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North American Wood Turtle (*Glyptemys insculpta*)

Quite Possibly One of North America's Smartest Turtles

The North American wood turtle is a medium sized to large species of terrestrial to semi-aquatic North American turtle indigenous to the Midwestern and Great Lakes regions, through the New England's northeastern United States and into southeastern Canada. This turtle's semi-domed carapace can range in color from blackish, to olive or olive-brown, to yellowish-brown, and each scute on the carapace is highly sculptured, giving these turtles their common names, although these can become smooth and more worn in older turtles. The plastron is typically a pale yellow with large, darker, rectangular blotches along the margins, and their skin on their heads, necks, feet, and limbs ranges from blackish, to grayish with a yellowish to orangish wash in between their skin and scales, giving these turtles even more color to their appearances.

As with Central American wood turtles, their Central American counterparts, the North American wood turtle (*Glyptemys insculpta*) is among the most perceptive and intelligent species of turtles in North America, with several accounts and scientific studies and reports demonstrating these turtles to have the cognitive ability to solve simple to moderate in difficulty puzzles and mazes in laboratory settings. These turtles also use their strong cognitive abilities to locate and capture prey as well, with perhaps the best known example of such are these turtle's habits of stomping their fore limbs on the ground to simulate rainfall or other disturbances to draw earthworms and other invertebrates to the ground surface. Wood turtles, both North American, and Central/South American species, can often make for overall very entertaining, intelligent, and perceptive pet turtles to keep in captivity under the right circumstances.

Taxonomy

Life: All living, physical, and animate entities

Domain: Eukaryota

Kingdom: Animalia

Phylum/Sub Phylum: Chordata/Vertebrata

Class: Reptilia

Order: Testudines

Suborder: Cryptodira

Superfamily: Testudinoidea

Family: Emydidae

Genus: *Glyptemys*

Species: *Glyptemys insculpta**

*Taxonomy subject to change and revision.

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Lifespan and Longevity

North American wood turtles can be long lived species, and may attain longevity of 30 to 40 years or more with proper care and conditions.

Distribution and Habitat

The North American wood turtles are a medium sized to large species of semi-aquatic to terrestrial turtles indigenous to the upper Midwestern and Great Lakes regions of the United States, and into much of the northeastern New England States of the U.S. and southeastern Canada, including Nova Scotia and into Quebec. Depending on the seasonality and other local factors and environments, North American wood turtles can be highly variable in their habitat uses and selections. During some portions of the year, these turtles can remain quite aquatic to semi-aquatic, being found in and near relatively clear, pristine medium to large, well vegetated rivers and streams with soft, muddy or sandy bottoms. During the summer and some other portions of the year, depending on their range, these turtles will wander further away from water, and can be found in a variety of more terrestrial to semi-aquatic habitats including bogs, fens, wet meadows, prairies and grasslands, upland to lowland forests and woodlands, shrub wetlands, and other riparian, or edge habitats.

Conservation Status

IUCN Red List Listed Threatened, Endangered Species (EN).

Legal and Regulatory Status(*Subject to Change)

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

Intermediate/Moderate to Advanced.

Size

North American wood turtles are a medium sized to large, semi-aquatic turtle species which usually reach a carapace, or upper shell length of 5 ½ to 9 inches, which males being dimorphic and larger than females.

Housing and Enclosure

North American wood turtles are medium sized to large, active turtles which should be considered semi-aquatic, and require sufficiently large enclosures, especially if they are to be housed indoors. Provide a sturdy, escape proof aquarium or commercially available plastic or galvanized stock tank or turtle tub of sufficient size with an elevated dock or basking area/access to dry land using a substrate dam. The latter are perhaps preferred for maintaining aquatic to semi-aquatic turtles in, as they are easier to clean, move/transport, and maintain than aquariums. A minimum of a four to six foot by three foot, or preferably larger enclosure with a shallow water dish or pan, or other accessible aquatic gradient that can easily be drained, and which these turtle(s) can readily enter and exit from are also recommended options. As a general rule, provide a minimum of 10 gallons of space per inch of shell for most chelonians, although more is always recommended with highly active species such as these turtles. A general rule of thumb to follow for North American wood turtles is to provide water is only deep enough to allow for complete submersion, and at least two to three times the carapace length for adequate swimming and movement. A powerful water filter rated at least twice that of the amount of water in the enclosure is highly recommended for any semi-aquatic turtles, as they are messy and require

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frequent cleaning and regular water changes. Use a submersible water heater with a guard to maintain water temperatures of 75 to 85 degrees F. Substrate that should be used should be of sufficient depth of at least 6 inches or more to allow for burrowing and hiding opportunities, and should include cypress mulch, coconut fiber bedding, peat moss or sphagnum moss, and/or play sand mixtures. Substrates should be kept moist to prevent drying out, but not be overly wet. Additional rocks, logs, cork bark, live or artificial foliage can also be provided for additional foraging, basking, and hiding opportunities that these turtles will use and enjoy. Also ensure that any enclosure used is adequately sturdy and escape proof, as North American wood turtles are surprisingly adept climbers.

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 North American wood 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 the substrate, clean, and disinfect the enclosure and its furnishings at minimum every 2 to 3 months. These turtles require a thermal gradient using a ceramic or radiant heat emitter, UTH (or under tank heating pad), and UVA/UVB overhead lighting. Provide a basking area or platform for your turtle to emerge completely from the water and monitor at around 85 to 95 degrees F. Ambient temperatures should generally be 70 to 80 degrees F although overnight temperatures can be allowed to drop to within the 60's or even mid-50's. A 12 to 14 hour light, or day/night cycle can also be utilized, and humidity kept relatively moderate to high for these species from around 60 to 75% using hand misting, or through use of a commercially available misting or fogging system. 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

Omnivorous; In the wild, North American wood turtles are largely omnivorous, feeding on a variety of insects and other invertebrates, carrion, or dead and decaying plant and animal matter, crustaceans, mollusks, fungi, fruits, berries, and other plant and vegetable matter. In captivity, providing a varied diet is important. These turtles tend to be omnivorous, and can be given a variety of prey or food items including feeder insects of appropriate size, including crickets, roaches, mealworms, waxworms, superworms, or other insects. Gut load feeder insects and supplement these turtle's diets with calcium and vitamin D3 at least two to three times weekly for their optimal health and well-being. Some commercially available aquatic turtle or omnivore mix diets can also be given. Other food items that can be used can include small feeder fish of appropriate nutritional value, redworms and earthworms, freeze-dried shrimp or krill, berries, and greens, fruits, and vegetables. Many of these are available in your local grocer's market, and can include turnip, mustard, and collard greens, bananas, tomatoes, watermelon, and several others. Additional books, websites, and other resources are also available that further detail foods that are suitable and unsuitable for these turtles. Small, frozen-thawed rodents can also occasionally be given, but any foods or diets high in fat or proteins should be done sparingly, if at all. Do not overfeed these turtles as well, as obesity and other health related concerns can result. Providing supplementation in their diets at least two to three times weekly is recommended. 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.

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Handling

Hatchling and newly acquired North American wood turtles can be initially shy and wary, but over time, and with regular handling and interaction, can often become very personable, intelligent, and outgoing turtles, especially when food is expected. Most small to mid-sized turtle and tortoise species that are not aggressive or prone to biting can be picked up and handled either by placing both hands along both sides of the shell, or from the rear of the carapace with the thumb on the carapace and index through pinky fingers on the plastron to reduce the chances of being kicked, scratched, or nipped when they are threatened. Although most species of chelonians are not outwardly aggressive, defensive, or dangerous, they can become stressed as a result of over-handling, however, and some species, and even individual animals can be shyer than others. These are some considerations to keep in mind when handling any chelonian species.

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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