat leaves behind: hair and scat. Like household cats using a litter box, bobcats often will cover up urine or feces, making the waste difficult for researchers to find, especially in the snow. But like the domestic kitty-cat that scratches its claws on the living room sofa and wipes its face (and scent) against the loveseat, the bobcat uses its favorite tree stumps to leave its mark. Researchers usually can find hair left behind on these stumps and other “scent stations.” The hair will be used to collect DNA, which will be checked against the database of DNA already gathered from radio-collared bobcats in the state. If the DNA isn't a match with the collared cats, then the research team can add another individual bobcat to their roster. This total list of bobcat DNA will be used to estimate the bobcat population in New Hampshire. This number will then be compared to the population densities found in Maine, Vermont, and Massachusetts – our three neighboring states where, unlike in New Hampshire, limited bobcat trapping is allowed in late fall or winter of each year.

The DNA and radio-collar data will enable N.H. Fish and Game and the University of New Hampshire to uncover new insights into this secretive cat. For the first time, scientists will be able to document the bobcat population's size, whereabouts and habitat requirements in the state. With these insights, we can all work together to help ensure that this elusive feline presence continues to grace the landscape for generations to come.

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*A great deal of potential bobcat habitat is included in lands that make up the proposed Quabbin-to-Cardigan project, shown at right in yellow. Any lands conserved in this region have the potential to improve conditions and connectivity for New Hampshire's bobcats.*

