



Wildlife Information Guide

COYOTE (*Canis latrans*)

DESCRIPTION

The coyote (aka brush wolf or eastern coyote) is a medium-sized member of the dog family, typically weighing between 25-35 pounds, though some individuals may be larger. Eastern coyotes, found throughout New England, tend to be larger than their western counterparts due to historical hybridization with wolves. They possess several distinctive physical characteristics that set them apart from domestic dogs and other canids.

PHYSICAL CHARACTERISTICS

Coyotes have a slender, elongated muzzle and large, pointed, upright ears that are proportionally larger than those of domestic dogs. Their eyes are yellow rather than brown, providing another distinguishing feature from most domestic breeds. The tail is bushy and drooping, typically carried low, with a characteristic black tip.

Their coat coloration varies considerably but is typically grayish-brown with reddish tinges behind the ears and around the face. Coloration can range from silver-gray to black, with lighter fur around the nose and undersides. During winter months, their fur may appear more gray than brown. The coat consists of a dense undercoat and longer guard hairs, providing excellent insulation against New England's harsh winters.

Adult coyotes measure approximately 3-4 feet in length, excluding the tail, which adds another 12-16 inches. They stand about 24 inches tall at the shoulder. Males are typically 10-15% larger than females, though size variation exists within populations.

BEHAVIOR

Coyotes exhibit complex social behaviors that have adapted remarkably well to both rural and urban environments. Their social structure is highly flexible and depends largely on resource availability and population density. **Social Organization** Contrary to earlier beliefs that coyotes were strictly solitary, recent research reveals they engage in sex-specific social behaviors. Related females often share common areas and may cooperate in raising young, while unrelated males sometimes form small groups of up to four individuals to maintain territorial advantages against competing males. The basic



social unit is typically a mated pair with their offspring. In areas with abundant resources, larger pack structures may develop, though these are generally smaller and less stable than wolf packs. Pack size rarely exceeds 6-8 individuals and usually consists of the breeding pair, their current year's offspring, and occasionally one or two older offspring from previous years. **Territory and Communication** Coyotes are territorial animals that establish and defend home ranges varying from 2-15 square miles, depending on habitat quality and prey availability. Urban coyotes often have smaller territories due to higher resource density, while rural coyotes may require larger areas. Their characteristic vocalization is a howl made by solitary individuals, though they employ a complex repertoire of vocalizations including barks, yips, and group howls. These vocalizations serve multiple purposes: maintaining contact between pack members, announcing territorial boundaries, and coordinating hunting activities. Group howling sessions, often heard at dawn and dusk, help reinforce social bonds and may serve to intimidate neighboring coyote groups. Scent marking through urine, feces, and glandular secretions plays a crucial role in territorial communication. Coyotes frequently mark prominent landscape features such as rocks, stumps, and trail intersections. **Activity Patterns** Coyotes are primarily crepuscular, being most active during dawn and dusk hours, though they may adjust their activity patterns based on human activity and food availability. In urban areas, they often become more nocturnal to avoid human contact. They remain active throughout winter, unlike some other mammals, though they may reduce activity during extreme weather conditions. Their movement patterns show remarkable adaptability to landscape features. They commonly use human-made corridors such as railway lines, power line easements, and abandoned roads for travel, while avoiding direct human contact whenever possible.

REPRODUCTION

Coyote reproduction follows a highly regulated system that demonstrates remarkable biological adaptations to environmental pressures and population dynamics. **Breeding System** Under normal conditions, only the dominant "alpha" male and female within a social group breed, while behaviorally suppressing reproduction among subordinate individuals. This reproductive suppression occurs through a combination of physical dominance, stress-induced hormonal changes, and social interference with mating attempts. The breeding season typically occurs from January through March, with peak activity in February. Females enter estrus once per year for a period of 2-5 days. During this time, the breeding pair may remain together almost constantly, with increased territorial marking and aggressive behavior toward potential competitors.

Gestation and Birth Following successful mating, the gestation period lasts approximately 58-65 days. Pregnant females select den sites in late March or early



April, often choosing locations such as enlarged woodchuck burrows, natural rock crevices, hollow logs, or dense brush piles. Urban coyotes may den under decks, in storm drains, or in other protected artificial structures. Litter sizes typically range from 3-7 pups, with an average of 4-5. Litter size often correlates with prey availability and overall population health. In years of abundant food resources, larger litters are common, while environmental stress may result in smaller litters or failed reproduction entirely. **Pup Development** Coyote pups are born blind, deaf, and completely helpless, weighing approximately 8-10 ounces. Their eyes open at 10-14 days, and they begin to hear shortly after. The female remains with the pups almost constantly for the first 2-3 weeks, while the male provides food for the family. Pups emerge from the den at 3-4 weeks of age and begin eating regurgitated food from both parents. Weaning begins at 5-6 weeks, though pups may continue to nurse occasionally until 8-10 weeks of age. By 8-10 weeks, pups accompany parents on hunting excursions, learning essential survival skills through observation and play behavior. **Dispersal** Juvenile coyotes typically remain with their parents through their first winter, dispersing the following spring or early summer at 9-12 months of age. Dispersal patterns show significant variation, with some individuals traveling over 100 miles from their natal territory, while others establish territories relatively close to their birthplace. Dispersal timing and distance often depend on population density, habitat quality, and social dynamics within the family group. In areas where adult mortality is high due to human control efforts, young coyotes may disperse earlier and over shorter distances to fill vacant territories.

DIET

Coyotes are true omnivores with remarkable dietary flexibility that has contributed significantly to their successful expansion across North America. Their opportunistic feeding behavior allows them to exploit a wide variety of food sources depending on seasonal availability and habitat type. **Primary Prey Species** The foundation of the coyote diet consists of small to medium-sized mammals. In New England, primary prey species include:

- **Rodents:** Meadow voles, deer mice, woodrats, and squirrels comprise a significant portion of their diet, particularly during winter months when other prey may be less available.
- **Rabbits and Hares:** Both eastern cottontails and snowshoe hares represent important prey species, especially during spring and summer when young rabbits are vulnerable.
- **Other Mammals:** Muskrats, woodchucks, and occasional smaller carnivores such as skunks and raccoons may be taken when opportunities arise.

Large Prey Eastern coyotes, being larger than their western counterparts due to



historical wolf genetics, are capable of taking larger prey than previously recognized. They regularly prey on white-tailed deer, particularly fawns during spring and summer. In some regions, adult deer comprise up to 50% of their diet during winter months when deer are weakened by harsh conditions and deep snow. Hunting strategies for large prey often involve pack cooperation, though individual coyotes are also capable of successfully taking adult deer. They typically target sick, elderly, or injured individuals, though healthy adults may also be taken during favorable conditions. **Seasonal Dietary Variations** Coyote diets show pronounced seasonal fluctuations reflecting prey availability and abundance:

Spring: Heavy emphasis on newborn mammals including deer fawns, rabbit kits, and ground-nesting birds and their eggs. This season provides abundant, easily captured protein during the energy-demanding pup-rearing period.

Summer: Continued focus on young mammals, supplemented by increasing amounts of insects, fruits, and berries. Grasshoppers, beetles, and other insects may comprise up to 25% of summer diet in some areas.

Fall: Increased consumption of fruits and berries, including apples, grapes, and various wild berries. Small mammal hunting continues, with preparation for winter energy storage.

Winter: Maximum reliance on mammalian prey, particularly deer and rabbits. Carrion becomes increasingly important, and coyotes may scavenge road-killed animals and hunter-killed deer remains.

Urban Diet Adaptations Urban and suburban coyotes show remarkable dietary adaptability, though their consumption of anthropogenic (human-provided) food sources can lead to health problems and increased human-wildlife conflict. Urban diet components may include:

- Pet food left outdoors
- Garbage and compost materials
- Fallen fruit from ornamental trees
- Small pets (cats and small dogs)
- Urban wildlife such as rats and urban birds

Research indicates that urban coyotes consuming higher percentages of anthropogenic foods often show decreased body condition and altered gut microbiomes compared to their rural counterparts, potentially leading to increased disease susceptibility.

DEFENSIVE MECHANISMS

Coyotes possess a sophisticated array of defensive mechanisms that combine physical attributes, behavioral adaptations, and social strategies to avoid predation and human persecution. **Physical Defenses** Speed and Agility: Coyotes can reach speeds of up to 40



mph in short bursts and maintain speeds of 25-30 mph over longer distances. Their lightweight build and long legs provide exceptional agility for navigating varied terrain and escaping threats. **Sensory Capabilities:** Exceptional hearing allows coyotes to detect potential threats from considerable distances. Their large, mobile ears can pinpoint sound sources with remarkable accuracy. Combined with excellent night vision and a keen sense of smell, these sensory abilities provide early warning systems against danger. **Bite Force:** While not as powerful as larger canids, coyotes possess sufficient bite force (approximately 1,500 pounds per square inch) to defend themselves against most potential predators and threats. **Behavioral Defenses** **Wariness and Avoidance:** Coyotes exhibit extreme wariness toward humans and potential threats, often detecting human presence from hundreds of yards away. This behavior, likely intensified by generations of persecution, represents their primary defense mechanism. **Nocturnal Activity:** Shifting to primarily nocturnal activity patterns in areas with high human activity reduces exposure to threats while maintaining access to resources. **Cover Utilization:** Coyotes expertly use natural and artificial cover to remain concealed. They prefer to travel along edges between habitat types and use vegetation, topography, and structures to avoid detection. **Social Defensive Strategies** **Group Defense:** When threatened, family groups may coordinate defensive behaviors. Parent coyotes will aggressively defend dens containing pups, sometimes employing distraction displays to lead threats away from vulnerable young. **Territorial Behavior:** Established territories provide familiarity with escape routes, den sites, and safe areas. Territorial coyotes often have multiple den sites and safe refuges throughout their range. **Communication Networks:** Howling and other vocalizations can alert other coyotes to potential threats, creating area-wide awareness of danger. **Anti-Predator Behaviors** Adult coyotes have few natural predators, though they may occasionally fall prey to mountain lions, wolves, or large bears where these species overlap. More commonly, they face threats from domestic dogs, vehicles, and human persecution. **Mobbing Behavior:** Coyotes may engage in mobbing behavior against larger predators, using coordinated harassment to drive threats from their territory. **Den Site Selection:** Careful selection of den sites with multiple entrances and escape routes provides security for vulnerable pups and pregnant females. **Vigilance Patterns:** Coyotes maintain high levels of vigilance during feeding and other activities, frequently scanning their surroundings for potential threats.

MANAGEMENT CONSIDERATIONS

Effective coyote management requires understanding their behavior, biology, and the specific circumstances leading to human-wildlife conflicts in residential and municipal settings. Their adaptability and intelligence require comprehensive, science-based



approaches rather than simple control measures. Management strategies should emphasize prevention, timing, habitat modification, and when necessary, professional removal services.

SCIENTIFIC REFERENCES

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This document represents current scientific understanding of coyote biology and behavior as of 2025. Information should be used in conjunction with local wildlife management guidelines and regulations.

