



*Russ Gurley

Common Box Turtle (*Terrapene carolina ssp.*); Eastern, Three-Toed, Gulf Coast, Florida

Big Things Can Come in Small Boxes

Box turtles are relatively small, terrestrial turtles named for their hinged plastron (lower shell). When threatened or attacked, they withdraw their heads, necks, and limbs and seal their shells closed as a defense mechanism using their hinged plastron. Box turtles are small turtles with a domed carapace that can range in color from blackish to gray, tan, to olive brown with yellowish to orange radiating blotches, stripes, and streaks on each scute. The three toed box turtle tends to have a solid or only faintly marked pale yellow, olive-yellow, olive brown, or grayish brown carapace. Skin on the head, neck, and limbs is often heavily mottled with yellow or orange. Box turtles in North America consist of several subspecies by including the eastern box turtle (*T. c. carolina*), three toed box turtle (*T. c. triunguis*), gulf coast box turtle (*T. c. major*), and Florida box turtle (*T. c. bauri*). Box turtles, if given the proper care, and live for 40 to 50 years or more and require long term care and commitment.

Taxonomy

Life: All living, physical, and animate entities

Domain: Eukaryota

Kingdom: Animalia

Phylum/Sub Phylum: Chordata/Vertebrata

Class: Reptilia

Order: Testudines

Suborder: Cryptodira

Family: Emydidae

Subfamily: Deirochelyinae

Genus: Terrapene

Species: *Terrapene carolina**

*Taxonomy subject to change and revision.

Lifespan and Longevity

Common box turtles, if given the proper care, and live for 40 to 50 years or more and require long term care and commitment.

Distribution and Habitat

The North American, or common box turtles are a widely distributed and adaptable genus of

turtles found from southern to southeastern Canada and much of the eastern half of the United States, depending on the species and subspecies. The Florida box turtle (*T. c. bauri*) is found in peninsular Florida, while the Gulf Coast box turtle (*T. c. major*) occurs from the panhandle of Florida, west along the Gulf Coast to Texas. The three toed box turtle (*T. c. triunguis*) occurs in the Mississippi River valley of the southern to south-central United States, while the eastern box turtle (*T. c. carolina*) occurs over the rest of these turtle's range over much of the Midwestern, eastern, and northeastern United States, and south to the other subspecies' ranges. Little overlap occurs between the subspecies, except for portions of the south-central to southeastern U.S. Within these ranges, these turtles can occupy a wide variety of terrestrial to semi-aquatic environments including open, deciduous to mixed forests and woodlands, pastures and agricultural areas, lightly populated suburban or residential areas, forest clearings and meadows, savannahs, prairies, and the margins of permanent to semi-permanent bodies of water such as ponds, rivers and streams, marshes, ditches, and swamplands.

Origin/History

Terrapene carolina (Linnaeus, 1758). The subspecies would then have other first describing authors attributed to them with differing years.

North American common box turtles, and their several subspecies (including the Eastern Florida, Gulf Coast, Three-Toed, and Yucatan box turtles) have been popular pet turtles for many decades. While information about their first instances of keeping seems to be lacking, they probably were first collected and kept in substantial numbers as pets during at least the 1960's or 1970's. In following decades, native box turtle populations have declined drastically due to over demand and over-exploitation. Many were also exported overseas for foreign pet markets to fill the demand for small European tortoises when they became protected by law.

Now, box turtles are protected by law in most U.S. states where they are native, and the wild-collection of them became prohibited by law, or at least strongly discouraged, and purchasing or acquiring only captive-bred box turtles whenever possible became recommended.

Experience Level Required

Intermediate/Moderate.

Size

Adult common box turtles are small to medium sized turtles with most usually ranging from 4 to 6 ½ inches in carapace, or upper shell length depending on the species, age, and gender, as well as locality.

Housing and Enclosure

Enclosure System: Primarily Terrestrial. Provide a secure and escape proof enclosure. If housed indoors, a minimum of a 4 foot by 2 foot plastic or glass terrarium or other enclosure can be used, and are lightweight and easy to clean. Substrates that enable burrowing such as a mix of fine aspen chips, pesticide and chemical free potting soil, organic bark, or coconut fiber substrates are acceptable substrates to use for box turtles. Outdoor pens can work during the warmer months in temperate to sub-tropical climates, and can provide ample access to natural sunlight. Outdoor pens must have a perimeter at least 8 to 9 inches deep and at least 12 inches high. Be sure the enclosure is adequately sealed to prevent access by outdoor predators. Although they derive much of their water from their food, it is best to provide a shallow water dish or pan within the enclosure, which should be changed every several days or if fouled. Soaking your box turtle at least weekly in lukewarm water can also serve as added hydration. Providing an artificially heated hide box if housed in outdoor enclosures can provide for added safety and security for these tortoises.

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 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. Provide a thermal gradient with a ceramic or radiant heat emitter, UTH (or under tank heating elements), and/or overhead UVA/UVB incandescent lighting on a heavy duty clamp lamp. The ambient and cool end temperatures should be within 75 to 85 degrees F and the basking area from 85 to 90 degrees F. Maintain a light cycle of 12 to 14 hours per day, and be sure to monitor temperatures with a quality thermometer. Spot clean the enclosure for urates, feces, or uneaten food at least twice per week, and periodically replace the substrate, clean, and disinfect the enclosure and its furnishings at minimum every 2 to 3 months. 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. Overall relative humidity levels may vary somewhat depending on the species and subspecies of box turtle being maintained, although in most cases, box turtles should be maintained at, or around about 70 to 80%.

Feeding, Diet, and Nutrition

Omnivorous; In the wild, common 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. Common 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, but do not feed them too much high fat foods. 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. 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.

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

Common, or North American box turtles can be somewhat shy species, and will withdraw into

their shells if startled suddenly. 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:

Eric.S.Roscoe@gmail.com

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.

***Copyright, 2023**