



\*Russ Gurley

## Asian Box Turtles (*Cuora amboinensis*)

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### **Tropical Box Turtles of the Old World**

The Asian box turtles are also known as the Ambionia 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*

**Species:** *Cuora 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 with ample vegetation. In some

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cases, these turtles can even be quite tolerant of habitat degradation.

### **Conservation Status**

IUCN Red List Vulnerable (VU).

### **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**

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.

### **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,

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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.

### **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 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](mailto:info@madisonherps.org)

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