



# Minks and Muskrats

by Chuck Fergus

Often two wildlife species are associated closely with each other. The fox and the rabbit, the bobcat and the snowshoe hare, and the mink and the muskrat are good examples. While not one of the three mentioned predators subsists solely on its “partner” species, the prey often makes up a sizeable portion of the predator’s diet. When it comes to mink and muskrats, it’s fair to say that although the muskrat is not the principal prey of the mink, the mink is the principal predator of the muskrat.

Both mink and muskrats are found in suitable wetland habitat throughout Pennsylvania. They are classified as furbearers, and trappers harvest both species. By far, more muskrats are trapped than minks, but a mink pelt is more valuable than a muskrat’s.

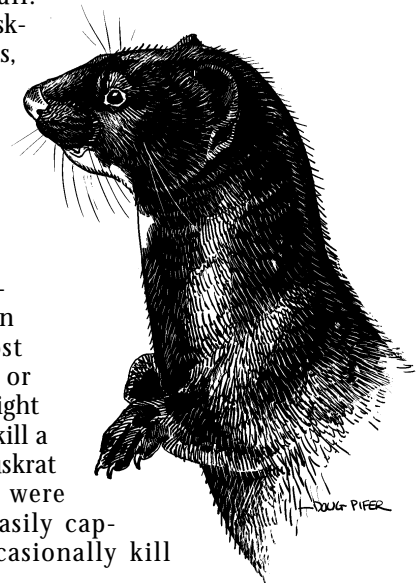
**Mink** (*Mustela vison*) — is a semi-aquatic member of the family Mustelidae. Other mustelids include weasels, martens, fishers, wolverines, badgers, skunks and otters. Mink are found over most of the northern hemisphere in both Europe and North America. They live on the edges of lakes, streams and rivers in forested areas.

Adult males average two feet in length, including an 8-inch tail. They weigh 1½ to 2 pounds. Females are 10 to 15 percent smaller than males and up to half a pound lighter. Body configuration resembles that of a weasel: short legs; long, bushy tail; long, sinuous neck and body; short head; and pointed muzzle. A mink’s coat is thick, full and soft. A short, tight layer of underfur is covered with longer guard hairs, which give the pelt its luster. Colors range from russet to a deep, chocolate brown. Unlike some weasels, the mink does not turn white in winter.

Mink have excellent hearing and sight, and a good sense of smell. On land, they travel at a slow, arch-backed walk or a bounding lope, which they can keep up for miles. They swim and dive with ease; a webbing of stiff hairs between the toes of their hind feet helps propel them through water. Mink are most active at night and early morning, although they sometimes venture out during the day as well.

Active year-round, mink may curl up and sleep for several days during winter cold spells. Like most mustelids, they are agile and fierce fighters, killing prey with a hard bite to the back of the skull.

Prey includes muskrats, mice, rabbits, shrews, fish, frogs, crayfish, insects, snakes, waterfowl and other birds, eggs and domestic poultry. Generally, a mink is an opportunist, feeding on whatever is most easily caught or found; thus, it might avoid fighting to kill a healthy adult muskrat if, say, crayfish were abundant and easily captured. Mink occasionally kill



more than they can eat. In winter, they cache carcasses and revisit them to feed.

Mink den in abandoned woodchuck tunnels, hollow logs, vacant muskrat lodges, holes in stone piles and beneath large tree roots. Dens are usually near water and may have more than one entrance. Mink line their nests with dried grass, leaves and feathers; bones and scraps of kills often litter the nest area.

Mink are basically solitary, except during mating season, when they use a powerful scent from their anal glands to attract mates. Males fight over receptive females. It's not known whether mink pair up after mating, although males are believed to mate with several females.

Mating occurs from February to April, with most activity in March. After mating, the fertilized eggs develop slightly, but then 13 to 50 days may pass before the embryos attach to the female's uterine wall and continue developing. This is called delayed implantation, and it's common among mustelids. Females give birth in early May following a gestation period of 28 to 30 days after embryo implantation. Thus, total time from mating to birth may be 40 to 80 days.

At birth, young are 3½ inches in length, blind and hairless, and they weigh only a fifth of an ounce. Litters include 2 to 7 young, with an average of four. In two weeks, young are furred; their eyes open after five weeks; and after six or seven weeks they are out foraging with their mother and learning how to hunt. The family disperses by late summer. Minks are sexually mature at 10 months.

Minks are best suited for areas where water pollution is minimal, because these waters will hold the greatest concentrations and varieties of prey. A male covers a range up to three miles in diameter, while a female's range is much less. Individual territories overlap, and the same den may be used by several animals in succession. One mink will have several dens along its hunting route.

Minks live up to 10 years in captivity, but a wild one would be fortunate to survive two or three winters. Disease, cars and trapping are mortality factors, and the species is preyed on by foxes, bobcats and great horned owls.

The American mink was introduced to Sweden in the 1920s, and in 35 years spread throughout that country. *M. lutreola*, the European mink, is found from France east to the Caucasus Mountains. Pennsylvania has two subspecies of mink, the less common mountain race, *Mustela vison vison*, being somewhat smaller and darker.

**Musk rats** (*Ondatra zibethica*) — Why the name “muskrat?” “Musk” refers to a strong smelling substance released from this animal's perineal glands (between the thighs), while “rat” describes its rat-like appearance. The muskrat is a rodent — related to mice, voles, beavers

and rats. The nation's most abundant furbearer, the muskrat lives on or near the still or slow-moving water of ponds, marshes, streams and rivers and, to a lesser extent, faster mountain streams. The species is found over most of North America north of the Rio Grande River, including the coastal tidal marshes. It's common in Pennsylvania, but nearly abundant as it used to be.

Adult muskrats are 22 to 25 inches in length, including the tail. They weigh 2 to 3 pounds, have a stout body, short legs, and an 8- to 12-inch tail that is flattened vertically, scaly and practically hairless. Ears and eyes are small but well-developed. In appearance, muskrats resemble small beavers with long, rat-like tails.

The tail functions as a prop when the animal stands on its hind feet, and as a rudder and propulsion-aid when it swims. The muskrat's large, broad, partially webbed hind feet power it through water. Its forefeet are small and agile, with well-developed claws for burrowing. To insulate against cold water, a muskrat's underfur is dense, silky and soft, overlain with long, dark brown guard hairs shading to gray-brown on the throat and belly. Overall pelt color can be chestnut-brown to almost black, or any color in between.

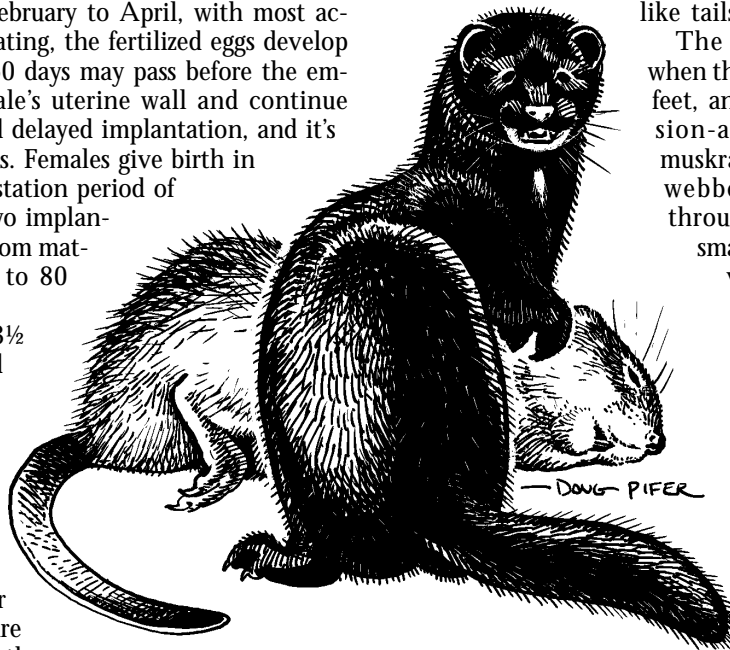
Food: roots and stems of aquatic plants

(the cattail is often an important item; also bullrushes, water lilies, pickerelweed and others), and, when they grow near water, legumes, grasses, grains, garden crops and fruits. Muskrats eat a small amount of animal protein, including crayfish, freshwater mussels, fish and frogs — the last two often as carrion — and even carcasses of other muskrats. They don't hibernate; over winter they subsist on roots and shoots dug from marsh bottoms, and the twigs, buds and bark of various trees, including willows, cottonwoods, ash and box elders.

Muskrats build houses (also called lodges) of vegetation, or they burrow into stream banks, earthen dikes and dams, often causing considerable damage. Both lodges and burrows have underwater entrances and above-water living quarters. Lodges are built of cattail stalks or other vegetation, chinked with mud and weeds above the waterline. They may be 8 to 10 feet across and 2 to 3 feet above water, with a single living chamber plus offshoots, or several chambers. Muskrats do not dam streams.

In breeding season, muskrats leave musk, or scent, in likely places around their territories to attract potential mates. Males may impregnate several females, and play no part in raising young.

Muskrats have a high reproductive potential, giving



birth to large litters and breeding from spring to fall. Mature females have two, three or even four litters each year, depending on the length of the warm season (more litters in southern Pennsylvania, fewer in the north).

After a 30-day gestation period, the female bears 5 to 8 naked, blind and helpless young. In a month they are weaned and fully furred, and the female drives them off, especially if she is about to bear another litter. A female may overwinter with her final litter of the year, the family breaking up in the spring. Young disperse along streams or colonize new sections of marsh.

Muskrats are sexually mature the year following their birth, but few survive long enough to breed. Young muskrats and dispersing immatures are especially vulnerable to minks, hawks, owls, foxes, snapping turtles and snakes. Surplus animals — individuals beyond the number that the habitat can support in good health over winter — are often lost to predators, taken by trappers or forced to move to new areas. Surplus individuals are more vulnerable to predation, starvation and disease than are members of the secure, basic population.

Some prey populations may limit their own numbers by failing to breed in crowded conditions, by aggressively defending a territory in overpopulated areas, or by some other type of behavior. Overcrowded

musk rats are strongly territorial, and predation by mink is just a way of reducing the excess population. Mink seldom have much effect on local muskrat populations; the surplus animals would probably die soon anyway. Only if the habitat should change, such as when drought comes and the marsh dries up, would formerly secure muskrats be vulnerable to minks; the habitat can no longer support as large a muskrat population, some of the basic population would become surplus. A bad winter,

an outbreak of disease such as coccidiosis, or a flood during the height of breeding season may also cut muskrat numbers. The population varies widely from year to year, but tends to show a peak in abundance about every 10 years.

Musk rats are tenacious fighters. Minks prefer to tackle young or sick muskrats, because a mature adult puts up a brisk defense. Females defending young have been observed driving off attacking minks. Musk rats are parasitized by mites, fleas, flatworms, roundworms and tapeworms.

While the average life span is under 12 months, some individuals may live as long as five or six years.

Through their feeding, muskrats open up areas of densely vegetated marsh; this can change local habitats to benefit waterfowl and other aquatic wildlife. Musk rats also damage agricultural and ornamental crops near water, and their tunnels riddle dams, dikes, canal banks, etc. This is a serious problem and trapping is the most effective and least expensive solution to it.



Wildlife Notes are available from the  
Pennsylvania Game Commission  
Bureau of Information and Education  
Dept. MS, 2001 Elmerton Avenue  
Harrisburg, PA 17110-9797

[www.pgc.state.pa.us](http://www.pgc.state.pa.us)

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# Wildlife Notes

Allegheny Woodrat	Northern Cardinal, Grosbeaks, Indigo Bunting and Dickcissel
Bats	Opossum
Beaver	Otter
Black Bear	Owls
Blackbirds, Orioles, Cowbird and Starling	Porcupine
Blue Jay	Puddle Ducks
Bobcat	Raccoon
Bobwhite Quail	Rails, Moorhen and Coot
Canada Goose	Raptors
Chickadees, Nuthatches, Titmouse and Brown Creepers	Ring-necked Pheasant
Chimney Swift, Purple Martin and Swallows	Ruby-throated Hummingbird
Chipmunk	Ruffed Grouse
Common Nighthawk and Whip-Poor-Will	Shrews
Cottontail Rabbit	Snowshoe Hare
Coyote	Sparrows and Towhee
Crows and Ravens	Squirrels
Diving Ducks	Striped Skunk
Doves	Tanagers
Eagles and Ospreys	Thrushes
Elk	Vireos
Finches and House Sparrow	Vultures
Fisher	Weasels
Flycatchers	White-tailed Deer
Foxes (Red & Gray)	Wild Turkey
Gray Catbird, Northern Mockingbird and Brown Thrasher	Woodchuck
Hérons	Woodcock
Kingfisher	Wood Duck
Mallard	Woodpecker
Mice and Voles	Wood Warblers
Minks & Muskrats	Wrens