

American Alligator

Class: Reptilia. **Order:** Crocodylia. **Family:** Alligatoridae.

Other names: "Ole Redeye", Gator



Physical Description: General body coloration is black with yellowish or cream cross bands that become less apparent with age. The large fourth tooth on the bottom jaw is not visible when the mouth is closed, which is one way to distinguish the alligator from crocodiles. Alligators have a large compressed tail used to propel the animal through the water. They have four limbs and the hind feet are webbed to help in swimming. Body size averages 6-16½ feet with the largest animal recorded over 24' which was caught by Wildlife Officers in Texas in 2008.

Diet in the Wild: Rough fishes, small mammals, birds, turtles, snakes, frogs and invertebrates. The young consume large numbers of insects.

Diet at the Zoo: mice, crickets, capelin (small forage fish of the smelt family).

Habitat & Range: Prefers fresh water in marshes, ponds, lakes, rivers, swamps, bayous from the coast of southeast North Carolina to the Florida Keys and west along the coastal plain to southern Texas, north to extreme southeast Oklahoma and southern Arkansas, but may be occasionally found in brackish water.

Life Span: Estimated 50 years in the wild, if they survive to adulthood (less than 9% of newborns survive their first 2½ years). The oldest alligator that we have records for died in 1999 at age 81. He (Tojo) resided at the Cincinnati Zoo since 1923 until he was retired to Florida when the old Bird House was renovated to Wings of world.

Perils in the wild: Eggs and hatchlings are eaten by herons, snakes, turtles, raccoons, fish, older alligators, and other predators. Man is the greatest threat to adults through habitat destruction and alteration and pollution.

Physical Adaptations:

- Alligators are well camouflaged to remain hidden while resting or hunting. The young also have stripes that blend with grass when they are out of the water.
- Powerful tail used for swimming.
- Eyes and nostrils on the top of their head so they can remain submerged while breathing and keeping an eye out.
- A "third eyelid" called the **nictitating membrane** sweeps sideways across the eye to protect the eye during feeding and diving.
- Their powerful jaws and sharp teeth can deliver a very powerful bite. Even very young alligators are capable of inflicting serious bites.

Behavioral Adaptations:

- Alligators are **catheymeral**. Being active during the day or night

- Large males prefer to live solitary lives, but it is very common to find alligators basking in the sun and convening in the water in large groups.
- As is true of all reptiles, a relatively consistent body temperature is achieved through **behavioral thermoregulation**; thus a great deal of time is spent during the summer crawling in and out of the water. Winter is spent in submarine dens known as gator holes. Gators like to bask together on sunny banks, sometimes piling atop one another.
- Escaping by swiftly swimming
- Adults use their powerful tails to swat prey and attackers.

Reproduction and Development:

- Mating season is Mid-April through May
- The American alligator can be vocal and is noted for the boisterous, bellowing roars (heard over considerable distance) of males and females during the breeding season. Courtship, which consists of soft nose bumps, head-slapping on the water's surface, body posturing, bubble blowing, mutual neck massaging, and pheromones (scent signals), lasts for several days. Males tend to be polygamous, mating with many females.
- Females lay 25-60 3" long eggs in large, mound-shaped nests made of mud, leaves and rotting organic materials. Alligator nests often represent the highest and driest points available in the wetland habitat. Turtles, snakes, and lizards are known to lay their own eggs in alligator nests. The advantages to this are numerous, not the least of which is the fact that these eggs are protected also by the female alligator.
- During the nine-week incubation period females remain near the nest and may attack if it is approached. Sex of the hatchling is determined by incubation temperature, 86°F producing females, and 93°F yielding only males.
- Hatchlings are 9-10" long and will remain with the female for one to three years.
- Young gators grow roughly a foot a year for the first five years. Adult males often weight 600 pounds. In captivity they may balloon to 900. One of the most astonishing facts about gators is the difference in size between a 9-10" hatchling, weighing less than three ounces and a 6 foot + adult.
- It may have been the unimposing sight of the little ones that inspired the name of the species. Early Spanish explorers called them "**el lagarto**" (lizard), which Colonial Americans converted to alligator.

Additional Information:

- The American alligator is one of the largest reptiles (along with the American crocodile) in North America. The broad rounded snout of the American alligator can help distinguish it from the American crocodile.
- A regional name for the alligator is "Ole Redeye". The nickname derives from the fact that alligator eyes reflect light with a special layer of light reception cells in the retina called the **tapetum lucidium**.
- Light reflected from the retina causes a telltale shine that serves as a giveaway for hunters out spotting at night. Hunters take advantage of the fact that adults are protective of young alligators, luring them to their deaths by imitating the distress cries of the babies.
- According to one source there were 100 alligator attacks with reports of seven fatalities recorded between 1948-1988. In every case the victim had been, at least partially, in the water with the alligator. In most cases there was reason to believe that the motivation for the attack was hunger. There is ample evidence that gators are able and willing to attack humans for food. When one

considers the thousands of alligator-human encounters it would seem that such behavior is extremely rare.

- Large gators crunch away indiscriminately at almost anything, including cans, bottles, nails and other debris. Scientists were long puzzled by the frequent presence of rocks in gator bellies. Some thought the stones functioned as stabilizing ballast, but current researchers suspect that rocks are gobbled up inadvertently the way that other objects are.

Conservation Connection:

Alligators are a **keystone species** in their ecosystem. A keystone species is a plant or animal that has a disproportionately large effect on the ecology of their habitat. During long cold or hot dry spells, gator holes are the only source of water for the wildlife of the community. Further, the fish and frogs which survive there are eaten by birds and snakes, and so the food chain continues.

Conservation Status: (IUCN Status)

They are still on the Red List, but are considered Lower Risk/Least Concern (LC)

Conservation Efforts:

The American alligator once was hunted nearly to extinction. With passage of the Endangered Species Acts (1969, 1973) and the protection they afforded, America's largest reptile began to make a comeback and its future seemed guaranteed. However, it is once again threatened due to habitat loss and modification. Furthermore, as the human population continues to grow, there are increasing reports of unwanted encounters between alligator and human. While still protected by law, controlled hunting is allowed in both Florida and Louisiana. Both states also have "nuisance-alligator control" programs which allow licensed hunters to destroy or in other ways to remove alligators that are potential threats to human or domestic stock.

behavioral thermoregulation- How a reptile may regulate its body temperature by its behavior. By basking in the sun to warm and moving to the shade to escape the heat of the day allows these animals to maintain a relatively stable temperature of 97-102 degrees.

catheermal- Active during the day and night.

keystone species – A species of plant or animal that plays a disproportionately large effect on the ecosystem that it inhabits.

nictitating membrane- A "third eyelid" that sweeps across the eye to provide additional protection.

tapetum lucidum- a special layer of light reception cells in the retina of nocturnal animals that reflect existing light in the eye to improve nocturnal vision. This feature is what causes "eye shine" in animals.

Sources:

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09/04/2012

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