

THE AMERICAN BIOLOGY TEACHER



About Our Cover

American Alligators *Alligator mississippiensis*

Here, in an unusual display of reptilian parental care, are several young American alligators perched on and near the head of a large female in a photo taken at Avery Island in Iberia Parish, Louisiana. Not only is this site the home of the McIlhenny Company, producers of Tabasco hot sauce, but the area also features a large wildlife sanctuary where these alligators, along with exotic plants and many species of birds such as egrets, are protected.

The American alligator is a large apex predator second in size in the family Alligatoridae only to the black caiman. Adult males can weigh up to 450 kg and grow to about 4 m in length, while females are smaller at about 3 m long and 320 kg, although “giants” of both sexes are occasionally reported. American alligators are native to freshwater marshes, swamps, and wetlands of the southeastern United States. While less salt tolerant than the American crocodile, their relatively high tolerance to cold gives them a more expansive range than the crocodile, which is larger in size and favors warmer saltwater environments.

Alligators consume all sorts of creatures, with diets that include amphibians, birds, fish, insects, and even other reptiles. They play an important role in the ecosystem, as construction of small ponds near their nests, called alligator holes, help to maintain a year-round aquatic ecological community supporting many other organisms.

Alligators will often bellow to mark their territory and to attract mates but can also call to prospective partners using infrasound, which is below the range of human hearing. These animals reach sexual maturity starting at 10 years of age, with mating typically occurring in May. Females build a large nest composed of vegetation to provide protection for the typical clutch of 30–50 eggs, laid in late June. As with other reptiles, the temperature of incubation determines the sex of the young. Warmer incubation temperatures (above 32.5°C) result in about three-quarters of the young being female, while lower temperatures produce a similar ratio favoring males. Therefore, it is vital that nests be monitored by females to provide varying zones of incubation temperature.

The young alligators make high-pitched sounds from inside the eggs, signaling to the mother to remove the nesting material. Baby alligators are quite vulnerable to predation by raccoons, snakes, and large fish and “yelp” to stay in contact with their mothers for up to a year, at which time they venture out on their own.

This digital image was recorded with a Nikon D810 camera using a 28–300mm image-stabilized zoom lens. The photographer is William F. McComas, editor of *The American Biology Teacher* and Parks Family Professor of Science Education and director of the Project to Advance Science Education at the University of Arkansas (mccomas@uark.edu).

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