

Coyote

(*Canis latrans*)



The coyote is a member of the dog family, *Canidae*. It has played a central role in Native American legend and folklore, portrayed as a trickster, a shaman, a deceiver and even a deity. Native American translations of its name, such as “song dog” and “little wolf” are the best descriptions of its behavior and place in the natural world.

From fossil records and pioneer journals, it appears coyotes have greatly widened their distribution, particularly from the period of European settlement to the present. The expansion is thought to be tied to the extermination of the wolf and habitat changes as a result of human settlement. Once mainly an inhabitant of the American West and Mexico, this “little wolf” is now found in every state, except Hawaii, and in every Canadian Province.

Even more surprising is its southward distribution into Panama and northward expansion throughout Alaska. The success of this species lies in its adaptability. Coyotes have the ability to survive in deserts, swamps, on mountain tops, or in city centers. There appears to be almost no climate,

elevation, or environment that precludes its habitation. Coyotes are common in Utah, occurring in open deserts, grasslands, forests, urban settings, and other habitats.

Description

Coyotes look like small wolves, except that they are more slender and weigh $\frac{1}{4}$ to $\frac{1}{3}$ as much or less. Their coloration can be similar to that of a gray wolf or red wolf. From a distance, coyotes may be differentiated from wolves by the way they hold their tails. Coyotes generally walk and run with their tail resting low, while wolves carry their tails straight out.

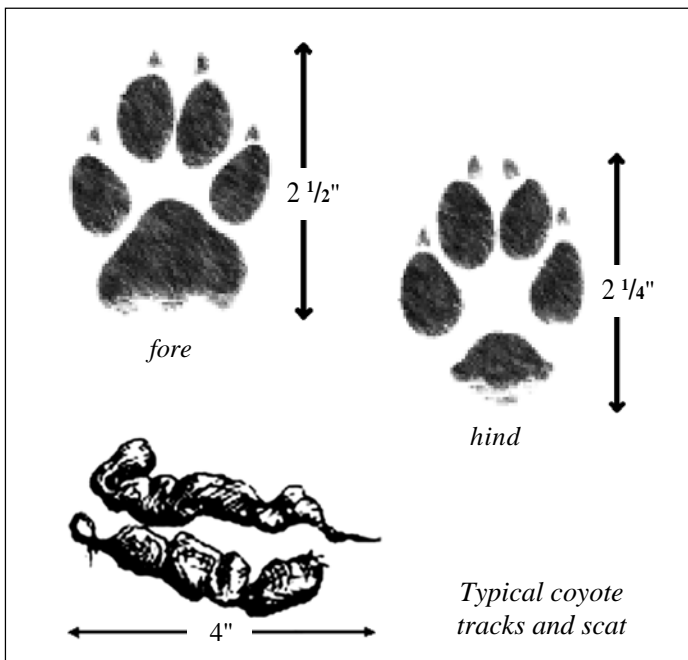
Coyotes have large, tawny or rust-colored triangular ears. Their muzzle is long, slender and pointed, terminating with a shiny black nose. Eye color ranges from yellow to light brown. The black-tipped tail is rather bushy, especially during winter.

A coyote is endowed with a keen sense of smell and excellent hearing. Their vision is good, but is not the dominant sense as in man. They depend more on their hearing and sense of smell.

Coyotes vary greatly in their height and weight from north to south. Coyotes in cold, northern climates are much larger. In southern, desert environments, they are smaller and more slender. Across its geographic range, adults may weigh anywhere from 15 to 55 pounds. Their height at the shoulder may range from 15 to 26 inches and the total length (body and tail) may range from 40 to 60 inches. Males are typically larger than females. Individuals may not reach full adult size for one year or more.

In winter, coyotes typically have a salt-and-pepper appearance with light underparts. Their summer pelage is typically tawny on the back with white undersides, and their legs, muzzle, and ears will sometimes have a faint rusty color. Like a domestic dog, a coyote sheds and replaces its hair year-round. A single heavy molt occurs in spring, when the winter guard hairs and undercoat is shed. As winter approaches, there is a lengthening and thickening of the guard hairs and undercoat.

The track of a coyote is much the same as that of a medium-sized dog. The only difference might be that the coyote's track is a little more elongated. Front tracks are 2 to 3 inches long with a narrower width. The tracks of the hind feet are smaller in length and width than the those of the front tracks. Four toes and claw marks show up in the prints.



Food Habits

Coyotes eat almost anything. Although they prefer a carnivorous diet, including mainly mammals such as voles, prairie dogs, cottontail rabbits, ground squirrels and mice, and to a lesser extent deer and deer fawns, birds, snakes, lizards and large insects, coyotes will also feed upon plant matter and carrion. Opportunity plays the biggest role. Near human habitation, fare may consist of trash or pet chow. On a ranch or farm, prey may include poultry and young livestock. In a farm belt, their diet will include vegetables, fruits, and berries.

Coyotes can be either solitary or social hunters, depending on the time of year and circumstance. A family group is better able to take down larger prey such as a deer or to double-team in out-running prey. Single individuals are forced to hunt smaller animals and to scavenge opportunistically.

Coyote scat is similar in size and shape to that of a domestic dog, except that the droppings of a coyote contain hair, bone fragments, berries, and seeds, revealing its omnivorous diet. As a coyote travels around its territory, it leaves urine and scat along roadways, streambeds and game trails. By so doing, the coyote identifies itself and advertises its territory.

Behavior

True to its name, the song dog engages in regular nighttime choruses with other family members. At the prompting of one or more individuals, the family breaks into a cacophony of howls, barks and yips. The song of the coyote is subject to interpretation, but seems to communicate pleasure, excitement, jubilation and team spirit.

Apart from the song, the coyote communicates by means of other expressions. Barks with howling from a single coyote are often a call in search of other family members. A combination of barks and howls sometimes warns a territorial interloper against intrusion. Yelps, yips and barks are used at play or during conflicts to express a variety of emotions. The scientific name of the coyote, *Canis latrans*, literally means “barking dog.” And, the coyote’s common name is borrowed from the Spanish/Mexican term for the species, an adaptation of the word *cóyotl*, the Nahuatl (Aztec) name for the animal.

A coyote is capable of sustained speeds of 40 mph and bursts of 45 mph. Its acrobatic ability is impressive, especially when it chases and then catches a mouse on the fly. As far as a coyote’s jumping ability, documentation suggests that eight feet is an average limit. Coyotes are capable diggers and excellent swimmers.

Coyotes are mostly nocturnal in habit, but can be crepuscular (active at dusk and dawn) or diurnal, depending on a variety of circumstances. Nocturnal activity allows for movement under the cover of darkness, which is usually preferable. Most prey species, such as hares and rodents, are easier to catch when they are active, and their nighttime activity period drives that of the coyote. Around human habitation, coyotes are especially prone to nighttime activity. Temperature, weather, seasons, prey and competition all figure into activity patterns.

Coyotes occupy and defend territories. The most vigorous defense is mounted by a mated pair, during the denning season. The size of the territory will be as large as needed for an individual to satisfy its life requirements for food, water, shelter and space. Prey abundance and distribution is the most important element to be considered for an animal that makes its living from a largely carnivorous diet.

Reproduction

Courtship occurs in January or February. Males wander in search of a mate, but in the end, it’s the female that selects the mate and submits to breeding. Following conception, gestation ranges from 58 to 65 days with birthing occurring in early spring. Pairs are monogamous and may stay together for several years, or even for life.

The young are nurtured in dens, which may be dug under boulders, tunneled into cutbanks, located under rock ledges, or burrowed into some abandoned den. Den locations may also include hollow trees or thick brambles. A den will typically have more than a single entrance and may be used year after year.

The average number of pups is 6, but the litter size has been known to range from 1 to 19. Pups weigh about 8 ounces. They are born blind, lop-eared and pudgy, resem-

bling a dog more than a coyote. In about 2 weeks, the pups' eyes open and shortly thereafter, they begin to explore the den and surrounding area. The female suckles the pups for 4 to 5 weeks. Beginning the third week, pups are introduced to semi-digested food, brought to the den by the male, which engorges on a kill, and carries the food to the den in his stomach. By the fifth or sixth week, pups transition from milk to flesh.

Somewhere between the sixth and the tenth week, the pups are led on hunting forays away from the den. During summer pups improve in life skills. By fall they are capable of hunting on their own. In early winter, young males typically disperse to establish their own territories. Young females stay in or adjacent to their parent's territory.

Threats to Survival

Humans are the coyote's most common "predator" through shooting, trapping, poisoning and accidental death. Where man is absent, the song dog's worst enemy is the wolf, which treats the coyote as a competitor. Other predators of the coyote include feral dogs, domestic dogs, cougars, bears and wolverines.

A newborn pup has less than a 50% chance of surviving to its first year. Natural causes of mortality include disease, predation, and starvation. Human-caused mortality is primarily due to shooting, trapping and collisions with vehicles. If a pup survives past its first birthday, life expectancy improves. If the den and pups occur in an area where coyote control is practiced aggressively, life expectancy will be considerably shorter.

Coyotes are susceptible to the same diseases and parasites as other members of the dog family and many other domestic and wild mammals. Diseases and parasites affecting coyotes include distemper, parvo virus, hepatitis, mange, mites, ticks, rabies, tularemia, fleas, tape worms, round worms and heart worms.

In captivity, coyotes have lived as long as 15 to 18 years. In the wild, longevity might be 10 to 14 years however few coyotes live beyond 6 to 8 years.

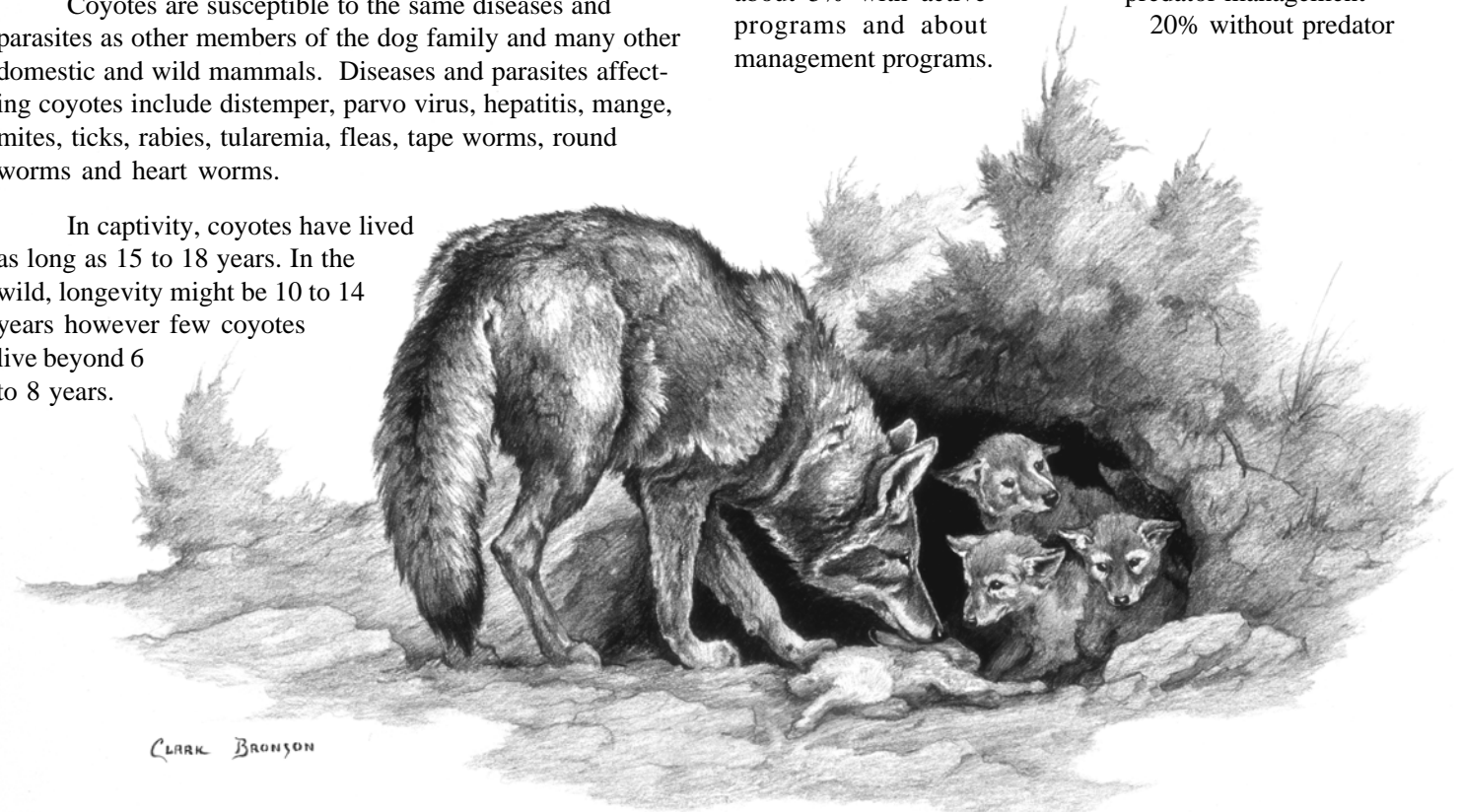
Coyotes and People

Coyotes are among a few animals that generate a great deal of emotion and controversy among people. Many people are thrilled to see a coyote or hear them yipping and howling when out camping—the coyote represents a romantic icon of the American West. Others who work the land sometimes see the coyote as an enemy, a predator which kills livestock and threatens their livelihood. A naturalist's viewpoint might be that the coyote is a valuable component of a healthy ecosystem.

The federal government first became involved in predator control in the early twentieth century. Initially the government mainly conducted studies and demonstrations of predator control tools and techniques. Increased pressures from the livestock industry, however, led to substantial federal funding for full-fledged predator control programs on public lands. In 1931, Congress passed the National Animal Damage Control Act, directing the government to "conduct campaigns for the destruction or control of (predatory) animals."

Over time, changing public attitudes towards predators and increased concern about the inhumane means by which coyotes were being killed led to changes in predator management. For example in 1963, the Leopold Commission was established by U.S. Secretary of the Interior Stewart Udall to evaluate federal predator control programs. Empirical evidence assessed in the Committee's 1964 report did not support coyotes being widespread predators on livestock. Estimates of livestock (sheep, goats and cattle) losses due to predation reported in more recent research are about 5% with active predator management and about 20% without predator management programs.

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In contrast, the vast majority of livestock loss is actually due to disease, severe weather, and difficulty during calving or lambing. In 1972, the use of poisons for the control of predators was banned on federal lands and later, the interstate shipment of Compound 1080 and other poisons used to control predators was made illegal.

Today, an agency known as Wildlife Services (formerly Animal Damage Control), part of the U.S. Department of Agriculture's Animal and Plant Health Inspection Service, oversees predator control across the nation. They recommend non-lethal predator control methods such as fencing, guard dogs and night-time enclosures as primary control measures. When lethal control is necessary, they advocate direct control methods such as trapping instead of the use of poisons, or livestock collars that target the specific animals responsible for depredation problems. Aerial gunning, which does not focus on specific depredating animals, still however accounts for over 30% of the coyotes taken each year in some western states. This method is intended as a preventative measure to reduce local coyote populations before any livestock losses occur.

In Utah, the coyote is not a protected species. The Utah Division of Wildlife Resources does not have jurisdiction to manage the species. Instead, coyotes can be taken at any time, anywhere, and for any reason, as long as there is no violation of other laws such as those related to discharging a firearm, illegal trespass, etc.

Despite millions of coyotes being taken during the past century, and ongoing control efforts, coyotes not only still flourish, but are expanding their range. Like "Wile E. Coyote," in the *Roadrunner* cartoon, coyotes seem to cheat death again and again. Besides being highly intelligent and adaptable, coyotes are able to employ physiological and behavioral means to counteract threats to their existence. For example, when coyote populations are lowered, females tend to produce larger litters and more females reproduce. This is known as "density dependent reproduction." Also, those coyotes that evade being killed, are typically the toughest, strongest and smartest members of the species, thus through selection, the cleverness, speed and wariness of coyotes has, over time, been inadvertently enhanced by those seeking to eliminate them.

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Coyotes are not usually dangerous to people. A potential exception is if they become habituated to people and lose their natural fear. To minimize attracting urban coyotes, keep garbage in sturdy animal-proof containers, do not intentionally feed coyotes, and keep bird food inaccessible. In certain situations, pets may become prey for coyotes. To address this problem, keep pets in a fenced area during the day and bring them indoors at night. Feed your pets indoors and don't store pet food outside. If bitten, by a coyote, contact a public safety dispatcher to have the animal captured and held for rabies testing.

What You Can Do

- Learn more about coyotes and the important role of predators in ecosystems;
- Join or support predator conservation organizations;
- Take care to prevent coyotes from becoming nuisance animals by keeping refuse contained and pets indoors.

Additional Reading

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