



Coyote

by Arnold Hayden

The eastern coyote has stirred as much interest and emotion as any other animal in Pennsylvania. Seeing a coyote or hearing the howl of this wild, wily animal is a great reward of nature to many people. Others fear this animal just knowing it is in the wild. Some sportsmen hate coyotes because they think the predators kill too many game animals. Trappers and hunters find coyotes to be especially challenging. Some farmers lose livestock due to coyote predation. The coyote has been referred to as the brush wolf, prairie wolf, coy-dog and eastern coyote.

The eastern coyote (*Canis latrans*) is found throughout northeastern United States and southeastern Canada. Recent research shows the eastern coyote is an immigrant whose origin may have involved interbreeding between coyotes and gray wolves. Analysis of DNA suggests coyote/wolf hybridization has occurred. Other studies indicate that the eastern coyote is intermediate in size and shape between gray wolves and western coyotes. As a result, the eastern coyote exhibits different behavior, habitat use, pelt coloration, prey preferences and home range sizes from its western cousin. The eastern coyote is the largest canine found in Pennsylvania. The following information pertains to the coyote in Pennsylvania and throughout northeastern United States.

History

Fossil records indicate coyotes have existed in what is today eastern North America since the Pleistocene period, a million years ago. Occurrence has been intermittent over that time, and only in the past 75 to 100 years has the animal appeared to become common. The coyote status in Pennsylvania during the 1700s and 1800s is clouded with that of the wolf. Old bounty records indicate both coyotes and wolves from other sections of the country were fraudu-

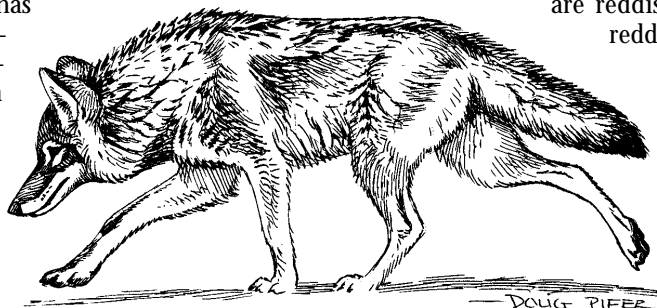
lently turned in as wolves here during the late 1800s.

Little is known of the wolf in Pennsylvania, or if indeed the same animal now called the "eastern coyote" may in fact have been similar to the wolf of the past. Pictures dating to the 1930s have appeared in *Game News* over the years. These animals look like the same coyotes being killed today. The first coyote identified as an animal similar to what we today call the "Eastern coyote" was killed in Tioga County in 1940.

In the late 1960s, it appears an influx of coyotes entered northern Pennsylvania from the Catskill Mountains in New York, and from there they spread south and west across the state. In the 1970s, the highest population was in the Pocono Mountains of the state. The coyote continued to expand its range during the late 1970s and occupied the entire state by 1990, with the highest populations across the northern half of the state.

Biology

The eastern coyote is much larger than its western counterpart. Adult males in Pennsylvania weigh 45 to 55 pounds. The heaviest known male caught here weighed 62 pounds. Females are smaller, 35 to 40 pounds. The heaviest known female in Pennsylvania weighed 42 pounds. Total body length of eastern coyotes ranges from 48 to 60 inches. Their pelage colors range from light blond, reddish blond, gray to dark brown washed with black, and black. Generally, coyotes are gray to a German shepherd coloration. Their legs are gray, tan and reddish with black markings or lines down the front of the front legs. The cheeks and behind the ears are reddish or chestnut colored. Blond, reddish and black coyotes may not have any noticeable black stripes on their front legs. Their ears are erect and their bottle brush tail is usually held in a downward position. Normally, their eyes are yellow, but some with brown eyes have been found.



Coyotes are monogamous; they maintain pair bonds for several years. The social unit evolves around the mated pair and its offspring. However, the delayed dispersal of some offspring may result in extended family relationships beyond a year. A social group occupying a territory may include a pair of adults (generally more than a year old), transients (aged 6 to 18 months), pre-dispersing sub-adults (usually less than a year old) and non-breeding associates that are more than one year old. Observations indicate other coyotes living in a territory may help provide food to a growing litter.

Normally, females do not breed — or implant embryos — until their second winter, but there are cases of some yearling females breeding and producing litters. They have one heat period that lasts 4 to 5 days, usually in February. The litters are born from mid-April to early May, and litter sizes average 5 to 7 pups. Coyotes compensate for unusually high mortality by having larger litters. Known denning sites range from beneath overturned trees, piles of tree stumps, rock dens, and dug out red fox dens. Dens are usually located on southerly exposures. The pups are moved frequently to new dens to avoid detection.

Young coyotes begin to disperse from the family group during October, when they're six months old. Studies in Pennsylvania indicate some juvenile coyotes dispersed up to 100 miles, but 30 to 50 miles is more common.

Coyotes use a variety of yips, barks and howls to communicate and periodically assemble into larger packs. Coyotes at times will "pack" and at other times will hunt alone or in the company of another coyote or two. They are primarily nocturnal, but often hunt during daylight hours, especially in the morning. Howling may occur at any time of day, but the highest activity is usually at night. A coyote's sense of smell, hearing and alertness are especially keen.

Habitat

The coyote has adapted to a wide variety of habitats in Pennsylvania. The animals can be found in the heavily forested northeast and northcentral regions of the state, in dairy and cropland areas, and even around the heavily

populated areas of Philadelphia, Harrisburg, Pittsburgh and Erie. Coyotes prefer heavy brushy cover, such as clearcuts, and often live along edges between forest and agricultural areas where prey is abundant.

Food Habits

The coyote is a generalist. An analysis of 300 coyote scats collected in Pennsylvania indicate a wide array of food items in their diet. Mammals from at least 13 genera were found, ranging from small mice and voles to deer. Overall, deer was the dominant food, occurring in 57 percent of the scats. That deer were a dominant food item was not surprising given the high deer density in many areas, the large number of deer killed on the highways, starvation losses, and deer that have died for any number of other reasons.

Rabbits and woodchucks ranked behind small mammals and deer as important food items. Birds were found in 10 percent of the scats and insects in 18 percent. Plant material occurred in 50 percent of the scats. Various kinds of fruits were important during the late summer and fall, but plant material appeared important on a year-round basis. While no livestock was found in the analysis, predation on sheep, chickens, ducks, goats and domestic rabbits does occur, but at a low rate. However, depredation can be significant in localized areas or at certain farms.



Population

Coyotes are found throughout Pennsylvania, but are most common in the northern half. The total population in 1995 was probably between 15,000 to 20,000. The harvest in the early '90s exceeded 6,000; incidental to turkey, bear and deer hunting. Coyote hunters and trappers accounted for the other half. Mortality from hunting and trapping approaches 60 percent for young coyotes, but only 15 percent for adults.

Coyote populations throughout North America have continued to expand, despite man's attempt to control them. If there's one thing we have learned about this intriguing animal, it's that the coyote controls its own destiny, not man.

Wildlife Notes are available from the
Pennsylvania Game Commission
Bureau of Information and Education
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