

American Alligator

Alligator mississippiensis

Contributors (2005): Stephen H. Bennett and Kurt A. Buhlmann [SCDNR]

Reviewed and Edited (2013): Will Dillman (SCDNR)

DESCRIPTION

Taxonomy and Basic Description

The American alligator is the only crocodylian native to South Carolina. The range of this reptile includes the Coastal Plain of the Gulf and Atlantic states, ranging as far north as Albemarle Sound in North Carolina, and westward to southern Texas. This is a large animal that can reach lengths of 5 m (16 ft.) (Conant and Collins 1991). The American alligator is typically black or dark brown with light yellow-white cross bands on the body. Juvenile alligators have bright yellow bands on the body that fade with age. Alligators differ from the American crocodile, the only other crocodylian native to the United States, in having a broader, rounded snout. The American crocodile (*Crocodylus acutus*) does not occur in South Carolina, as its native distribution is restricted to extreme southern Florida and the Caribbean.



Status

The American alligator is currently listed as “Federally Threatened by similarity of appearance to the American crocodile” and as a species in need of management in South Carolina. This species was formerly listed as Endangered, both on the Federal and State lists. NatureServe (2013) identifies the American alligator as secure both statewide (S5) and globally (G5).

POPULATION SIZE AND DISTRIBUTION

The American alligator is currently common to abundant in coastal South Carolina. Large, protected populations exist on some government-owned lands such as the Savannah National Wildlife Refuge and Donnelly Wildlife Management Area. This species has recovered from very low population levels in the 1950s and 1960s (Murphy and Wilkinson 1982) due to protection from unregulated harvest afforded it by the federal Endangered Species Act (Murphy and Wilkinson, 1982).



Generalized Range Map of the American Alligator in South Carolina
Adapted from Conant and Collins 1991

HABITAT AND NATURAL COMMUNITY REQUIREMENTS

The American alligator is a resident of large river swamps, lakes, ponds, coastal impoundments, abandoned rice fields, and other bodies of water (Conant and Collins 1991; Martof et al. 1980). Alligators are occasionally found in brackish water marshes and estuarine tidal creeks (Palmer and Braswell 1995). Juvenile alligators will use seasonal wetlands, such as Carolina bays (Gibbons and Semlitsch 1991), where they likely feed on abundant amphibians. Alligator nests may superficially resemble muskrat lodges. Nest sites are constructed by the female alligator and consist of muck and aquatic vegetation piled on to a mound. The nests are usually constructed near freshwater and may be concealed in stands of cattails or other emergent vegetation. The eggs incubate in the rotting vegetation and therefore require exposure to sunlight. Alligators are unique among reptiles because the female will guard and protect the nest from predators, including humans (Ross 1989).

CHALLENGES

The major challenges facing the American alligator are unregulated harvest and wetland habitat loss due to coastal development (Murphy and Wilkinson 1982). Human/alligator interactions may increase as coastal development continues. Alligators often inhabit golf course ponds as their native wetlands are altered or destroyed. Alligators will habituate to humans who feed them. Education campaigns are necessary because human encounters often result in negative consequences for the alligator.

Alligators, particularly large specimens that live in close proximity to human populations, may pose a threat to human safety. Such animals are deemed "nuisance alligators" and may have to be removed and destroyed. The Department has developed a program to handle nuisance alligators that is enabled under SCDNR's regulatory authority. The nuisance alligator program is managed such that it does not threaten the long-term survival of this species in this state.

CONSERVATION ACCOMPLISHMENTS

The American alligator is listed as a species in need of management in South Carolina; therefore, all activities regarding this species in our state are regulated. The American alligator has experienced a significant recovery from historically low populations due to listing and the prohibition of unregulated harvest. The alligator population has recovered to the point that a sport hunting season for the species could be established and was so in 2008.

A cooperative agreement between SCDNR and Clemson University's Cooperative Fish and Wildlife Research Unit was established to develop a conservation and management strategy for the State's alligator population. The 4-year project will develop a scientifically based harvest strategy for SCDNR to guide future alligator management decisions. The project will also collaborate with other Southeastern states to help guide region-wide management decisions.

CONSERVATION RECOMMENDATIONS

- Design educational materials, especially signage, that can be erected at sites where human/alligator interactions frequently occur such as golf courses, state parks, natural areas, and recreational lakes.
- Develop a plan that delineates proper methods for responding to nuisance alligator problems.
- Develop a plan for a limited harvest of nuisance alligators.
- Determine locations of stable alligator populations in the State. Continue life history studies that provide data necessary for harvest and sustainable use planning.
- Monitor alligator population stability at protected sites and respond to increases or decreases in current populations.

MEASURES OF SUCCESS

As results from current research and surveys or future efforts are identified and analyzed, projects will be initiated to address specific needs that arise from these results. Monitoring of marked populations of alligators on SCDNR properties will provide data on natural population fluctuation over time. Such data can be compared to future surveys on private lands, subject to alligator removal/harvest, to determine the effect of such programs on the local alligator population. Public opinion concerning alligators may be monitored in the future to reveal any shifts in the public perception of this species due to increased educational efforts. Stable populations of this species on public lands will be a measure of success.

LITERATURE CITED

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