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SNAP!

A LOOK AT ALABAMA'S SNAPPING TURTLES

The southeastern United States is regarded as one of the world's biodiversity hotspots. Much of this diversity is a result of the physiography of the region. Within the Southeast, Alabama is especially fortunate to have a tremendous wealth of aquatic taxa, including one of the highest diversities of turtle species. Of the 42 species occurring in the Southeast (from Virginia to Arkansas), 30 (71 percent) are found in Alabama. Of these, two of the most underappreciated and often confused species are the snapping turtles—the Alligator Snapping Turtle and the Common Snapping Turtle. Although similar in appearance, the demeanor and habits of the two species are different in many respects and are the focus of this article.

ALLIGATOR SNAPPING TURTLE

(*MACROCHELYS TEMMINCKII*)



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The **alligator snapping turtle** is the largest freshwater turtle in North America. Adult males may attain weights over 200 pounds (although extremely rare in the wild), while females generally do not exceed 50 pounds. Aside from its massive size at maturity, distinguishing characteristics include a very large, partially retractable, triangular-shaped head tapering to a prominently hooked beak (upper jaw), three pronounced ridges extending down the carapace (top shell) prevalent at all ages, a long and muscular tail, a reduced cross-shaped plastron (bottom shell), and eyes positioned along the sides of the head that are surrounded by a ring of small fleshy projections. They also possess a unique set of scutes (bony scales or plates) on the carapace

referred to as “supramarginals” located between the marginal (outer edge) and costal (inner area) scutes, which is a diagnostic characteristic.

Alligator snapping turtles are restricted to the river drainages that flow into the Gulf of Mexico ranging from the Suwannee River in north Florida west to the San Antonio River in Texas and northward within the main channel and tributaries of the Mississippi River to southeast Iowa. In Alabama, it occurs throughout the state from the Tennessee River system south, with higher densities likely occurring in the Coastal Plain region. It is a denizen of slow-moving water bodies such as oxbow lakes, swamps and backwater sloughs often associated with large floodplain river systems.

Within these situations, they tend to favor places where there are submerged logs, root entanglements and snags.

This turtle is almost entirely aquatic in habit, only leaving the water to nest. Mating takes place from February to April with nesting occurring shortly afterwards. Females seek the highest places near water such as overgrown sections of sandbars, natural levees and man-made spoil mounds. At nest sites, females will excavate a flask-shaped cavity with their hind legs and deposit a clutch of 30-40 eggs on average. Only one clutch is laid each year or every other year depending on the turtle's physical condition. The eggs are chalky white and nearly spherical. Incubation time varies with soil temperature and range between 79 to 110 days. As with other turtle species, incubation temperature influences gender, with warmer soil temperatures yielding female-dominated clutches and cooler temperatures yielding male-dominated clutches.

Hatching takes place over several days and the hatchlings are similar in appearance to adults. It takes over a decade for young to reach sexual maturity. Nests and hatchlings are susceptible to a variety of predatory mammals, reptiles, birds and large fish. Adults have no natural predators.

Alligator snapping turtles are opportunistic foragers and will feed on a wide variety of plant and animal matter including carrion. It also forages using a specialized



The cross-shaped plastron is a characteristic of both the Alligator Snapping Turtle (pictured) and Common Snapping Turtle. It is considerably smaller in size compared with other species of turtles in the Southeast.

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worm-like appendage or “tongue” as a lure located at the base of its lower jaw. During these instances, it will sit motionless with its mouth agape and wiggle the specialized tongue to attract fish. When an unsuspecting fish hits the lure, the turtle’s jaws slam shut with great velocity enabling it to swallow its prey whole.

Alligator snapping turtles can be very sedentary and have been reported to remain at one location for more than a month before moving. Alternatively, they may move considerable distances within river channels when food scents are detected. When removed from water, alligator snapping turtles will remain in place and hold their jaws open and occasionally hiss. Although very powerful, their bite has

been fabled to snap a broom handle in half, which is an exaggeration. However, they can snap quickly and with considerable force causing significant injury to those that are careless around them.

Alligator snapping turtles have undergone severe population declines throughout much of their range, primarily as a result of unmonitored commercial harvest supporting the soup industry. During its peak in the 1970s, many populations were exploited by trappers well below sustainable levels, prompting the enactment of legal protection in most states including Alabama (see Nongame Species Regulation 220-2-.92). Although commercial harvest is no longer a serious threat in Alabama today, many populations have not recovered from wide-

spread harvest. Furthermore, other factors may be contributing to its decline currently. These include the use of baited limb lines, trotlines, and hoop nets for fishing that are not regularly attended. As opportunistic scavengers, they can easily be hooked or trapped underwater placing them at risk of drowning.

Habitat degradation and pollution have also been implicated in population declines. Collectively these threats are further exacerbated by this species’ life history traits – slow to mature, low reproductive output, and vulnerable to nest predation. These factors, in addition to poorly understanding many aspects of their biology, have resulted in its recent designation of high conservation concern in Alabama’s Comprehensive Wildlife Conservation Strategy.

COMMON SNAPPING TURTLE

(*CHELYDRA SERPENTINA*)



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Common snapping turtles are large, semi-aquatic turtles recognized by their large, rounded and fully-retractable head, elongated neck, powerful jaws, relatively broad and flat carapace, long and knobby tail, and sturdy legs with formidable claws. The scutes along the posterior end of the carapace are strongly serrated (saw-toothed) and the plastron is small and cross-shaped. Their eyes are positioned toward the top of the head. The carapaces of hatchlings and juveniles are knobbed (tubercle-shaped) giving a three-keeled appearance, but become smoother with age and almost completely smooth in old individuals. Additionally, they are almost always found with leaches attached to their bodies. Recorded weights of adults range

from 10 to 75 pounds, but any individual exceeding 40 pounds in the wild is quite unusual. Although males grow larger than females, both sexes are nearly indistinguishable except that the cloaca (cavity in the pelvic region) of adult males extends beyond the carapace edge.

As its name implies, the common snapping turtle is one of the most widespread turtles in North America occurring just about everywhere east of the Rocky Mountains. It is so abundant that it has been found in nearly all freshwater habitats (e.g. rivers, creeks, marshes, swamps, reservoirs, farm ponds, vernal pools, ditches, etc.) throughout from sea level to elevations exceeding 6,500 feet. Much of its widespread distribution can be attributed to its habit of

moving long distances over land between water bodies.

Common snapping turtles are opportunistic foragers and will feed on a diverse array of plants and animals and are especially adept at scavenging. They are maligned by many anglers due to the misconception that they are detrimental to sport fish. Although they maneuver well in water, they are unable to subdue most healthy fish; rather they pursue sick, injured or dead fish and may occasionally hit a baited hook. They may also use the “sit-and-wait” tactic to ambush unsuspecting prey.

Mating begins in late winter and continues through early spring. During May and June, females typically seek open areas near

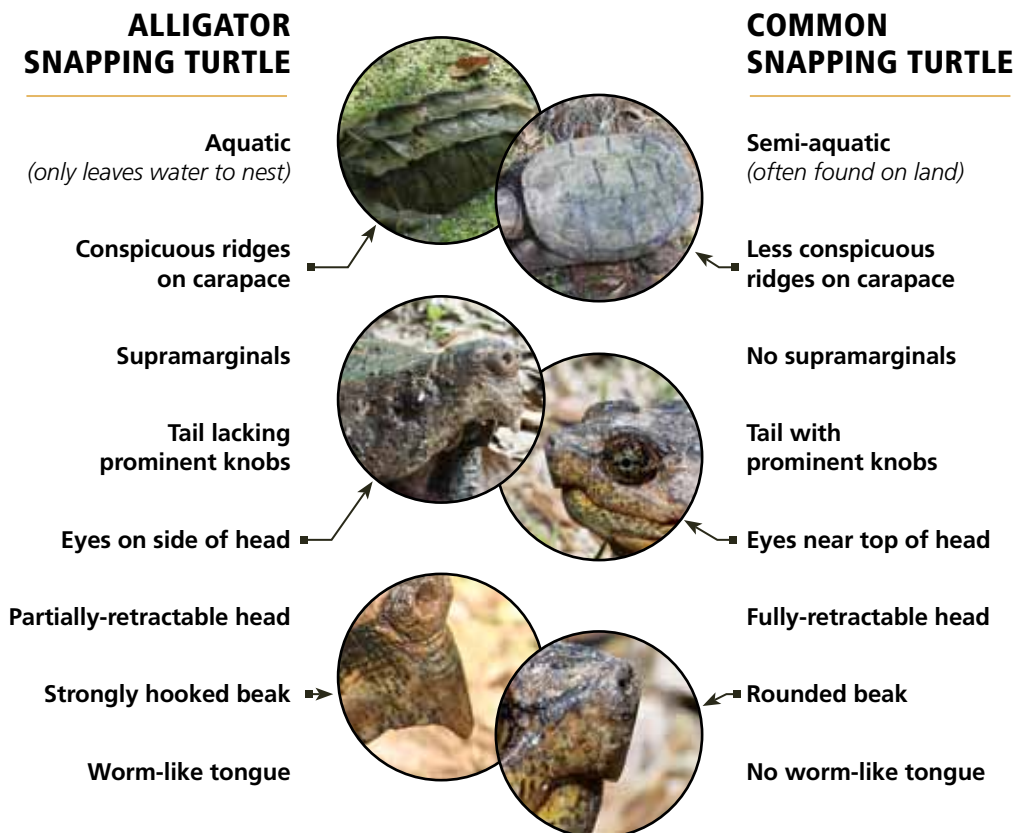
COMMON SNAPPING TURTLE

water to lay eggs, but may travel considerable distances over land to nest. Clutch sizes usually range from 20 to 40 spherical eggs, but may exceed 100. The incubation period varies from 55 to 100 days depending on location with some nests overwintering as a result of colder climates or late nesting. Nests and hatchlings are vulnerable to predation from a variety of carnivorous mammals, reptiles, birds and large fish. When threatened, adults are combative and will snap rapidly and repeatedly in defense, momentum often carrying a portion of its body off the ground. Its powerful jaws are capable of inflicting significant flesh wounds and must always

be respected. If necessary, the safest way to carry a common snapping turtle is by firmly grasping its hind legs and insuring that its head is away from one's body at all times. Although once advocated, holding them by the tails can cause serious injury to their lower vertebrae and should never be done.

In Alabama, common snapping turtles with carapace lengths between 4 and 12 inches are protected by Nongame Species Regulation 220-2-.92 (3). Nevertheless, adults are occasionally harvested by humans for their meat, which subsequently may affect local populations. Moreover, they are often casualties of human persecution for a variety of unsubstantiated reasons. Many are also killed by automobiles as they cross roads to reach nesting sites or adjacent wetlands. Despite these impacts, common snapping turtles appear to be abundant throughout Alabama and are currently recognized as a species of lowest conservation concern. [GA](#)

NOTED DIFFERENCES BETWEEN SNAPPING TURTLES



Further Reading

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