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Asian Leaf Turtles (*Cyclemys* spp.)

Asian Turtles Under Threat

Asian leaf turtles belong to a genus of semi-aquatic to terrestrial freshwater turtles, consisting of approximately seven (7) species. Coloration and appearance depend on the species, but Asian leaf turtles generally have a rounded, leaf like carapace with serrated rear marginal scutes (hence their common name). Carapaces can range in color from olive-green, blackish, brown, or tan, and may also have a prominent vertebral keel. Many species also have lighter colored reddish, yellowish, to orangeish radiating stripes on the head, neck, and limbs. Adults of most species tend to be more terrestrial than juveniles and hatchlings, but many are threatened and declining in the wild due to over-harvesting and over-exploitation.

Taxonomy

Life: All living, physical, and animate entities

Domain: Eukaryota

Kingdom: Animalia

Phylum/Sub Phylum: Chordata/Vertebrata

Class: Reptilia

Order: Testudines

Suborder: Cryptodira

Family: Geoemydidae

Subfamily: Geoemydinae

Genus: *Cyclemys*

Species: *Cyclemys* spp.*

*Taxonomy subject to change and revision.

Lifespan and Longevity

Asian leaf turtles may attain longevity of 30 to 40 years or more with proper care and conditions.

Species

Species include the Western Black Bridged or Striped Leaf Turtle (*C. atripons*), Asian Leaf Turtle (*C. dentata*), the most commonly kept and bred species, Eastern Black Bridged Leaf Turtle (*C. pulchristiata*), Enigmatic Leaf Turtle (*C. enigmatica*), Myanmar Brown Leaf Turtle (*C. fusca*), Assam Leaf Turtle (*C. gemeli*), and Southeast Asian Leaf Turtle (*C. oldhami*).

Distribution and Habitat

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These turtles occur in and around the shallow, slow moving ponds, streams, rivers, and other bodies of water among the tropical to sub-tropical forests and woodlands of southern to southeastern Asia. Range is dependent upon the exact species, but generally, these genera of turtles ranges from northeastern India, Myanmar, Thailand, Laos, Cambodia, Vietnam, to Indonesia, and Malaysia.

Conservation Status

Conservation status is dependent upon the species. Some are Not Evaluated for the IUCN Red List (NE) or otherwise Data Deficient (DD). Some are Lower Risk/Near Threatened (LR/NT).

Legal and Regulatory Status(*Subject to Change)

Cyclemys spp. are CITES Appendix II 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

Intermediate/Moderate.

Size

Depending on the subspecies, Asian leaf turtles usually reach a carapace, or upper shell length of 7 to 10 ½ inches, with females being larger than males.

Housing and Enclosure

Asian leaf turtles are semi aquatic to semi-terrestrial turtle species. 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. Provide a minimum of 10 gallons of space per inch of shell, or about 40 to 100 gallons for most adult Asian leaf turtles. 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. A powerful water filter rated at least twice that of the amount of water in the enclosure is highly recommended for aquatic turtles, as they are messy and require 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 is optional, and foregoing it makes for easier cleaning and maintenance, but small to medium sized gravel can be used. Additional rocks, logs, live or artificial foliage can also be provided for additional foraging, basking, and hiding opportunities.

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 Asian leaf 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), submersible water heater, and/or incandescent or UVA/UVB overhead lighting. Be sure to provide a basking area or platform for your turtle to emerge

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completely from the water and monitor at around 85 to 90 degrees F. Maintain the ambient and cool end areas of the enclosure at 75 to 80 degrees F. 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, Asian leaf turtles are primarily omnivorous to carnivorous, feeding on aquatic to semi-aquatic insects, crustaceans, mollusks, and other invertebrates, as well as smaller vertebrates including small fish, amphibians, and carrion, or dead and decaying plant and animal material. Some algae and other aquatic plants may also be consumed. In captivity, variety is important with most aquatic to semi-aquatic turtle's diets. Asian leaf turtles can be given feeder insects of appropriate size including crickets, roaches, mealworms, waxworms, superworms, or other invertebrates. They can also eat small, frozen-thawed rodents of appropriate size, but offer these sparingly, if at all. Other food items that will be accepted by these turtles can include many of the commercially available aquatic to semi-aquatic turtle or omnivore mix diets, small feeder fish of appropriate nutritional value, earthworms, redworms, freeze dried shrimp or krill, or some other meats. Dog and cat foods can also be used, but use these sparingly, if at all as well. They can also be fed some chopped greens, fruits, and vegetable material as well. Gutloading any feeder insects and providing additional calcium and vitamin D3 is essential for these turtle's optimal health and well-being. Without proper supplementation, they are susceptible to Metabolic Bone Disease, pyramiding of the shell, and other abnormal bone, growth, and health maladies. Feeding frequency will depend on the age, size, and overall health of your turtle, but typically in most cases should be twice to three times weekly. Do not overfeed them, though as obesity and other health related issues can become a concern. 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

The Asian leaf turtle (*C. dentata*) is the most frequently kept and available *Cyclemys* species as captive born specimens. Other species are more likely to be imported or wild caught, although captive breeding efforts are now beginning to focus on these other species as well. Captive born and raised Asian leaf turtles can become very tame and personable pets, often even approaching their keepers for food. 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 shy 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

Disclaimer: Note that the information provided in these, or any care sheets, are not intended to be all-exhaustive, and further research and care should always be sought and provided when it comes to any

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