

Managing Conflicts with Wildlife: Living with Deer¹

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White-tailed deer are popular game animals in Florida. Deer are also an integral part of Florida's ecosystems. The foraging of controlled populations of deer maintains healthy plant communities, and deer are an essential food source for large predator species.

Deer rarely pose problems for people. However, there are rare situations where deer can cause some damage. In this document, we present some facts about deer, describe problems they may cause, and provide suggestions on how to cope with these issues.

Getting to know white-tailed deer

- White-tailed deer (*Odocoileus virginianus*) are ungulates (i.e., hooved mammals) of the deer family (Cervidae); a native throughout the Americas (Figure 1), and found in every Florida county.
- Florida has 4 subspecies of white-tailed deer, including the diminutive, endangered, and protected Key deer found only in the Florida Keys.
- Deer numbers vary widely throughout their range depending on habitat, and appear to be increasing throughout most of their range from historic lows in the 1800–1900s.
- Abundance of deer in the United States is estimated to exceed 26 million animals, and is well-above pre-European settlement levels. In some regions, deer densities may

exceed 100/mi²; most of Florida has fewer than 15 deer/mi².



Figure 1. Male Florida white-tailed deer.
Credits: J. Stehn, USFWS

- White-tailed deer size and color can vary with season and region. Males, and occasionally females, have antlers that are shed and regrown annually.
- Deer typically have solid-colored, greyish and/or reddish-brown hair throughout most of the body, white bands across the nose, white eye rings, a white “bib” on the throat, and white underparts; fawns have white spots (Figure 2). The underside of their tail is white—its namesake.

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- Florida deer weights are variable, with adult males (bucks; average 115 lbs) larger than females (does; average 80 lbs).



Figure 2. White-tailed deer fawns are spotted.
Credits: Alico, Inc

- They have excellent senses of smell and hearing and very good vision. Although long thought to be color-blind, recent research suggests deer can see some colors!
- Deer use a variety of vocalizations (e.g., grunts, bleats, whines, bawls, and blows) and visual signals (e.g., flashing the white underside of the tail), and also communicate using several pheromones and scents, sometimes associated with scrapes and rubs.
- Signs of deer include tracks (Figure 3), scat (Figure 4), trails, scrapes (Figure 5), and rubs.



Figure 3. Deer tracks indicate their presence.
Credits: S. Lanigan, UFIFAS

- Deer use almost all Florida habitat types, with food and occasionally cover availability driving their preferences. Being an edge species requiring a variety of vegetation types to meet their habitat needs, the best areas for deer

are usually areas with a mix for forest (e.g., hammocks) and rangeland (e.g., marshes, prairie, flatwoods). Agricultural lands can often provide a suitable habitat mix and supplemental food resources.



Figure 4. Deer scat or droppings.
Credits: W. M. Giuliano



Figure 5. Scrapes are used by deer to communicate.
Credits: W. M. Giuliano

- Deer are herbivores, with their primary food being browse (i.e., parts of woody plants including stems, leaves, seeds, and fruits). When available, hard mast (seeds and nuts) such as acorns are a preferred food, as are many soft mast (fruits and berries) species such as persimmon, blackberry, beautyberry, and saw palmetto.
- Throughout most of their range, deer breed in the fall (i.e., the rut). However, in south Florida, breeding may occur any time during the year. In good condition, deer can breed as early as 6 months of age, but usually do not do so until they are at least yearlings.
- In good condition, females will produce twin fawns. In Florida, due to naturally poor-quality habitat leading

to poor nutrition and condition, most deer typically produce a single fawn.

- Deer gestation (pregnancy) lasts ~201 days and they produce one litter of 1–3 fawns per year. Fawns remain with the doe for the first year until they are chased off, at least temporarily, by the mother when she produces next year's litter.
- The basic social unit of deer is the matriarchal family group, consisting of a mature female, her offspring from the current year, and her female offspring from previous years. Young males are driven off after the first year. Outside of the rut, adult bucks are segregated from females and can be found in bachelor groups (2–5 animals). During the rut, dominant males compete for access to females.
- It takes 3–5 years until deer are fully grown, and they usually live 8–10 years unless they are in areas with intense hunting pressure.
- Deer mortality is greatest during the first 6 months of life (30–90% mortality) and then improves with age. Predation, particularly for fawns, is a leading cause of death but harvest, accidents, disease, weather, and starvation can be important too.
- Adult male deer may range over areas approaching 1600 acres. Females range over about 1000 acres. Deer are crepuscular, which means that they are primary active around dawn and dusk, but with high hunting pressure or adverse weather, they will seek cover during the day and be most active at night.

Potential risks and damage associated with white-tailed deer

- The herbivorous nature of deer can lead to problems for people, especially when deer densities are high and natural foods are scarce. Deer will readily forage on agricultural crops, nursery crops, gardens, horticultural plantings, and in plantations and orchards.
- The selective feeding tendencies of deer can also change forest structure and habitat for all wildlife if the deer overbrowse mast and seedlings of select plant species and change plant species composition and structure. In some cases, deer may browse on mature plants such as large trees and damage them (Figure 6).
- With mast, including acorns, as their preferred food, deer may compete with many wildlife, including turkeys and squirrels (Figure 7).



Figure 6. Small coniferous trees showing a deer browse line.
Credits: W. M. Giuliano



Figure 7. Acorns are a favorite food of deer.
Credits: W. M. Giuliano

- Although not typically considered a serious threat, deer may serve as a potential reservoir for many diseases and parasites that affect other wildlife, livestock, and people (e.g., Lyme disease).
- Deer are not usually a direct threat to people. However, a cornered or injured animal trying to escape can cause injury with antlers and sharp hooves.
- In areas with extreme deer densities (not typical in most of Florida) and along roadsides where deer often prefer to forage, deer-vehicle collisions can be common and dangerous.

Preventing risks and damage associated with white-tailed deer

- First, confirm that deer are the true culprits damaging crops and other plants before investing time and money trying to manage them.
 - Look for the distinctive tracks (Figure 3) and scat (Figure 4) of deer in damaged areas.

- Watch the area with damaged plants during dawn and dusk to attempt to observe the animal causing the damage. Wildlife cameras may also be useful for this purpose.
- Evaluate the height and type of damage to plants.
 - Deer can browse higher than other Florida herbivores (up to 6 ft), and leave a distinctive browse line (Figure 6).
 - Deer lack upper incisor teeth that are common in other herbivores that may be causing problems such as rabbits and rodents, so they tend to tear and jerk their food to cut it (Figure 8). Plants eaten by deer
- Deer damage to plants can be minimized by selecting landscape/ornamental, garden, and agricultural varieties of plants that are less preferred by deer.
- Changes to agricultural practices can reduce damage from deer.
 - Using crop varieties that mature faster or that can be harvested earlier will reduce the amount of time deer have to damage crops.
 - Plant crops away from wooded areas used by deer for cover.
 - Plant sacrificial lure crops to draw deer away from agricultural crops.



Figure 8. Unlike rabbits and rodents, deer tear and jerk plants and leave a ragged end.

Credits: Daren Mueller, Iowa State University, Bugwood.org

tend to show ragged ends of twigs, stems, and leaves, while those foraged by rabbits and rodents tend to leave a smooth cut surface.

- Before undertaking any deer control or management measure, review local laws. The Florida Fish and Wildlife Conservation Commission (FWC; <http://myfwc.com/>) is an excellent source of such information.
- Because most problems caused by deer are the result of high deer numbers, hunting can be an important management tool. Methods and seasons of hunting vary, and in Florida, FWC should be consulted.
- If hunting and other control methods (see below) fail to alleviate damage to agricultural crops, FWC may issue depredation permits to allow land and business owners to remove deer out of season and with additional methods to reduce or eliminate the problem.
- Exclusion using fencing can be an effective if expensive deer control option for areas such as a garden or small plantation. Fences need to be multi-rowed or tall enough (higher than 8 feet) to prevent deer access.

- Deer can sometimes be scared from areas using various frightening devices and animals (e.g., propane cannons, fireworks, and dogs). Consult local ordinances before using propane cannons or fireworks to scare deer.
- A wide variety of repellants are available to deter deer from foraging on plants. Repellent cost and effectiveness vary greatly. Repellents will never eliminate damage, but they may reduce it.

More Information

Giuliano, W. M., E. Garrison, and B. J. Schad. 2009. Understanding white-tailed deer: Florida and the Southeast. University of Florida, Gainesville, FL 32611 (<http://ifasbooks.ifas.ufl.edu/p-450-understanding-white-tailed-deer-florida-and-the-southeast.aspx>)

<http://edis.ifas.ufl.edu/uw128>—UF/IFAS extension document providing information on coping with damage caused by deer in Florida

<http://edis.ifas.ufl.edu/uw369>—UF/IFAS extension document providing information on identifying damage caused by wildlife, including deer, in Florida

<http://edis.ifas.ufl.edu/uw371>—UF/IFAS extension document providing information on how to stop damage caused by wildlife, including deer, in Florida

<http://myfwc.com/wildlifehabitats/profiles/mammals/land/deer/>—Information on deer ecology and conservation provided by the Florida Fish and Wildlife Conservation Commission

<http://myfwc.com/hunting/by-species/deer/>—Information on the Florida Fish and Wildlife Conservation Commission's deer management program