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Asian Box Turtles (*Cuora-Pyxidea amboinensis*)

Tropical Box Turtles of the Old World

The Asian box turtles are also known as the Ambionna box turtles, which consist of approximately 12 species altogether. The nominate Asian box turtle species, *C. amboinensis*, is perhaps the most widely kept and familiar of the species. They are medium sized to large turtles with a somewhat domed blackish brown to olive brown carapace, with blackish to grayish black skin and paler yellowish striping and/or streaking on the head and neck. Depending on the species of Asian box turtle, they may be primarily aquatic, semi-aquatic, to primarily terrestrial, spending only occasional amounts of time in shallow water. These turtles may also be omnivorous to carnivorous depending on their species and food availability as well.

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: Cuora-Pyxidea

Species: *Cuora-Pyxidea amboinensis**

*Taxonomy subject to change and revision.

Lifespan and Longevity

Asian box turtles may attain longevity of 30 to 40 years or more with the correct conditions and care.

Distribution and Habitat

Depending on the subspecies, these turtles are indigenous to southern and southeastern Asia including Myanmar, Thailand, Malaysia, Vietnam, and Borneo. Depending on the species, they may be primarily aquatic, to semi-aquatic, to primarily terrestrial, and are often found in ecotone, or edge habitats of swamplands, stream, pond, and river margins, as well as rice paddies and irrigated croplands with ample vegetation. In some cases, these turtles can even be quite tolerant of habitat degradation as well.

Origin/History

Cuora amboinensis Daudin, 1802. The several subspecies would have different authors and years described attributed to them.

Cuora (the genus to which Asian box turtles belong to) have long been one of the most heavily traded and exported species from Southeastern Asia, namely Indonesia. Demand for these turtles came not only from the pet trade, but also their use for the meat and traditional medicine industries. In 2017, however, they were appointed as CITES Appendix II (see below). While exportation quotas were put into place, with zero wild collection quotas for several other *Cuora* spp., these quotas would regularly be exceeded. In the 1970's, wild populations of these turtles were reported as stable; however, by the 1990's, population declines of these turtles were reported. This indicates that these Asian turtles have been present in the live animal exportation since at least these decades.

Experience Level Required

Intermediate/Moderate.

Size

Depending on the subspecies, Asian box turtles usually reach a carapace, or upper shell length of 5 to 12 inches, which females being larger than males.

Housing and Enclosure

Enclosure System: Primarily Semi-Aquatic to Somewhat Terrestrial. Despite a common misnomer, these Asian box turtles are quite semi aquatic, and often are much more aquatic than terrestrial. Provide a sturdy, escape proof aquarium or commercially available turtle tub of sufficient size of at a minimum of 40 to 120 gallon aquarium or similar sized plastic or galvanized stock tank, turtle tub, or other enclosure with an elevated dock or basking area/access to dry land using a substrate dam. Although they are largely aquatic, basking opportunities should still be provided. A general rule of thumb to follow for Asian box 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 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 box 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. Ambient and cool end temperatures should be within 70 to 80 degrees F and the basking area from 85 to 90 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. Asian box turtles require relatively higher relative humidity levels of around 80 to 85%.

Feeding, Diet, and Nutrition

Omnivorous; In the wild, Asian box turtles are 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. Asian box 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.

Commercially available canned or pelleted turtle diets are not good staples for feeding aquatic to semi-aquatic turtles, and should not exceed roughly 25% of their diets; Variety is always best. 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.

Handling

Asian box turtles are available as both captive bred and wild caught/imported specimens, with captive bred turtles tolerating handling better than imports. Captive born and raised Asian box 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 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

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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 species one may prospectively be interested in. These care sheets are also not intended to serve as substitutes for professional veterinary medical care and husbandry should any animal require it. Always seek proper and professional veterinary care for any animal should the need arise, and be prepared ahead of time for any and all husbandry costs and expenses that may occur with any animal beyond the initial purchase. Any animal owned is ultimately a matter of personal/individual care and responsibility. We cannot make any claims or guarantees regarding any information in this care sheet therein. This care sheet may be reprinted or redistributed only in its entirety.

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