

Managing Conflicts with Wildlife: Living with Coyotes¹

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The omnivorous coyote is a relative newcomer to Florida that plays an important role in ecosystems and food webs. Of particular importance and possible benefit may be their potential ability to control populations of pest species such as some rodents.

Although rare, there are situations where coyotes can become dangerous or damaging. In this document, we present some facts about coyotes, describe dangers and problems they may cause, and provide suggestions on how to cope with these issues.

Getting to know coyotes

- Coyotes (*Canis latrans*) are members of the dog family (Canidae), referred to as the American jackal, brush wolf, or prairie wolf (Figure 1, and have recently (since the 1960s) expanded their range to Florida and the eastern United States.
- They are now found in every county of Florida and range throughout North America and much of Central America.
- The coyotes of the eastern United States are sometimes larger than their western counterparts (particularly in the Northeast), possibly due to hybridization with wolves and dogs during their range expansion. They can hybridize

with domestic dogs, gray wolves, and red wolves, but this appears to be rare in Florida.



Figure 1. Coyotes are common throughout Florida.

Credits: W. M. Giuliano

- Accurate estimates of coyote numbers are unknown and likely vary by habitat type and region. Some locales have reported coyote densities approaching 1 animal/mi².
- Coyotes have a dog- or wolf-like appearance that varies by region, age, and sex, and their pelage (coat) can vary. Coat colors often include mixtures of rusty brown, tans, whites, grays, and even black. On average, adult males in Florida likely weigh 25 lbs, but they can weigh over 30 lbs. Males are larger than females. Coyotes reach full size in less than two years.
- They have an excellent sense of smell, good hearing, and keen vision.

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- Coyotes are social and use a variety of vocalizations (e.g., howls, yips, and barks) and scent marking to communicate.
- Coyote sign includes tracks (Figure 2), scat (Figure 3), trails, and vocalizations.



Figure 2. Coyote tracks often give away their presence but are difficult to differentiate from dog tracks.
Credits: W. M. Giuliano



Figure 3. Coyote scat.
Credits: Whitney Cranshaw, Colorado State University, Bugwood.org

- They use a variety of habitat types, including areas of high human activity and development, and they are omnivorous, opportunistic foragers. They tend to prefer animal material (e.g., rodents, deer fawns, turkey poults, lizards, insects, fish) to plant material (e.g., grasses, persimmons, watermelons, berries), but they will eat almost anything, even some carrion (dead animals) and garbage, all of which makes them well suited for urban environments.
- Coyotes typically breed once a year in winter and are sexually mature at 1 year of age.
- After a gestation (pregnancy) of about 2 months, females typically produce a litter of six pups in a den (e.g., hollow log, burrow, dense vegetation), where the pups stay for 3–10 weeks. They often exhibit a strong

density-dependent reproductive response, where litter sizes may increase as the number of coyotes in an area declines.

- Coyotes may be found alone or in large packs, but most often occur as pairs or small family groups.
- They usually live 5–6 years.
- While a variety of factors lead to coyote deaths, harvest (trapping and hunting), road kills, and predation (where other large carnivores occur such as panthers in Florida and gray wolves in other parts of the range) are leading causes of mortality.
- Coyote home range size varies widely. Depending on food, season, and other factors, a given coyote may range over more than 10,000 acres.
- Coyotes are *crepuscular*, which means that they are most active at dawn and dusk, but they can be seen at any time of day.

Potential risks and damage associated with coyotes

- The opportunistic and omnivorous tendencies of coyotes and their ability to adapt speedily to nearly any habitat type and human activity leads to many conflicts with people, pets, livestock, and other wildlife.
- Coyotes may compete for food with many wildlife species, including bobcats and foxes.
- Coyotes may consume nests, young, and adult reptiles (including snakes and sea turtles), ground-nesting birds (including turkeys), and mammals (including deer fawns), which may lead to population declines in these species.
- They can be a significant predator upon young domestic livestock, including calves, swine, poultry, sheep, and goats; and possibly free-roaming pets, such as dogs and cats (Figure 4).



Figure 4. Coyotes will prey upon young livestock.
Credits: USDA ARS

- Identifying the predator responsible for livestock depredation can be difficult, with coyotes often blamed when dogs or other predators are the responsible species.
 - Indicators of coyote depredation on livestock include bite marks around the neck and throat; signs of attack on the hindquarters and sides; loss of tail; bite marks and consumption of the nose, especially on young animals; and feeding primarily on the flank with consumption of the internal organs (Figure 5).



Figure 5. Indicators of coyote depredation often include livestock with bite marks on the hindquarters.
Credits: R. Boughton

- Indicators of depredation by other native predators such as bobcats, panthers, and black bears can be similar to that of coyotes, but differentiation is sometimes possible because the latter two species often additionally crush the skull and/or spine, and sometimes drag prey away and cover it to hide it for later use.
- Indicators of domestic/feral dogs include livestock with bite marks and mutilation that appear indiscriminately around the body; and very little or no feeding on the animal.
- Coyote depredation on certain crops such as watermelons can be significant.
- Coyotes may serve as a potential reservoir for diseases and parasites affecting native wildlife, livestock, and people. The risk of this is small, however, and it is not considered a significant threat.
- Coyote attacks on humans are extremely rare and typically cause little injury.

How to prevent risks and damage associated with coyotes

- Before undertaking any coyote control measure, review local laws. The Florida Fish and Wildlife Conservation Commission (<http://myfwc.com/>) and USDA-APHIS

Wildlife Services (http://www.aphis.usda.gov/wild-life_damage/) are excellent sources of such information.

- On private land in Florida and with landowner permission, there is no closed season, bag or size limit when hunting coyotes (hunting laws are different in other states). Legal methods include gun, bow, and snare, and the use of lights at night is permitted. Padded steel leg-hold traps may be used but only with special permit.
- On public lands, coyotes have various classifications, and, depending on the property, may require licenses and permits to be legally taken.
- Small numbers of livestock may be protected by keeping them in corrals at night rather than leaving them out to pasture or free ranging. Bringing birthing herds close to human habitation, being vigilant, and responding quickly to coyote intrusions will also help protect livestock.
- Exclusion fencing can get expensive, but for relatively small areas it may be an effective control option. Fences more than 5 feet tall, slightly buried, with a 3-foot overhang and mesh of no more than 4 inches are best. Electric fencing can also be effective.
- Guard dogs can be an effective livestock protection method (Figure 6). Donkeys and llamas have also been used as guard animals.

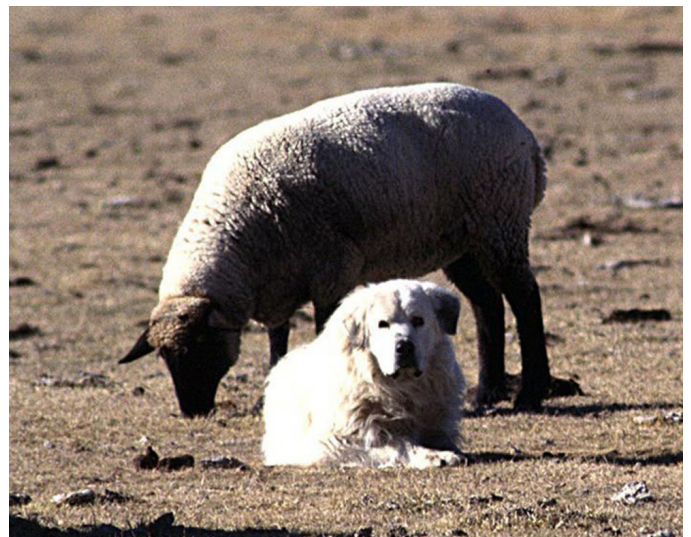


Figure 6. The presence of guard dogs can often deter coyotes.
Credits: Terry Spivey, USDA Forest Service, Bugwood.org

- Protect cats and dogs and other small domestic species by keeping them indoors or in fenced areas, and do not leave their food outside. Leaving food out may attract other animals on which coyotes feed (e.g., opossums) or coyotes themselves. Be wary when walking small dogs in wooded areas at dawn, dusk, or night, because this is when most coyote attacks on pets occur, and keep pets on a leash.

- It is unlikely that any amount of hunting or other population control will eradicate coyote populations, but it may be possible to limit further population expansion and damage at certain times of year (e.g., calving) by using a combination of methods on a sustained basis.
 - **Hunting** is an important population control method, is inexpensive, and provides recreational opportunities. Typically, coyotes are hunted by calling (e.g., wounded rabbit) to get them within range, and shooting.
 - **Trapping** will often be more successful at controlling numbers than hunting. Several types of traps are permissible for use, including cage, leg hold (requires special permit in Florida), and snare. Leg holds and snares are most effective and cage traps the least.
 - **Toxicants and Repellents** have been suggested as viable means of controlling or deterring coyotes. However, no poisons (toxicants) are legal for use in Florida, and repellants are typically ineffective.
- If you are attacked by a coyote:
 - Stand upright and aggressively fight back with any objects or even your bare hands.
 - Never run. Stand your ground.
 - Report the incident to your local Florida Fish and Wildlife Conservation Commission Regional Office (<http://myfwc.com/contact/>).

More Information

<http://edis.ifas.ufl.edu/pdffiles/UW/UW17100.pdf>

<http://edis.ifas.ufl.edu/uw127>

<http://myfwc.com/wildlifehabitats/profiles/mammals/land/coyote/>

<http://myfwc.com/wildlifehabitats/profiles/mammals/land/coyote/faqs/>

<http://myfwc.com/media/2675483/Living-With-Urban-Coyotes.pdf>