

# American Alligator

## *Alligator mississippiensis*



Image Courtesy of SC Aquarium (T. Manier)

### **Relatives:**

Class: Reptilia - alligators, turtles, snakes and lizards

Order: Crocodylia - alligators, caimans, crocodiles, gavials, jacare

Family: Alligatoridae - alligators

There are only 24 species of Crocodylia worldwide. All are distinguished by long jaws with teeth set in sockets, like their ancestors from the Triassic period called “Thecodontia.” It is widely believed that modern crocodylians are more closely related to birds than reptiles.

The American alligator is the only member of the order crocodylia native to South Carolina. The American crocodile is the only other species native to the United States, and is restricted to southern Florida. The spectacled caiman - native to South and Central America - has been introduced in Florida.

### **Description:**

American alligators are generally black, dark gray or dark green. The species has a broad, round snout comparable in shape to the top of a duck’s bill. In comparison, crocodiles have a longer, more pointed snout.

Young alligators have distinctive yellow bands on a black background, fading to a white or yellow belly. Banding disappears with age, but may remain faintly evident in some adults. These bands may help the young alligators camouflage in the grasses from larger predators.

American alligators have counter-shading, which means their body is two different colors (dark/black on top and light/white on the underside). Counter-shading helps the alligator camouflage since the dark upper side blends in with the dark water. The light underside helps the alligator camouflage from fish and other species swimming underwater where the water looks lighter from the sun.

The scales covering an alligator's body are rough and hard, imitating a "suit of armor." The scales have a special name called scutes and assist the alligator in protection and absorbing heat from the sun.

**Size:** American alligators may reach lengths of 6-16ft (1.8-5m), and individuals may weigh between 500-1000 pounds.

The longest American alligator on record was 19 feet 2 inches long.

**Habitat:** The American alligator occurs in relatively shallow water, typically freshwater. Rivers, swamps and marshes are potential alligator habitats within their range. It is unlikely to see alligators venture into brackish or salt water, but occasional reports of alligators on beaches and barrier islands suggest that sometimes they do. In comparison, crocodiles prefer brackish water and are not found in South Carolina. Crocodiles have salt-secreting glands that allow them this ability but alligators do not possess these glands.

**Range:** The American alligator can be found in the southeastern United States: Alabama, Arkansas, North & South Carolina, Florida, Georgia, Louisiana, Mississippi, Oklahoma, and Texas.

**Predators:** Alligator eggs are sometimes eaten by raccoons and snakes. Within the first 2 years of life birds, raccoons, bobcats, otters, snakes, fish, and larger alligators may eat the young; humans also eat them.

**Diet/Prey:** Alligators are opportunistic feeders eating just about anything that will fit in their mouths. As juveniles, they will eat insects, small fish, and amphibians, while adults feed on larger reptiles, mammals, and birds. In addition, alligators are known to eat carrion.

Alligators typically only need 1 pound of food per week; they can fast for up to 2 years.

**Aquarium Diet:** Alligator chow

**Reproduction:** American alligators reach sexual maturity when they reach about 6ft (1.8m), which in natural conditions takes about 10-12 years. Male alligators will bellow during the breeding season as part of the mating ritual.

In the spring to fall, mainly June, females will build a mound-like of vegetation for her eggs; the nest measures approximately 4-7 feet (1-2m) wide and 18-36 inches (45-90cm) tall. The female alligator then buries about 30 eggs in the nest, and incubation lasts about 65 days. The

temperature of the nest during incubation determines the sex of the hatchlings. The colder the nest is (below 86 °F/ 30 °C) the more female alligators are born; the warmer the nest is (above 93 °F/ 34 °C) the more male alligators are born. During the period of incubation the female alligator will guard her nest. When born, the hatchling alligators are 5-6 inches long (12.5 cm), and at this time they produce minute vocalizations. The mother, in turn, grunts to the young as she carries them, in her mouth, to the water. The newly hatched gators will stay in groups called “pods.” Young alligators remain with their mothers for 1 year for protection.

**Fun Facts:**

- There are only two species of alligator in the world – the American alligator and the Chinese alligator
- American alligators have a lifespan of 35-50 years, and have been known to live 80 years in captivity.
- The name “alligator” originates from the first Spaniards in Florida; they called the reptiles “el lagarto” which means “the lizard”
- The American Alligator’s scientific name was originally misspelled. They left out one “p” calling it, *Alligator mississippiensis* instead of *Alligator mississippiensis*, which it was later changed to.
- Alligators can stay underwater for 45-60 minutes
- Alligators’ feet are webbed to help them with swimming and have claws to help them with walking and climbing on land.
- Alligators will go dormant (not a true hibernation) when the weather gets cold
- Alligators can have 80-100 teeth in their mouths and as they wear down, they are replaced. An alligator may go through 2,000 to 3,000 teeth in one lifetime
- American alligators have a biting force of 3000 pounds per square inch (psi)
- During the dry season, alligators create “gator holes” by sweeping large tails back and forth; these holes of water become a great source of water for wildlife in the area, which in turn brings potential prey into their range
- Hunting for alligators is allowed in South Carolina on a limited, permit only basis

**Conservation Connection:**

The importance of alligators in their ecosystem is undeniable. As an apex consumer, they help to control the over population of other species in their environment. Many people refer to alligators as a ‘keystone’ species because they not only control over population of other species, but also create peat due to their habit of nest making. Alligators have come up with a great way of beating the cold or the heat for that matter. They will dig “alligator holes” which they create by using their snout and tail. These holes have a multipurpose service however, when they dry out and

the alligator inhabiting the hole leaves, other animals may use them for shelter and may even be able to hibernate in them.

The major threats facing the American alligator are wetland habitat loss, due to coastal development, and unregulated harvest. Hunting is once again beginning to be allowed in some states, but it must be heavily regulated. More importantly for the species, alligators are currently losing much of their native habitat; due to water management systems and increased levels of mercury and dioxins in water.

Human/alligator interactions may increase as coastal development continues. Alligators often inhabit golf courses as their native wetlands are altered or destroyed. Alligators will habituate to humans who feed them. Education campaigns are needed because human encounters often result in negative consequences for the alligator. In addition, large specimens that live in close proximity to human populations may be determined to pose a threat to human safety. These ‘nuisance’ animals need be managed in a way that it does not threaten the survival of the species.

Harvest programs play a very important role in the current population of American alligators. Before these programs, the American alligator was listed as an endangered species and now is off the list completely with the exception of being endangered in certain areas. Several states such as Florida, Louisiana and Texas have managed to maintain very large-scale programs where alligator eggs are collected out in the wild, brought to a farm and reared. The baby alligators are “cropped” meaning some are released back out into the wild, while others are kept captive and raised for meat sales as well as using their skins for watches, boots, belts, etc. Nothing on the alligator is wasted. This system is very well monitored and not abused. Cropping is only allowed in certain populations of alligators, so those populations that are still rebuilding will not be touched. This process has shown to be highly effective to regulating alligator populations as well as offering positive conservation benefits for their environments. There are certain states that allow for very regulated alligator hunting. Numbers have been determined of alligators that may be hunted or taken from a population without creating instability on the overall population.

Once on the verge of extinction due to over hunting for their skins and meat, the American alligator has made a remarkable recovery, and today wild populations are estimated at over one million. Thanks to strict conservation efforts and extensive research, it is no longer considered endangered, except in scattered areas of its range. However, it is still listed as threatened on the U.S. Endangered Species List because it is very similar in appearance to the American crocodile, which is endangered, and hunters are likely to confuse the two species. It is state listed as a species in Need of Management in South Carolina. In addition, it is listed

in Appendix II of CITIES to halt the trade of alligator skins for various products that was the cause of their fall in numbers during the 1960's, 70's and 80's, and as a species of 'Low Risk' or 'Least Concern' by on the IUCN Red List.

- Status in SC:** Common, listed as “similar in appearance to a threatened taxon, most likely the American crocodile, which is endangered and limited to southern Florida.
- Aliases:** Florida alligator, Louisiana alligator, Mississippi alligator, swamp dragon.
- References:** Buhlmann, S.H. “Herpetofaunal Species of Greatest Conservation Need of South Carolina (Draft Report).” South Carolina’s Wildlife Initiative and the Department of Natural Resources. January 28, 2005.
- Conant, Roger and Joseph T. Collins. Reptiles and Amphibians, Eastern/Central America. Houghton Mifflin Company. Boston, 1991.
- Florida Museum of Natural History. “Crocodilian Species List: *Alligator mississippiensis*.”  
[http://www.flmnh.ufl.edu/natsci/herpetology/brittoncrocs/csp\\_amis.htm](http://www.flmnh.ufl.edu/natsci/herpetology/brittoncrocs/csp_amis.htm)
- Martof, Bernard S, William M. Palmer, Joseph R. Bailey and Julian R Harrison III. Amphibians and Reptiles of the Carolinas and Virginia. The University of North Carolina Press. Chapel Hill, 1980.
- Smithsonian National Zoological Park.  
<http://nationalzoo.si.edu/Animals/ReptilesAmphibians/Facts/FactSheets/Americanalligator.cfm>.