

# Alligators

Prepared by the National Wildlife Control Training Program. <http://WildlifeControlTraining.com>

Research-based, certified wildlife control training programs to solve human – wildlife conflicts.

One source for training, animal handling and control methods, and wildlife species information.



**Figure 1. American alligator (*Alligator mississippiensis*) Photo by Ron Case.**

## Species Overview

### Conflicts

Alligators sometimes excavate burrows or dens for refuge from cold temperatures, drought, other alligators, and humans. Alligator burrowing can damage dikes, levees, and impoundments, and breach fences.

An alligator will prey on any animal it can physically consume. They readily take domestic dogs and cats.

### Legal Status

Alligators are federally classified as “threatened due to similarity of appearance” to other endangered crocodylians. The classification provides federal protection for alligators but allows state-approved programs for management and control. Alligators can be taken legally only by individuals with proper licenses or permits. Alabama, Florida, Louisiana, Georgia, South Carolina, and Texas have programs to control problem or nuisance alligators that allow hunters with permits to kill or facilitate the removal of alligators. Other

states use state wildlife officials to remove alligators that are causing problems.

### Identification

American alligators (*Alligator mississippiensis*, Figure 1), often called “gators,” are one of 22 crocodylian species worldwide and the most common crocodylian native to the US. The other native crocodylian species is the American crocodile (*Crocodylus acutus*). Caimans (*Caiman* spp.), imported from Central and South America, survive and reproduce in Florida.

### Physical Description

An alligator is distinguished from American crocodiles and caimans by a more rounded snout and black and yellow-white coloration. American crocodiles and caimans are olive-brown in color and have pointed snouts. Alligators and crocodiles are similar in physical size, while caimans are about 40% smaller. Male alligators can grow to more than 14 feet long and 1,000 pounds. Females can exceed 10 feet and 250 pounds. The growth rate of an alligator depends on diet, temperature, and sex. To reach 6 feet in length, alligators take up to 10 years in Louisiana, 14 years in Florida, and 16 years in North Carolina. Alligators can grow to 6 feet in 3 years when they are raised on farms under ideal conditions.

### Species Range

Alligators thrive in Texas, Oklahoma, Arkansas, Louisiana, Mississippi, Alabama, Florida, Georgia, South Carolina, and North Carolina. The northern range is limited by low temperatures in winter. Alligators rarely are found south of the Rio Grande River.

American crocodiles are scarce and protected in the US. They are found in the coastal waters of Florida, south of Tampa. Caimans rarely survive winters north of central Florida and reproduce only in southern Florida.

### Health and Safety Concerns

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Alligators usually are not aggressive toward humans. Unprovoked attacks by alligators smaller than 5 feet are rare, but unusual behavior does occur. Single bites usually are made by alligators that are less than 8 feet long. Most bites occur in Florida, which documented 340 attacks between 1948 and 2006, of which 17 resulted in human fatalities. Attacks also have been documented in South Carolina, Louisiana, Texas, Georgia, and Alabama. Most attacks are non-fatal, although one-third involved repeated bites, major injury, or death.

Serious and repeated attacks normally are made by alligators greater than 8 feet in length. Death occurs either by suffocation or by drowning.

Alligators inflict damage with sharp, cone-shaped teeth and powerful jaws. Bites are characterized by puncture wounds and torn flesh. Alligators often seize an appendage and twist it off by spinning. Many serious injuries involve badly damaged and broken arms on humans, or legs on other animals. All alligator bites require medical treatment, and serious wounds may require hospitalization.

In the most serious alligator attacks, victims were unaware of the alligator before the attack. Most attacks occur in water, but alligators have assaulted humans and pets on land. People who are walking their pets often are the secondary target after the pet escapes. Alligators quickly become conditioned to humans, especially when food is associated with people. Alligators that habituate to humans can be dangerous, especially to children. Alligators fed by humans often become aggressive and must be removed.

Ponds and waterways at golf courses and high-density housing are problem sites when alligators become accustomed to living near people.

Few attacks are attributed to wounded or territorial alligators, or females defending their nests or young. When defending a territory, alligators normally display, hiss, and approach on the surface of the water where they can be more intimidating.

In the rare event that you are attacked, awareness of alligator behavior may save your life. Alligators clamp down with powerful jaws, then twist and roll. If an alligator bites your arm, it may help to grab the alligator and roll with it to reduce tearing of the arm. Strike the nose of the alligator hard and often, and try to gouge the eyes. If at all possible, do not allow the alligator to pull you into the water.

### General Biology, Reproduction, and Behavior

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#### Reproduction

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Alligators reach sexual maturity when they are 6 to 8 feet long. Throughout most of their range, alligators begin courting in April and breed in late May and early June. A female lays a single clutch of 30 to 50 eggs in a mound of vegetation during early June to mid-July. They incubate eggs for about 65 days. In late August or early September, 9- to 10-inch hatchlings are liberated from the nest by the female. The female may defend and stay with her hatchlings for up to a year, gradually removing herself as caregiver as the next breeding season approaches.

#### Nesting/Denning Cover

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Alligator nests are about 2 feet high and 5 feet wide. Nests are constructed of vegetation and materials in the surrounding habitat, which commonly includes marsh grasses, peat, pine needles, and soil.

## Behavior

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Alligators are ectothermic, meaning they rely on external heat sources to maintain their body temperature. They are most active during warm weather (82° to 92° F), stop feeding when the ambient temperature drops below 70° F, and become dormant below 55° F.

## Habitat

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Alligators are found in wetlands throughout the coastal plains of the southeastern US. They may be found in almost any freshwater habitat, and densities are greatest in wetlands that provide sites for nesting and feeding. Alligators often inhabit urban wetlands (canals, lagoons, ponds, streams, and impoundments).

## Food Habits

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Alligators are carnivorous and prey on any animal that is available. Juvenile alligators (less than 4 feet) eat crustaceans, snails, and small fish. Sub-adults (4 to 6 feet) eat fish, crustaceans, small mammals, and birds. Adults (greater than 6 feet) eat fish, mammals, turtles, birds, and other alligators. Diet is dependent on where the alligator lives. In coastal marshes of Louisiana, adult alligators primarily feed on nutria, whereas in Florida and northern Louisiana, rough fish and turtles comprise most of their diet. Cannibalism is common among alligators in Florida and Louisiana.

## Voice, Sounds, Tracks, and Signs

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Alligators communicate through bellowing and slapping their heads against the water.

## Damage Identification

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### Damage to Landscapes

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Alligators sometimes damage turf and other landscapes with their burrowing and nesting activities.

### Damage to Livestock and Crops

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Alligators will prey on any animal it can physically consume. They readily take domestic dogs and cats. Losses of livestock other than domestic waterfowl are uncommon and difficult to verify. In rural areas, large alligators may take calves, foals, goats, hogs, domestic waterfowl, and occasionally full-grown cattle and horses.

### Damage to Structures

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Alligators sometimes excavate burrows or dens that can damage dikes, levees, and impoundments, and breach fences.

## Damage Prevention and Control Methods

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### Habitat Modification

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Most wetland modifications are unlawful and can be detrimental to other wildlife. Check with appropriate conservation authorities before modifying wetlands.

Eliminate emergent vegetation to reduce cover for alligators. Construct trails at least 15 feet from the edge of water. Keep vegetation cut along trails.

### Exclusion

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Alligators are most dangerous in water or at the edge of water. They occasionally make forays over land in search of new habitat, mates, or prey. Along waterways and lakes, concrete or wooden bulkheads that are at least 3 feet above the high water mark will discourage alligators from getting to land.

Alligators have been documented climbing 5-foot chain-link fences to get at dogs. Angle the top of a fence outward to prevent climbing. All fences should be made with 4-inch mesh, with 2 feet buried into the soil. Alligators have difficulty digging in firm, dry soil but they easily excavate soil that is mucky.

### Frightening Devices

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Aversive conditioning and rough handling of captured alligators have had limited success in several areas. Pressure from hunting appears to be the most effective way to increase wariness of alligators, and may be responsible for reducing attacks by alligators in Florida, despite increasing populations of both humans and alligators. The low rate of attack in Louisiana is attributed to a history of intense hunting.

### Repellents

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None are registered for the control of alligators.

### Toxicants

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None are registered for the control of alligators.

### Shooting

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In South Carolina, nuisance alligators should be reported to the South Carolina Department of Natural Resources (SCDNR). Licensed trappers have been permitted by the SCDNR to remove and dispatch of any alligator who may exhibit aggressiveness, habituated behavior towards humans (most likely from feeding), illness/injury, or inhabit a recreational swimming area.

Alligators can be shot during night or day. Be careful while shooting over water because of the risk of ricochet. Alligators in water sink almost immediately when shot, making them difficult to recover with gaff or snatch hooks, especially in a current or heavy vegetation.

### Trapping

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Contact the SCDNR for nuisance alligator complaints.

Trapping alligators can be dangerous and is best left to professionals. Never place your hands near the head of an alligator, as it can swing and snap with great speed. Use catch-poles and other devices to handle and control alligators. Never assume an alligator is dead. Secure the jaws with duct tape as soon as safely possible.

Alligators are attracted to bait and easily lured to traps; wire box traps have been effective. Use cages large enough to catch the alligators in your area. Before trapping, obtain proper permits or licenses from your state wildlife agency.

### Disposition

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#### Relocation

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Relocation of alligators in South Carolina is illegal.

#### Translocation

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Translocation of alligators in South Carolina is illegal.

#### Euthanasia

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#### Contact the SCDNR for nuisance alligator complaints.

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To euthanize an alligator more than 5 feet long, discharge a .243-caliber bullet or larger into the brain. Avoid placing the shot between the eyes or the top of the skull, as the bullet may ricochet off the bone. Shoot at the base of the skull instead. If using a bangstick, only discharge it underwater to reduce the potential of injury from fragments. Small alligators can be killed with a blow to the brain with a sharp object.

### Resources

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#### Web Resources

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<http://dnr.sc.gov>

For more information on the National Wildlife Control Training Program

visit <http://wildlifecontroltraining.com>

<http://icwdm.org/>

<http://wildlifecontrol.info>

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