



\*Russ Gurley

## Common Box Turtle (*Terrapene carolina ssp.*)

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### **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**

Depending on the species and subspecies, box turtles can occur throughout most of central, south central, and eastern United States in prairies, savannahs, swamps, wetland margins, to deciduous

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forests and woodlands.

### **Conservation Status**

IUCN Red List Vulnerable (VU).

### **Experience Level Required**

Intermediate/Moderate.

### **Size**

Adult common box turtles are small to medium sized turtle species typically 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**

Provide a secure and escape proof enclosure. If housed indoors, a minimum of a 40 gallon 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.

### **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,

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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. 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**

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 the Madison Area Herpetological Society at [info@madisonherps.org](mailto:info@madisonherps.org)

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