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Alligator Snapping Turtle (*Macrochelys temminckii*) (*Macrochelys suwanniensis*) and (*Macrochelys apalachicola*)

America's Largest Freshwater Turtle

These large turtles can be readily identified by their very large, broad heads with very distinctly beaked upper and lower jaws, a large, very thickened carapace consisting of three prominent, raised osteoderm like dorsal scutes and heavily serrated rear marginal scutes, a reduced plastron, and a relatively long tail with prominent, jagged osteoderms. Alligator snapping turtles can range in overall color and appearance from solid gray, brown, blackish, to olive gray or olive brown. All of these features, particularly the three rows of raised carapace scutes, distinguish the alligator snapping turtle from the smaller, more widespread common snapping turtle (*Chelydra serpentina*). They are largely aquatic, sedentary ambush predators of small fish and other aquatic invertebrates, with which they use a fleshy pink appendage located on the inside of the turtle's mouth as a lure to attract prey within or close enough to striking range, and which resembles a worm or other object of interest to prey. Alligator snapping turtles have a widely negative reputation, and can be quite aggressive if cornered or handled, and are not suitable beginner's or intermediate turtle species. They are a frequently maintained turtle species in captivity by advanced hobbyists, however.

Alligator snapping turtles are a controlled, regulated, or prohibited species in some states. Always check any applicable federal, state, and local laws and ordinances that may pertain to the specific possession of this species.

Taxonomy

Life: All living, physical, and animate entities

Domain: Eukaryota

Kingdom: Animalia

Phylum/Sub Phylum: Chordata/Vertebrata

Class: Reptilia

Order: Testudines

Suborder: Cryptodira

Family: Chelydridae

Genus: *Macrochelys*

Species: *Macrochelys spp.**

**Taxonomy subject to change and revision.*

Lifespan and Longevity

Alligator Snapping turtles may attain longevity of 30 to 70 years or more under proper care, husbandry, and conditions.

Species

Once recognized as a single species, recent scientific studies have found there to be three separate species of alligator snapping turtle: *Macrochelys temminckii* (the nominate species), *Macrochelys suwanniensis*, and *Macrochelys apalachicola*.

Distribution and Habitat

The alligator snapping turtle is a very large group of freshwater turtle species indigenous to the south-central to southeastern United States as far north as southern Illinois and Kansas. Within this limited range, alligator snapping turtles are sedentary, primarily aquatic species which very seldom venture out onto land, and instead most often occur in deep, relatively undisturbed large rivers, and their tributaries and basins, canals, lakes, ditches, and large marshes and swamplands.

Conservation Status

IUCN Red List Vulnerable (VU).

Legal and Regulatory Status(*Subject to Change)

Macrochelys temminckii (United States of America) is CITES Appendix III as of October 2017. Turtles and tortoises under 4 inches are regulated by the U.S. Food and Drug Administration (FDA). Also consult with your local, municipal, and state ordinances and regulations for any ownership restrictions.

Experience Level Required

Advanced.

Size

Alligator snapping turtles are among the largest freshwater turtle species worldwide, and certainly in North America. This species reaches average carapace lengths of 15 to 30 inches, and typical adults will reach anywhere from 35 to 150 lbs., with males being larger than females. The maximum recorded weight for these turtles has been recorded at approximately 320 lbs., with 230 to 240 lbs. being a more typical large adult size.

Housing and Enclosure

Any enclosure that is provided must be secure and escape proof. Hatchling alligator snapping turtles under 4" can be adequately housed in a 20 to 50 gallon aquarium or similar sized tub or enclosure, but will very quickly outgrow these accommodations, and larger accommodations should be provided accordingly. A general rule of thumb to follow for most aquatic to semi-aquatic turtles is to provide water that is at least 1 ½ to 2 times the turtle's height in depth to allow for complete submersion, and at least two to three times the carapace length for adequate swimming and movement. Once an individual reaches 8" in carapace length or more, housing and accommodations for this species can become more difficult. At minimum, a 55 gallon, or at a minimum a roughly two foot by four foot enclosure or larger should be provided for a small adult alligator snapping turtle, although appropriately sized plastic or galvanized totes, troughs, or some forms of commercially available turtle tubs may be more suitable and easier to clean and maintain. Up to an 800 gallon stock tank or trough is recommended for very large turtles. Alligator snapping turtles are also best housed individually or separately from other turtles or other animals to prevent the risk of potential predation or injury among them. A high power pump and water filtration canister system must also be set up and installed to maintain enclosure

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clarity and quality. Unlike the common snapping turtle, alligator snapping turtles even more seldom will bask out of the water, often opting to floating near the surface, and do not require a dry land area as long as they are able to reach the surface for air. Substrates that can be utilized can include bare bottomed enclosures, or non-abrasive aquarium sand or gravel that cannot be easily ingested. Substrate should be agitated weekly to clear out lodged debris. Additional furnishings and accessories can also be provided in the enclosure for added safety and security including commercially available hides or slabs, live or artificial plants, which should be planted firmly to prevent uprooting, as well as rocks, or other similar furnishings.

Temperature, Lighting, and Humidity

Providing the correct amounts of UVA/UVB overhead incandescent and florescent lighting, and calcium-to-phosphorus ratios is essential for ensuring the health and overall well-being of alligator snapping turtles in captivity. Without UVA/UVB, or adequate amounts of it, they can be susceptible to the abnormal bone and shell growth and development known as Metabolic Bone Disease (MBD), and other health and development maladies. Pyramiding of the scutes and shell can also occur due to poor or improper diet, lighting, or heating. Always be sure to spot clean the enclosure for urates, feces, or uneaten food at least twice per week. Be sure to periodically replace any substrate, clean, and disinfect the enclosure and its furnishings at minimum every 2 to 3 months. These turtles require a suitable thermal gradient using a ceramic or radiant heat emitter, submersible water heater, and/or UVA/UVB overhead lighting. Ambient and cool end temperatures should be within 75 to 80 degrees F and the basking area from 90 to 95 degrees F. Also be sure to maintain a light cycle of 12 to 14 hours per day, and monitor temperatures with a quality thermometer. More specific lighting, heating, and humidity product suggestions and recommendations that can best suit one's needs, as well as those of one's animals can be given as well.

Feeding, Diet, and Nutrition

Carnivorous; In the wild, alligator snapping turtles are largely carnivorous. They are highly aquatic, sedentary ambush predators that use their fleshy worm like appendage on the inside of their mouth to attract aquatic insects, crustaceans, mollusks, or other invertebrates, as well as small fish, smaller reptiles and amphibians, and even sometimes small birds or mammals. In captivity, variety is important, and these turtles can be given commercially available aquatic turtle or omnivore mix diets, as well as appropriately sized feeder fish of appropriate nutritional value. Avoid feeding them goldfish, which are not nutritionally staple. They can also be given crickets, roaches, waxworms, superworms, mealworms, nightcrawlers, red worms, earthworms, or crayfish. Frozen-thawed rodents of appropriate size, and other forms of fresh meats such as chicken, turkey, fish slabs, and/or beef can also be given, but any foods that are high in protein and fat should be given sparingly, if at all. Feeding frequency depends on the age, size, and overall health of your turtle, but in most cases, they can typically be fed two to three times weekly. They must feed and ingest food underwater, as with many other turtles, and any excess or uneaten food should be cleaned and removed to prevent fouling. These turtles also require regular calcium and multi vitamin and vitamin D3 supplementation two to three times per week for optimal health and well-being. Without the proper diet and supplementation, they can be susceptible to Metabolic Bone Disease (or MBD), and other bone, shell, and growth maladies. More specific dietary and supplementary product suggestions and recommendations that can best suit one's needs, as well as those of one's animals can be given as well.

Handling

Alligator snapping turtles are by no means an appropriate beginner's turtle and are best maintained by the more advanced turtle or reptile enthusiast able to provide the proper amount of space and housing for this species. Despite their widespread negative reputation, however,

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alligator snappers are perhaps more docile and less dexterous than the common snapping turtle if acquired and handled or interacted with on a regular and frequent basis from very early ages (such as from hatchlings). In general though, alligator snapping turtles are not suitable “pet” species for most individuals.

Due to their weight and bulk, any snapping turtle over 3 to 4” must be handled correctly to prevent injury to the animal and/or individual handling them. Snapping turtles should never be solely picked up or carried by their tails, as this is likely to cause spinal (or vertebral) injury. Many snapping turtles of intermediate size can be handled by firmly gripping their rear portion of their plastron and carapace between their tail and hind limbs. For more experienced handling, very large and heavy alligator snapping turtles can also be lifted from the forward margin of their carapace behind their head and neck.

****Also be sure to practice basic cleanliness and hygiene associated with proper husbandry after touching or handling any animals or animal enclosures to prevent the possibility of contracting salmonellosis or any other zoonotic pathogens****

Contact

Authored by Eric Roscoe. For any additional questions, comments, and/or concerns regarding this animal, group of animals, or this care sheet, please email and contact the Madison Area Herpetological Society at info@madisonherps.org

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