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Colorado Reptile Humane Society's Guide to Caring For North American Box Turtles

General Information

Box Turtles are one of the most well-known reptiles, both in the wild and as pets, across the United States. Most commonly, we see the Eastern Box Turtle (*Terrapene carolina carolina*), the Three-Toed Box Turtle (*Terrapene carolina triunguis*), and the Ornate (or Western) Box Turtle (*Terrapene ornata*) in the pet trade. Nearly all captive box turtles have been removed from the wild to be sold or kept as pets. Box turtles are primarily terrestrial animals, though they always need access to fresh water. They inhabit a wide range of habitats from grasslands to deciduous forests to damp wetlands. Despite these differences, western and eastern box turtles can be kept in the same conditions in captivity. Though a friendly species, they are happiest when observed from a distance and left to go about their daily routine.

Several species of Asian turtles, including the Malayan Box Turtle (*Cuora amboinensis*) and Chinese Box Turtle (*Cuora flavomarginata*), are commonly called box turtles but are not closely related to the North American Box Turtles. These turtles require entirely different care, diet, and habitat.

Habitat

CoRHS recommends an outdoor habitat, secure from predators, of at least 36 square feet (6 feet by 6 feet) for up to two turtles and 50 square feet for three turtles. This should include a variety of microhabitats, including areas in full sun, areas in full shade, plants, places to burrow, and other features to provide an interesting landscape for the curious turtle to explore. Plants such as strawberry, raspberry, and squash will provide both excellent ground cover and delicious food for turtles (and humans). A small area of composting organic waste will lure tasty bugs and furnish a spot for turtles to forage. A fresh water supply is essential. This should be large enough for the turtle to fully immerse himself, but not deeper than one-third of the shell height. The water should be at ground level with easy access both in and out and should be kept fresh with regular cleaning or a filtration system. Never use pesticides, herbicides, or other potentially dangerous chemicals in the area where your box turtle lives. In time, a box turtle will form a daily routine of basking, eating, and burrowing.

Light containing UV-B radiation is essential to healthy growth in all turtles and tortoises. The best source of this is natural sunlight; if a turtle is to be kept indoors, special lighting providing UV-B must be used without a barrier (plastic or glass) between the light and the animal. When handling a turtle, it is important to keep the turtle upright and hold with two hands, offering support for the turtle's legs so he is not stressed by the experience of flailing helplessly through space. Turtles have nails that can be sharp and will claw forcefully when put in an unfavorable situation.

Diet

Box turtles are omnivores. Their diet should consist of about 75% plant matter and 25% animal matter (protein). The key to a healthy diet is variety. A salad consisting of fresh greens (chard, collard greens, mustard, dandelion, escarole), fruit (berries, apple, melon), and shredded vegetables (carrot, sweet potato, squash, parsnip) can be given 2-3 times a week, supplemented with insects or other protein sources (zoophoba worms, crickets, earthworms, hardboiled egg with shell). These protein sources can be offered in moderation when an abundance of natural invertebrates (earthworms, pillbugs, slugs, centipedes) are available. A multivitamin is not necessary with a balanced diet, but is not harmful and can serve to ensure that turtles are getting everything they need. A piece of cuttlebone in the pen will provide a calcium source and is a great way for turtles to keep their beaks trimmed.

Canned or processed food should be avoided because of preservatives and other potentially harmful additives. In general, lettuces should be avoided because their low nutritional, but they can be offered occasionally.

Spinach contains high levels of oxalic acid which can prohibit calcium absorption, while broccoli and cabbage contain goitrogens, which interfere with iodine uptake. While these foods should be avoided in excess, they can be part of a healthy diet when offered in moderation. Frozen vegetables tend to lose some of their nutritional value, so fresh foods are always recommended, organic if possible. High-quality cat or dog food can be used as part of a mix to entice the reluctant eater.

The best means of monitoring the health your turtle's eating habits is to weigh him regularly using a scale (digital postal scales work well). Sub-adult turtles will gain some weight through the year, but fully-grown turtles should maintain a relatively constant weight. An adult turtle gaining or losing large amounts of weight (more than 10% of their body weight) could be suffering from health problems or has possibly developed or laid eggs.

Hibernation

All healthy box turtles should be safely hibernated for 2-6 months during the winter. This is essential to the health and longevity of the turtle and makes their care considerably easier. For more information on hibernation, please see our "Guide to Hibernating North American Box Turtles and Russian Tortoises" (available at www.corhs.org/hibernation.html). In spring and fall, turtles housed outside with a place to burrow can safely stay outdoors so long as nighttime temperatures are not significantly below freezing.

Illness

With any sign of illness, we recommend a visit to your reptile veterinarian as soon as possible. In box turtles, watch for swollen eyes, mucus in the eyes, nasal discharge, wheezing, and loss of appetite. Additionally, green, watery, or extremely odorous excrement can be a sign of illness. Regular soaking in tepid water one-third the height of the turtle for 20-30 minutes will promote hydration and voiding of wastes. This can be done 1-2 times per week for healthy turtles, or daily for ill turtles. In the event of illness or injury, follow your veterinarian's advice carefully and observe all changes in your turtle's habits.

Mating & Reproduction

While generally a docile species, male box turtles can become aggressive when desiring to mate, which can be any time. If co-housing animals, watch for signs of injury or stress. Males "in the mood" will not hesitate to go after females, other males, or even a nice-looking rock. A 1:4 ratio of males to females will prevent any one female from bearing the brunt of the male's attentions. Females will generally lay eggs from mid-June to late July. All females, even if not kept with males, can develop eggs and should be provided with a potential nesting spot of loose, friable soil to prevent egg binding (dystocia). You may notice some reluctance to eat and pacing around their pen, often at odd hours, prior to egg-laying. They may even dig several test holes. This may go on for several weeks before they find an acceptable place to deposit their eggs. If you happen to spot your female box turtle laying eggs, congratulations! This is not only an amazing feat to witness, but also demonstrates that you have a healthy, reproducing box turtle. Once the female has deposited her eggs, covered the hole, and left the area, it is safe to dig up the eggs. We recommend placing them immediately in the freezer as a sure way to stop embryo development. At CoRHS, we do not support the captive breeding of any reptiles, except in scientific programs to return endangered animals to the wild. If you have room for more turtles we encourage you to adopt another needy animal before adding the numbers in captivity.

For Further Reading

The Box Turtle Manual
from the Advanced Vivarium Systems series
By Philippe DeVosjoli & Roger Klingenberg
Published by BowTie Press, 2004

Box Turtles
By Tess Cook
Published by T.F.H. Publications, 2008

North American Box Turtles: A Natural History
By C. Kenneth Dodd, Jr.
Published by University of Oklahoma Press, 2002

World Chelonian Trust
www.chelonia.org

Box Turtle Care and Conservation Page
www.boxturtlesite.info

California Turtle & Tortoise Club
www.tortoise.org

The Tortoise Trust
www.tortoisetrust.org

The Turtle Puddle
www.turtlepuddle.org

*This guide was updated in April 2010.
Please contact info@corhs.org for more information.*