



Eastern Coyote

Canis latrans



The Eastern coyote (*Canis latrans*) moved eastward from west of the Mississippi and first appeared in Vermont in the late 1940s. It is generally larger than its western ancestor because it gained size by breeding with Eastern wolves (*Canis lycaon*) in southern Canada before it moved into our area. Our resulting Eastern coyote has evolved with the coyote's adaptability in being able to live close to people and eat a variety of foods while its larger size enables it to survive in our

deep-snow winters. Today, the coyote is well established in Vermont, playing an important role in Vermont's ecosystems. It has also populated states to the east and south as well as eastern Canadian provinces.

VERMONT WILDLIFE FACT SHEET

Physical Description

In general, male Eastern coyotes are larger and heavier than females, weighing between 30 and 40 pounds, although a few may exceed 50 pounds. On average, females weigh around 30 pounds.

There is considerable variation in coat color. The face is gray with a muzzle that is dark or reddish along the sides. There is a black line behind the eyes, soft reddish fur behind the ears extending to the neck, and white or cream-colored fur under the chin and throat.

The body is most often a brownish-gray with a dark line that runs along the back. The sides are usually dark, and the underbelly is white or cream-colored. The legs usually have a dark stripe partly down the front of the forelegs. Occasionally, this coloration occurs on the front of the rear legs as well. Outer sides and rear portions of both front and rear legs appear quite reddish, and this coloration sometimes extends onto the flanks. Feet are usually light or buff in color, but occasionally they are reddish around the toes.

The bushy tail is gray above and lighter below. The upper side of the tail has a black spot one third of the way down from the base and the tail is tipped in black. The tail is about 13 inches long, and in comparison with a German shepherd, it is shorter and bushier.

The body length of Eastern coyotes averages between 42 and 55 inches, however, females rarely exceed 48 inches. The ears are large, pointed and well furred.

Coyote tracks are considerably larger than fox tracks and smaller than wolf tracks, but narrower and longer than most dog tracks. Most people have difficulty distinguishing coyote tracks from those of domestic dogs. Coyotes, like most canines (the gray fox being the exception), have claws that are not retractable. Dewclaws are usually absent on the rear legs of Eastern coyotes.

Life Cycle

The howl of coyotes can usually be heard on winter nights, especially during mating season in February. They usually begin breeding at two years of age and may mate for life. The gestation period is approximately nine

weeks, with an average litter of six pups.

Coyotes sometimes dig out fox or woodchuck holes for dens, but also use other sites, including caves, crevices in ledges, and holes created by over-turned trees. Pups are born in late April or early May with solid colored coats and spindly tails, but this changes rapidly as they grow. Their coats become more like an adult's as they shed their puppy fur and their tails become fuller three months after birth.

Instinctive wariness makes adult coyotes alter their approach to the den. Both parents help care for the young, the male concentrating on bringing home the food. If disturbed while in the den area, they will move their pups to a new den. Until pups can travel, the den is only a base of operations. Coyote pups, like most wildlife young, are taught how to survive by their parents. The pups begin to go on short trips from the den at about two months of age. Gradually, family hunting trips become longer. Pups travel with their parents during the fall and sometimes into early winter. By January, as the breeding season approaches, most young coyotes must finish

learning on their own, as many times they are no longer tolerated by the adults. The pups often travel long distances to find a territory that is not occupied by another pair of coyotes. In late winter of their first year, a pup may take a mate, but they usually do not breed until the following year.

Food Items

The Eastern coyote is an opportunistic omnivore. It is both a predator and a scavenger, with a widely varied diet.

The Eastern coyote will eat small rodents, plants, fruit, deer, snowshoe hare, cottontail rabbits, woodchucks, insects, and birds. At certain times of the year, deer meat can be significant portion of its diet. Although a coyote may kill a fawn or deer in deep snow, it will also readily eat the carcass of a dead deer and other dead animals.

Research has shown that although the coyote does prey on deer fawns in the spring and deer in the winter, it is not a major controlling factor on deer numbers with the possible exception of areas where deer populations are already low or winters are extremely severe.

Although the coyote occasionally has conflicts with humans, the coyote plays an important role in the ecosystem. It is one of Vermont's major large mammalian predators.

The relationship between a predator, such as the coyote and its prey is complex. Predator populations tend to fluctuate in response to periodic changes in prey densities. Prey species in New England have evolved with predators such as wolves, mountain lions, and humans and are therefore well adapted to

predation. In Vermont, the highest coyote densities are in agricultural areas, where prey populations are high and varied.

Habits and Habitat

The Eastern coyote is quieter than the Western coyote. Their yapping howls sometimes can be heard at dawn or dusk. The coyote has a characteristic, high-pitched howl ending with a series of yips. It will sometimes also bark.

Coyotes are very adaptable and exist in all habitats in Vermont, including suburban areas. Part of the reason for the amazing success of coyotes is their incredible adaptability to human changes in the landscape.

Vermont coyote family groups have an average home range size of 15 square miles, but will focus most of their activity within a smaller core area of 4 to 8 square miles. The family group is territorial and defends the core home range from other coyotes, thus limiting the total number of coyotes that Vermont can support. The habitat within the coyotes' home range may include forested areas of hardwood and softwood trees, open areas (pasture and field), wetlands, and developed areas. Although coyotes are habitat generalists, a study completed in Vermont in 1988 found that coyotes in the Champlain Valley tend to use forested habitats more during winter and spring and open areas more frequently during summer and fall. Use of different habitats by coyotes depends on many factors, including the abundance of prey, the weather, topography, and competition with other predators.

Abundance

Vermont's coyote population will continue to thrive as long as

habitat conditions allow. Most coyotes in Vermont are wild and wary of people because of hunting and trapping. In states such as Massachusetts and California, where there is limited negative reinforcement from people, coyotes sometimes associate people with food (garbage, pet food, etc.). In these cases, coyotes may live around suburban neighborhoods and become a problem. The population of Eastern coyotes in Vermont fluctuates between 4,500 and 8,000 with fewer animals in the population during winter. Many juveniles disperse in the fall, while others may stay with their family group well into their second year.

Coyote reproduction and survival is tied directly to habitat and food availability. In addition, coyotes are density dependent breeders. As the number of coyotes in an area decreases, their reproductive rates increase. Coyote control efforts are therefore often unsuccessful because they tend to stimulate reproduction.

MORTALITY

Although little is known about the mortality factors of young coyotes, several studies have shown that between birth and one year, as many as 50-68% die. Adult mortality rates are lower. Several diseases and parasites can affect coyote survival including heartworm, distemper, canine hepatitis, sarcoptic mange, and rabies.

History

The wolf disappeared from Vermont in the late 1800s. Because the wolf fed almost entirely on hooved prey such as deer, moose and caribou, the loss of this animal from Vermont resulted in a lack of predation on these species.

The coyote is not a Vermont native. Coyotes were virtually unknown east of Wisconsin at the turn of the century. As European settlers moved westward, clearing the forests and eliminating the wolf, the coyote, a much more adaptable canine, moved eastward.

Recent DNA testing reveals that coyotes apparently moved eastward through southern Ontario and Quebec, hybridizing with the small Eastern wolf (*Canis lycaon*) along the way. In Maine, for example, 22% percent of over 100 coyotes sampled had some Eastern wolf DNA. The coyotes now found in the Northeast appear to be evolving with some larger size inherited from their wolf ancestors and the adaptability of their coyote forbearers.

Wildlife biologists no longer use the term "coydog" when referring to the Eastern coyote. Although the first coyotes moving into the Northeast may have rarely hybridized with domestic dogs, it is doubtful their progeny were successful in additional generations.

The first coyote documented in Vermont was shot here in 1948. Since then, coyotes have completed the eastward expansion of their range to the Atlantic Ocean. Reports of coyote sightings and occasionally dead coyotes in Vermont increased noticeably in the 1960s and early 1970s. The coyote population has since become well established and relatively stable.

Current Management Efforts

The Fish & Wildlife Department recognizes that people have many differing views on the value of predators. We believe, however, that coyotes are

important members of the ecosystem and have evolved together with many of nature's existing prey species. Conservation of the coyote is important to maintaining ecosystem integrity because of the vital role they play as predators. Coyotes are also a renewable natural resource and the utilization of these animals is appropriate as long as their population remains viable.

In Vermont, coyotes can be hunted at any time during the year. A regulated trapping season begins the fourth Saturday in October and runs through December 31st.

Coyote furs are presently a valuable renewable natural resource. With practice and patience, a unique form of hunting can be experienced with coyotes. They can be called in to close range with a game call that imitates the distress squeal of a rabbit.

Certain groups would like to decrease or eliminate the coyote population. While coyotes kill other animals to eat and survive, including an occasional deer, they should not be subjected to an extermination program. Coyotes fill the role of a natural predator, a role that is important for maintaining the dynamics and health of our ecosystems.

Expensive extermination and bounty programs were common in the past and were responsible, along with habitat loss, for the elimination of some natural predators throughout the United States. These techniques have no place in modern wildlife management, which stresses the importance of all species.