

# On the Trail of the Elusive Bobcat

Story by Susan Shea/Photos by Susan C. Morse

**A**S I DROVE NORTH ALONG ROUTE 12 THROUGH BROOKFIELD ONE WINTER day, I noticed a cat crouching in a marshy area along the edge of a frozen pond. It was sitting by a hole in the ice, probably waiting for a muskrat to surface. Much larger than a house cat, this feline had gray fur, spotted and streaked with black, a short tail, and black tufts of hair on the tips of its pointed ears. I pulled over to observe it, but after a few minutes, it became aware of me and stalked away into the brush. That was one of only two times that I've seen a bobcat.



Bobcats can be found in almost every town in the state of Vermont, but these reclusive wildcats are seldom seen (or photographed).





Vermont's bobcats are handsome animals, although their coats are less spotted in appearance than that of bobcats from western and southeastern states.

Bobcats are found in almost every town in Vermont, but are seldom seen. Someone who has observed many bobcats is Susan Morse, a wildlife ecologist and professional tracker who has studied and photographed this reclusive wildcat for 42 years. (Sue is also founder and program director of Keeping Track, a nonprofit that educates and trains citizens to monitor wildlife tracks and signs in their communities.) Sue has been fascinated with cats of all types since she was a child and studying their behavior is a passion of hers.

One July morning, I hiked with Sue into one of her study areas in the northern Green Mountains. The birds were still singing as we followed a trail along a small stream into a dark forest of hemlock and yellow birch. The vegetation was wet from the previous night's rain, and we had to be careful not to step on the bright orange salamanders (known as red eft) that wandered across the

path. Sue pointed out a tall cliff rising through the trees, which she has backtracked bobcats to. (Forward tracking can frighten and disturb animals and deplete their energy reserves.) Cliffs are important habitat for bobcats: "cliffy refugia," she calls them. The cats use cliffs as safe havens to rest, raise their young, as shelter from storms, and to escape enemies. Like housecats that jump onto the kitchen counter, bobcats are "precision jumpers"—they can jump and land with accuracy where they intend. Bobcats can move up and down cliff faces easily with a series of precise jumps. No one can follow them there, said Sue. The cats stay warm and conserve energy by lounging on rock ledges, soaking up heat from the sun.

Sue led me deeper into the damp forest to an outcrop of ledge used by bobcats as a communications post, where she had set up a game camera. She has photographed bobcats scent-marking

here, leaving messages for other bobcats. "It's their *Seven Days* or *Burlington Free Press*," she explained. Like other cats, to scent-mark a bobcat will back up to an absorbent surface such as a log, stump, or conifer branch and spray urine backward. Here the cats were spraying on the underside of a rock overhang. The scent chemicals they leave convey information about an individual's identity, breeding status, and whereabouts in space and time. Bobcats are solitary except when breeding and when females are raising young, and use scent-marking to avoid conflict with others, spacing themselves in the habitat. Bobcats will also make a scrape or scratch to communicate, said Sue. The animal will crouch, plant its front feet, and scratch back with its hind feet in succession, making a rectangular trough with a small pile of leaves, conifer needles, or soft earth. The absorbent materials will retain the cat's scent from the glands between its toes.



Bobcats often leave scat at scent-posts as well, and Sue pointed out a pile of scat below the rock outcrop. She had found this much-visited scent-station by using her expert tracking skills and knowledge of cat behavior. Sue checked the game camera attached to a nearby tree. By using the remote camera and backtracking cats in the snow for many years, Sue has determined that two to three bobcats live in her six-square-mile study area at any one time. Through her original research, she has pioneered the use of remote cameras at scent-marking areas as a noninvasive monitoring technique for studying bobcats and other wildlife. These techniques give scientists and planners a way to find out which animals live in an area, important for conservation purposes. She helped scientists in Arizona find a scent-marking post and place a camera to document the regular presence of the endangered jaguar.

On our hike out that morning, we passed a small wetland, lush and green with grass and alders. Wetlands are supermarkets for bobcats, commented Sue. The wetland edge attracts an abundance of prey such as small rodents, snowshoe hares, turkeys, ruffed grouse, muskrat, and beaver. Bobcats also feed on gray squirrels, cottontail rabbits, deer, and occasionally porcupine. They hunt by creeping stealthily along until close enough to pounce or by crouching in wait on a game trail and ambushing their prey. It would seem challenging for the average 18- to 22-pound bobcat to kill an adult deer (although occasionally tom bobcats weigh as much as 40 to 45 pounds, and a record bobcat in New Hampshire was 52 pounds). But deer are vulnerable in their winter yards when constrained by deep snow. Newborn fawns and lone bucks exhausted after the rut are also targets. Bobcats will cover a large kill with sticks and leaves and return to feed on the carcass later.

Bobcats “do best in habitats with a diversity of forest types and age classes and as a consequence, prey—everything from meadow to shrub-scrub to forest,” said Sue. It is essential for them to have some remote, core habitat not intruded upon by people so they have security when raising their kittens. One example of core bobcat habitat is the Green Mountain ridgeline and adjacent unde-



Sue Morse points to bobcat scat at a scent station beneath a rock outcropping.



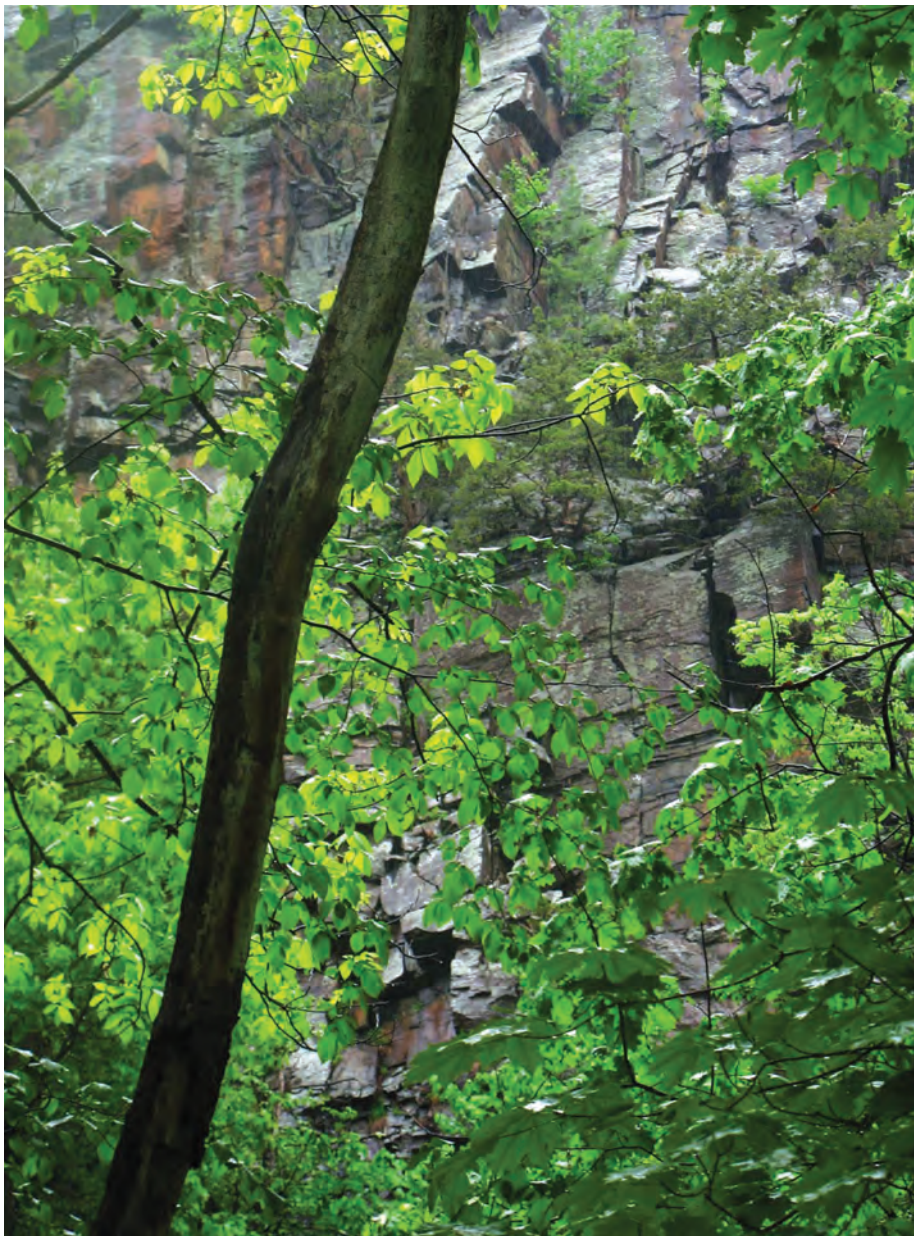
In addition to making scrapes, bobcats will spray urine underneath outcroppings. Below, mother and kitten take “selfies” with Sue’s game camera.







After their birth and weaning, bobcat kittens will stay with their mother from summer into early winter, learning hunting and survival skills.



A cliffy refuge like this one, remote and far from human interference, is ideal habitat for bobcats.

veloped land, much of which has been conserved. Bobcats will venture out from core habitat into farmers' fields, orchards, even sometimes into backyards to stalk birds and squirrels under feeders in winter.

After our hike, Sue showed me some of the photos she has taken of bobcats during the years, including game camera photos from the rock outcrop scent-station we had visited. One photo snapped at that spot was of a mother and kitten together. Bobcats mate in late March or early April, and three spotted kittens (on average) are born in late May or early June in a ledge crevice or under a blown-down tree. After the kittens are weaned at two months, they begin to venture outside the den to play and explore. From midsummer to at least early winter, they stay with their mother, learning how to hunt and survive.

Later I talked with state wildlife biologist Kim Royar. Bobcats travel widely, she informed me. Through a study that involved trapping and radio-collaring bobcats and monitoring their movements, the Vermont Department of Fish & Wildlife and UVM found that home-range size averages 9 square miles for females and 27 square miles for males, about the size of a town. (In areas where food is scarcer, home ranges are larger.) Bobcats used forested stream buffers extensively, especially for crossing roads. A couple of the collared cats followed railroad tracks across the landscape. Major highways can create barriers to the movement of bobcats and other wildlife, said Kim. A New Hampshire study found there was a genetic difference between the bobcats on each side of Interstate 93 because of the lack of interbreeding, and Kim suspects I-89 in Vermont may be a similar barrier. The Vermont Department of Transportation (in coordination with Fish & Wildlife and conservation groups such as Keeping Track) is working to incorporate wildlife crossings when there is new road construction or culvert or bridge replacement. For example, when the Bennington Bypass was built, some sections of the road were elevated to allow for wildlife passage underneath.

Bobcats are doing well in Vermont now, continued Kim. Their heyday was the early to mid-1900s when bobcats were the main predator and abandoned





A very determined and wet-looking muskrat hunter, hard at work.



A defensive-looking squirrel hunter, proudly carrying away its prey.



A young bobcat stalking grouse. A stealthy approach usually will bring a bobcat close enough to pounce on its prey.





A bobcat kitten. Bobcats mate in late March or early April and kittens are born in late May or early June.



Bobcats will often leave scat at scent posts; this dreamy-eyed tom is instead scent-marking a tree using glands around its mouth.

farmland was growing up into brush and young trees, creating great habitat for prey animals such as hare. With the reintroduction of fisher, movement of coyotes into the state, and the maturation of forests, the bobcat population declined. Now bobcats seem to have adjusted to the competition and changes in prey, and their population has increased in the past decade. Recent warmer winters have made it easier for these cats, as the cold and deep snow are hard for them.

Sue believes the wildcats are hunting different prey now, such as gray squirrels and turkeys. She said they will use the same habitats as coyotes, but move out of the way when a family of coyotes passes by. Bobcats and coyotes hunt some of the same prey, but each species specializes in different foods as well. Coyotes, for example, eat fruit, nuts, and insects. Fishers will sometimes attack and kill bobcats.

Bobcats do not pose a danger to people unless they are rabid, which is uncommon. They generally avoid people, which is one reason they're rarely seen. The state doesn't receive many reports of bobcats killing livestock or pets, but of course free-ranging chickens and housecats are at risk from any predator.

The continued existence of this graceful cat in Vermont will depend on our ability to conserve its core habitat and the connections between those habitats. "Bobcats could blink out in some towns because they can't get there from here," said Sue. "Town planners and conservation commissioners will have to work more aggressively to define and conserve the larger core habitats that are sending bobcats into smaller habitats. Throughout America, bobcats are the poster child for this issue of connected core habitat for wildlife and how our transportation system impacts that."

Keep your eyes open when driving or walking through the woods and if you're fortunate, you may see a bobcat—a gray or rusty phantom slipping silently across the road or trail. **T**

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Unlike its cousin, the Canada lynx, the bobcat has a short tail that is noticeably white underneath, and its feet are much smaller.



At left, clear tracks of the largest tom bobcat Sue monitored (for 11 years) back in the 1980s. Above, tracks next to Sue's boot print; there is some fresh graupel (pellet) snow in the track.