



Successful coexistence with coyotes requires an understanding of how coyotes survive, as well as an understanding of how humans can shape coyote behavior.

Program Goals

- Gain a basic understanding of coyote natural history and behavior
- Learn essential predator and coexistence vocabulary
- Assess a variety of coyote sightings, encounters, incidents, and attacks for normal, abnormal, and unacceptable coyote behavior
- Understand the human role in shaping urban coyote behavior
- Provide access to additional information and resources



Program Section 1

Primer on coyote biology and behavior: Coyote Myth vs. Fact

“Our limited understanding of how coyotes succeed in urban landscapes hampers management of this animal. Even knowledge of their basic ecology is incomplete.” (Gehrt 2006)

“How can you explain the coyote’s success? I guess if you wanted to use one word, it’d be plasticity.” Eric Gese, predator ecologist, Utah State University

Humans have impacted the coyote’s natural range

Fact. Coyotes were originally a prairie species. Extirpation of wolves, deforestation, and the suburban landscape have all contributed to a range expansion which extends across the entire United States, up into Canada and Alaska; and down into the Yucatan, Belize, and Panama.

Coyotes are carnivores

Myth. Dentition classifies them as carnivore, but scat and behavior indicates scavenger, omnivore, or opportunistic feeder; the ultimate flexitarian.

“Although coyotes are predators, they are also opportunistic and shift their diets to take advantage of the most available prey.” (Gehrt 2006)

Scientific analysis of scats indicates:

(1940 Study)

- Rabbits and Rodents: 77.4 %
- Carrion: 25.5 %
- Livestock: 21.9%
- Wild birds: 15%
- Deer 7.9%
- Fruits 6.7%

(Sand Dunes, late summer)

Insects: 80%

70.3% of diet beneficial to humans
11.5 % harmful (Murie, 1940)
Human food sources present 1.9% to 25% of the time. Domestic cat may be present in up to 13.6% (Wirtz *et al* 1982)

(2006 urban Chicago)

- Small rodents 42%
 - White-tailed deer 22%
 - Fruit 23%
 - Cottontail 18%
 - Birds 13%
 - Raccoon 8%
 - Grass 6%
 - Invertebrates 4%
 - Human-associated 2%
 - Domestic cat 1%
 - Muskrat 1%
 - Unk 1%
- ~1400 scats from urban Chicago coyotes.

Coyotes live and hunt in packs

Myth. Hunting style depends on prey, habitat, and time of year. Most research shows that coyotes are primarily solitary hunters, but may hunt cooperatively with family members, particularly in winter. They may team up to take large prey.

Lifestyle depends on age and dominance. May live a solitary and transient lifestyle, may be a monogamous pair, or in family groups dominated by alpha male and female (alpha pair with 1-5 subordinates that are relatives) In some urban areas, coyotes may defend territories as groups with 5-6 adults and their offspring.

Coyotes do not attack humans

Myth. Not only do coyotes attack humans, but attacks are also on the rise. Only recorded fatality is a three-year old in 1981.

I should be nice to the coyote when it is in my neighborhood

Myth. You should haze a coyote that is in your yard or roaming the streets of your neighborhood. Hazing includes: bright lights, banging on pots and pans, speaking forcefully, tossing rocks, etc. A coyote should not feel welcome in neighborhoods.

Coyotes are smarter than my pet dog or cat

Fact. Years of wild living trump your pet's breeding for looks and demeanor. No matter how smart you think your dog or cat is, they are no match for a savvy suburban coyote.

Coyotes are naturally skittish around humans

Fact. A wild coyote possesses a natural fear of humans. A coyote that has been fed or welcomed into a neighborhood or yard will lose its fear of humans. A coyote that is not afraid of humans is *habituated*.

Humans create a food and habitat rich environment for coyotes

Fact. "Anthropogenic sources of food and water in the form of unsecured garbage, pet food, free-roaming cats and small dogs, rodents, fruit trees, fruits, ponds, and irrigation systems can attract coyotes." (Fredriani *et al* 2001)

Coyotes are nocturnal

Myth. Coyotes are crepuscular and diurnal in the absence of humans, in areas where there are humans and coyotes are harassed, activity changes to nocturnal (Kitchen *et al*, 2000)

The idea that the coyote is a "trickster" is a myth

Myth. There are plenty of documented cases of coyotes tricking pets into play, using tails as distractions while another ambushes, using outside distractions to their benefit, to warrant this reputation.

Removing problem coyotes is an effective way to solve conflicts

Myth.

- "Following removals, populations return to pre-control levels, which are largely controlled by food resources."(Knowlton *et al.* (1999)
- "While trapping programs allow public officials to tell the public that they are doing something about the situation, their effectiveness is questionable because of the coyote's ability to rebound and recolonize vacant territories." (Knowlton *et al.* 1999; Sacks *et al.* 1999; Gompper 2002)
- "To suppress a coyote population over the long-term, more than 70% of the coyotes would need to be removed annually." (Connolly and Longhurst 1975)
- "Lethal removal may stimulate improved reproductive success and pup survival in the remaining coyote population." (Connolly and Longhurst 1975, Davison 190, Sterling *et al.* 1983, Crabtree and Sheldon 1999)

It is easy to remove problem coyotes from a neighborhood.

Myth.

- Relocation: By permit only. CDOW does not authorize relocations of predators in the metro area because it is simply moving a problem.
- Trapping: A 30-day permit for trapping can be obtained from county health officials in cases where there is a documented threat to HUMAN health and safety.
- Shooting: Most municipalities do not allow the discharge of firearms in neighborhoods. USDA Wildlife Services can be hired to remove coyotes using firearms. Current price tag is \$96,000/year. (In 2001, the cost of using this service averaged out to about \$400 per coyote removed)

The coyote I see looking in my backyard from the bike path lives in the den I see nearby at the golf course.

Myth. Coyote home ranges vary greatly, depending on habitat, social status, and food resources. In general, home ranges average 3 – 25 miles, but the details are noteworthy:

- Wild male coyotes have a home range of 8 to 16 square miles, females have 3.1 – 3.9 square miles (Gipson and Sealander 1972, Chesness and Bremicker 1974)
- Coyotes in family groups have smaller home ranges (3 sq. miles)
- Solitary coyotes have larger ranges (25 sq. miles) (Gehrt 2006)
- Suburban coyotes occupy a home range of .25 - .56 square miles (Shargo, 1988)

“A three-legged male had a home range extending over 40 square miles and 3 municipalities. Until this study, few people would have suggested the conflicts extending over three cities could be the work of one coyote.” (Gehrt 2004)

Coyotes are not competitive creatures

Myth. Coyotes defend territories and food resources from each other and from other species. They do not tolerate competition from mesocarnivores such as foxes, raccoons, skunks, feral cats, and domestic pets.

In general, people love coyotes

Myth. “Coyotes are just a little too much like the big, bad, wolf. Most people are perfectly happy to have them anywhere but in their own backyards.” Robbie Fearn, Cape Wildlife Center



Program Section 2: Essential coexistence vocabulary

“Inconsistent and exaggerated reports of coyote attacks can lead to heightened public fears.” (Fox, 2006)

Managers need accurate definitions of dangerous coyote behavior and clear guidelines for when such behavior warrants direct intervention.

Hazing/Aversive Conditioning: Using unpleasant sounds, objects, etc. to discourage a behavior.

Encroachment: Trespass or entry into another’s property without permission.

Depredation: Predation on domestic animals that a predator would not normally encounter in the wild.

Habituation: A learned behavior in which an animal exhibits a lessen response with repetition of stimulus. The process of getting an animal used to a situation that it normally avoids.

Observation: The act of noticing or taking note. Residents may make an *observation* of tracks, scat, vocalizations.

Sighting: Visual observation of an animal. Vast majority of human-coyote interactions are *sightings*.

Encounter: An unexpected direct meeting that is without incident .

Incident: A conflict with an unsafe situation, animal displayed unacceptable or abnormal behavior. Most attacks on pets fall into this category.
(Palo Alto, CA, Open Space Nature Preserves Policies and Procedures Manual, 2007)

Attack: An aggressive action initiated by the animal that involves physical contact with a human. Human is injured or killed by a wild animal. (Fox 2006)

Provoked: When a person enters an animal's personal space or purposefully tries to touch or injure, or lures (intentionally or not) with food or other attractant.

Unprovoked: Person did not enter an animal's personal space, try to touch, injure, or use an attractant.



Program Section 3: Learning to tell the difference between normal coyote behavior and nuisance coyote behavior is essential. Using proper vocabulary to describe interactions is essential.

“There were packs [of coyotes] running through the neighborhood at night howling up a storm.”

“I was sitting at the kitchen table one morning drinking coffee and two coyotes looked into my yard—in broad daylight.”

“A coyote ran through the parking area in broad daylight with a cat in its mouth.”

“I was walking my small dog on a flexi-leash when a coyote popped out of the cattails about 8 feet ahead of us. It stared us for a moment with its tail down, then it ran away along the edge of the cattails.”

“A coyote followed me and my small dog along the High Line Canal.”

“I let my deaf, 21-pound dog out in the backyard—which backs up to a golf course—at about 11 p.m. A coyote jumped the fence, attacked, and killed my dog.”

“I was with my toddler at Jewell Wetland when I noticed a coyote was watching me and my children.”

“I was walking along the practice fields when I noticed a coyote watching me from the other side of the drainage. As I got closer, it ran away.”

“A coyote tugged at a child's jacket when he approached the coyote, hand outstretched.”

“I can hear the coyotes killing bunnies at night.”

“A coyote chased a child to the school bus.”

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