



Wildlife Note — 3
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Bobcat

by Chuck Fergus

Tawny, tireless, smooth-moving and shy, bobcats are truly beautiful animals. Few persons ever actually see a bobcat; spotting one in the wild is a tremendous thrill. Despite the bobcat's elusiveness, many Pennsylvanians are intrigued by this predator.

Biology

The bobcat — also known as the bay lynx, wildcat, red lynx and swamp tiger — is our state's only feline predator. Its scientific name is *Lynx rufus*, and it is closely related to the Canada lynx, which is not found in Pennsylvania.

Bobcats are efficient, wary predators equipped with sharp senses of sight, smell and hearing. They have four large canine teeth to pierce deeply into prey; behind the canines are sharp cutting teeth. Five retractable, hooked claws on each front foot and four on the rear add to the armament.

Though it's a fierce fighter, a bobcat isn't a large animal. A mature bobcat averages 36 inches in length, including a stubby, 6-inch tail. This bobbed tail gives the bobcat its name. Pennsylvania bobcats weigh 15 to 20 pounds, with large individuals as heavy as 35 pounds.

Eight bobcat subspecies are found in the continental United States, with slightly varying pelt coloration and sizes. The bobcats in our state have gray-brown fur with dark spots and bars, which are especially noticeable on the legs. Lips, chin, the underside of the neck and the belly are white. A ruff of fur extends out and downward from the ears.

The bobcat's rangy, muscular back legs are longer than its front legs. This gives the animal a high-tailed, bobbing gait when it runs. The bobcat is a strong swimmer — although it usually jumps creeks or fords them on fallen logs — and an excellent climber.

Bobcats are mainly nocturnal, but they sometimes venture out in the daytime. They have large eyes, well-adapted to see in the dark; bobcat pupils are slit-shaped rather than round and can open wide to admit light. Two other eye adaptations that help night vision are abundant light-sensitive rods and a reflecting layer that makes an object stand out sharply from its background. Bob-

cats are colorblind and see only in shades of gray.

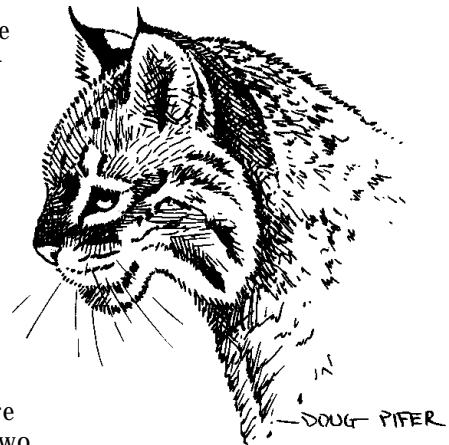
Small animals — mice, rats, shrews, squirrels, chipmunks, birds, rabbits and hares — form the nucleus of the bobcat's diet. But like most other predators, cats are opportunists, and porcupine, mink, muskrat, skunk, fish, frog, insect and fox remains have also been found in their stomachs.

Occasionally bobcats take sick, weak or crippled deer, but predation by bobcats has little or no effect on the size of Pennsylvania's deer herd. After feeding on a deer, a bobcat may cover the rest of the carcass with leaves. Bobcats also feed on whitetails which have starved during winter or died of other causes.

Breeding takes place from late February to early March. Male bobcats don't become sexually mature until two years old. Females can breed in their first year, but often do not. During estrus, a male may travel up to 20 miles in a single night searching for a receptive female. Radio telemetry research indicates that the male leaves the female after mating and plays no part in rearing young.

Kittens are born following a 50- to 60-day gestation period. Litters range from one to four young, with about two the average. Females guard their litters carefully, as an adult male bobcat may try to kill and eat the young. Owls and perhaps foxes may take kittens. A mature bobcat has few enemies other than man.

Bobcats give birth in dens — rock crevices, caves and hollow logs insulated with dry leaves and mosses. Though fully furred, kittens are blind and helpless at birth; their eyes open after eight or nine days and they are weaned within two



months. Kittens stay with their mothers for several more months, learning to hunt and kill prey, and reach 60 percent of their adult weight by winter.

Most wild animals are bothered by parasites, and bobcats are no exception. Fleas, mites and stomach and intestinal worms afflict bobcats. There have been few reports of rabid bobcats.

Some individuals live up to 14 years in the wild. Researchers aged captured animals by examining their teeth; each year the outer cementum layer of a bobcat's canine teeth lays down a growth ring, much like a tree does, thus making age determination possible. Bobcats in captivity usually live longer than those in the wild; one 30-pound captive male reached age 25. Research has shown a high mortality rate among bobcats during their first and second winters, before the young cats have completely mastered hunting skills.

During bad winter weather, a bobcat may shelter under overhanging rocks or in rock crevices. As soon as the storm subsides, though, the bobcat will be out hunting. If you can find its tracks in the snow, follow a bobcat on the prowl. Tracks will lead up and down mountains, cross streams (often on logs) and continue for miles. A hunting bobcat trots to a vantage point — a rock formation, steep hillside, low-leaning tree — and surveys its surroundings. Rock crevices, stumps, brush piles and thickets will be checked by a bobcat in search of a meal.

Individual bobcats have a definite territory, which is marked with feces, urine and scrape marks, and which may overlap the territories of other bobcats. Size of the territory depends on availability of food. In areas where food is abundant, the range may be as small as five miles in diameter. In the Western states, a low density of prey forces bobcats to range wider.

Habitat

In Pennsylvania, bobcats usually inhabit mountains, deep forests, swamps and, occasionally, agricultural areas.

Obviously, bobcats will live in areas where they can find ample shelter and food. Bobcats seem to prosper in remote areas near clearcuts. Studies have shown that the number of small mammals — rats, mice, shrews, etc. — increases following clearcutting (due to better food and cover conditions), and apparently cats respond to this increased prey supply. Oak leaf roller and gypsy moth caterpillars, insect pests which kill timber, may also indirectly increase small mammal populations by opening up the forest canopy and thus stimulating low, brushy growth.

A century ago, much of Pennsylvania was brushy, second-growth forest with an accompanying large population of grouse, rabbits, hares and small rodents. This terrific animal food supply and abundant uninhabited land allowed the bobcat to prosper. But when the forest matured, when saplings and sprouts grew into mature timber, when brush, thick laurel and blackberry tangles were replaced by a bare forest floor — and when man's cities and towns continued to expand — the amount of habitat suitable for bobcats shrank.

Bobcats are generally found in the state's mountain-

ous areas. They are well established in northcentral and northeastern counties. Over the past 20 years, bobcats have increased in number statewide and have been continually expanding their range.

Population

Population is in many ways a factor of habitat — poor habitat means low population. As Pennsylvania's second-growth forests matured and the number of prey animals decreased, the bobcat population fell, too. Fewer and fewer bobcats were spotted, and even tracks became hard to find. In 1970, the Game Law was changed to give the bobcat complete protection, and bobcat numbers subsequently increased.

Tough, resilient predators, bobcats are, nevertheless, affected by development of once-remote land, more and more houses, woods roads that open previously untouched areas to noise, and disturbances from ATVs and other vehicles. These intrusions, coupled with habitat change are threats to the bobcat's well-being in the more developed areas of the state.

Beginning in the 1980s, the Game Commission began various field research projects to better understand the factors affecting bobcat density and distribution throughout the state. Based on these studies and related surveys, in 2000 Pennsylvania's bobcat population was estimated to be approximately 3,500, and a hunting and trapping season, very limited, was once again offered.



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