

Brief Description

There are several species of box turtle native to North America (ornate box turtles in Colorado) but their wild populations are declining rapidly due to habitat loss, being hit by cars on roads, and from collection for the pet trade. Unfortunately once taken from the wild box turtles can have trouble adapting to captivity, however unless they can be released in the location they were found they will wander aimlessly searching for their lost territory for months often into roads or neighborhoods. The box turtle is known for being able to completely withdraw its body into its protective shell and a hinge on the bottom part of the shell allows it to close completely like a box. The shell is living tissue and should never be pierced or painted.

Lifespan

With good care the expected lifespan is 60-80 years on average.

Sexing

Once mature male box turtles will usually have red eyes and females will have brown eyes in most cases, however not always. Males will have an indent on their plastron (belly of the shell) and a longer, more pointed tail with a longer distance between vent and tail tip than the stubby tail of females where the vent is closer to the shell.

Caging

Box turtles need large enclosures and when able should be housed outdoors in a protected outdoor pen. Box turtles are great climbers so the pen will need to be secure to keep turtles in and predators (especially dogs) out. A young box turtle can be kept in a 40 gallon tank and adult box turtles should be in a 75 gallon tank or larger, or outdoor enclosure. Large storage containers such as Rubbermaid storage boxes or livestock troughs can also be used for enclosures. There should be one or two things for your turtle to hide under - half log, half buried clay pot, etc. *Males must be kept alone because they will fight with other males or constantly harass females to breed to the point of causing injury. Females may be able to be housed together successfully.*

Substrate

Box turtles should be able to make shallow burrows in the substrate so a mixture of several of the following is best: organic soil, coco coir, peat moss, sphagnum moss, dead leaves. Avoid cedar/pine/aspen mulches, sand, carefresh bedding, alfalfa pellets, and sand. Live plants can be planted directly in the substrate or kept in pots to provide cover and enrichment for your turtle.

Lighting and Temperature

Reptiles need a warm place to bask (**85-90 degrees**) on one side of the cage in order digest food and nutrients properly. The other side of the cage should be cooler (**70-80 degrees**) so they don't overheat. A thermometer should be placed at both ends of the cage to accurately measure temperatures. Lights should be on for 10-12 hours each day and then total darkness at night. Night temperatures can safely drop to 60 degrees so a night time heat source is not necessary in most homes.

Turtles **MUST** have UVB light to survive and a lack of UVB will lead to Metabolic Bone Disease, severe deformation, and death. A commercially available UVB bulb is necessary as UVB does not penetrate glass or plastic so having the cage near a window does not work. Look for UVB listed specifically on retail packaging before buying. *After about 6 months of use most bulbs will stop emitting adequate levels of UVB, even though they are still shining, so it's important to change the bulb every 6 months.*

Humidity

Humidity in the enclosure should be 50-60%. This should be monitored by a hygrometer.

Food

Box turtles eat a combination of live bugs and vegetables every day when young and every other day as adults. Younger turtles will eat a higher ratio of bugs/worms/protein (80-90%) than adults. The best bugs to use are



Three-toed Box Turtle



Ornate Box Turtle

earthworms, superworms, and crickets. Wax worms and mealworms should only be given as a treat because of the high fat content. A small amount of high quality canned low-fat dog food can be offered up to once weekly. Cat food is too high in protein and should be avoided. Strawberries are a favorite of box turtles. Uneaten food should be removed after 24 hours.

Gutloading

Gutloading is the process of feeding crickets, superworms, and/or dubia roaches a nutritious diet so they can ultimately provide your reptile with the proper nutrients it requires as it would in nature. Supplementing with a calcium and multivitamin powder is important, but not sufficient alone. Creating a well-rounded gutload at home can seem daunting but can actually be fairly inexpensive and easy to make! Each time you go to the store get one or two staple vegetables on the list, then rotate them for something else next time. Make sure you wash all produce to eliminate pesticide residues and cut off the peel of fruits and vegetables as they have waxes and pesticides you can't wash off. The time from feeding insects, to your reptile eating those insects, should be 6-24 hours, and gutloading must be done before every feeding to be successful.

Staple Ingredients (Highest in calcium and other nutrients)					
					
Collard Greens	Turnip Greens	Mustard Greens	Escarole	Endive	Dandelion

Good Ingredients (Use as supplements to staples listed above)					
					
Sweet Potato	Papaya	Kale	Butternut Squash	Berries	Mango
Commercial gutloads: Repashy Superload, Cricket Crack, Super Chow					

Avoid These Ingredients (Low in calcium and/or high in phosphorus, oxalates, goitrogens)
Idaho potatoes, cabbage, iceberg lettuce, spinach, broccoli, tomatoes, corn, grains, beans, bread, cereal, meat, eggs, dog food, cat food, fish food, canned or dried insects, vertebrates (pinkies, lizards). While convenient, some commercially available gutloads (Farms Orange Cubes, Fluker Farms High Calcium Cricket Diet, Nature Zone Cricket Bites) are low in calcium, imbalanced and/or insufficient for good nutrition.

Supplementation

A powdered calcium supplement (without phosphorus) should be lightly sprinkled over the food 3-4 times weekly until 5 years of age and then 1-2 times weekly after that. A multivitamin can be used less frequently (once or twice a month) if desired but with well-rounded nutrition this is not always necessary. A piece of cuttlebone in the enclosure will also provide calcium and keep the beak short.

Hibernation

Box turtles will go into a period of dormancy called hibernation in the winter to survive when temperatures drop. During this time they dig underground, their heart rate drops very low and they do not eat, drink or even move around. Some people allow their box turtles to hibernate in their outdoor enclosures until they reemerge for spring, and some chose to hibernate them in the safe, controlled climate of a basement or garage. If kept indoors hibernation is not necessary and turtles will not hibernate if warm temperatures are maintained. If hibernation is attempted then temperatures need to be reduce to 40-45 degrees consistently (24 hours a day). Temperatures not cold enough to hibernate but not warm enough to have normal activity causes illness and severe digestive problems.

Water

A shallow water dish at least as big as your turtle with fresh water must be available at all times. It should also be stable, so it cannot be spilled, and it should be easy to climb in and out of from all sides. The dishes used under potted plants are excellent for water dishes and inexpensive. Turtles enjoy full body soakings but often defecate in their water so it needs to be cleaned often.

Other good sources of information on Box Turtle Care:

<http://www.boxturtlefacts.org/>

<http://www.austinsturtlepage.com/Care/cs-ornateboxie.htm>

<http://www.reptilechannel.com/care-sheets/ornate-box-turtle.aspx>

Examples of Appropriate Enclosures:



Outdoor Enclosures should be predator proofed / escape proofed.

