



## EASTERN BOX TURTLE (*TERRAPENE CAROLINA*) OBSERVATION GUIDE FOR HERPSCAPERS

by John Byrd

### INTRODUCTION:

Discovering a box turtle in the wild is one of life's refreshing moments. These gentle creatures seem to help us slow down and appreciate the moment. Four of the six subspecies of box turtles are found in the southeast and every southeastern state has at least one or more subspecies. The focus here is on the Eastern box turtle which has the broadest distribution. Box turtles benefit from a variety of habitats, including forests, protected woodlots, brushy fields, berry patches, wet meadows, and shallow water features. A slow maturity rate combined with low egg output can lead to population collapse when large numbers of box turtles are eliminated from an area through habitat destruction or removal from the wild.

### IDENTIFICATION:

The head and shell of the Eastern box turtle often have striking yellow to orange markings, but as with many kinds of turtles, the beautiful colors darken with age. Females usually have dark to light orange eyes, while mature male eyes are typically red. Males have longer, thicker tails than females and the rear section of their bottom shell forms a satellite dish shaped depression. This concave depression better enables males to balance on the back part of the female shell during mating.



Female Box Turtles usually have dark to light orange eyes. Females may take over eight years to mature, after which they lay one to two clutches of 3 to 5 eggs per nesting season.

### BEHAVIOR:

Upon finding a box turtle it is hard to resist picking it up. When handled, the turtle will likely respond by hissing (expelling air) and tightly closing-up inside its shell. The unique ability to completely seal themselves inside a protective shell is crucial to their survival. As an added bonus it may anoint you with bladder fluid. These behaviors are effective defensive strategies against potential predators and less energy expensive than fighting or running away. If you have ever witnessed a box turtle moving through the woods or your backyard it is easy to conclude that they are highly unlikely to outrun a predator, but they have been known to fare well in races against cocky hares. There is little harm in admiring a box turtle by picking it up and taking time to appreciate its adaptive features, but wash your hands afterwards.



An alternative approach to picking-up a box turtle is to stand back and ask what the turtle is doing and why does it look the way it does (worthy questions to ask about any animal). It may be helpful to organize your thoughts around the three core animal activities which are feeding, mating, and avoiding predators. Noting weather conditions is also important for understanding box turtle behavior. For example, they often move in the mornings after a rain. Informed land owners and road departments could save the lives of many box turtles by delaying mowing until later in the day, after turtles move out of moist grassy areas. Under unfavorable conditions (e.g., hot and dry), box turtles spend a lot of time just sitting. A resting box turtle is often termed “in form.” The form may range from a depressed pad of leaves to a domelike tunnel under vegetation (leaf litter, grasses, etc.) with just the head sticking out. They also burrow under rocks and logs and in the mud around the edges of wetlands or sit in shallow streams. Some of these behaviors undoubtedly help turtles conserve moisture and maintain acceptable body temperature when weather conditions are stressful. Please visit the cresosnake website (see below) for 10 ways to help box turtles.



Box turtles are not picky eaters and will dine on mushrooms, plants, or animals (dead or alive). Here a red-eyed male is devouring a mushroom. Interestingly, box turtles appear to be the only animals that disperse the seeds of mayapple (*Podophyllum peltatum*) after eating the fruits.

#### LEARNING MORE:

Many of the resources on box turtles are guides on keeping turtles as pets. Unless there are valid reasons (e.g., research, rescue project, etc.), box turtles should never be removed from the wild.

#### Books:

- 1) [Stokes Nature Guides – A Guide to Amphibians and Reptiles](#), (1990) by Thomas F. Tying. All of the Stokes Nature Guides are highly informative and reader friendly resource books for curious naturalists.
- 2) [North American Box Turtles – A Natural History](#), (2001) by C. Kenneth Dodd, JR. This is a must have book for those interested in the lives of box turtles and how researchers study them.
- 3) [Turtles of the Southeast](#), (2008) by Kurt Buhlmann, Tracey Tuberville, and Whit Gibbons. Anyone interested in amphibians and reptiles should invest in this complete series of books.
- 4) [The Box Turtle Connection – Building a Legacy](#), (2017) by Ann Barry Somers, Catherine E. Matthews, and Ashley A. LaVere. This is a comprehensive guide on box turtle research techniques and conservation (see #1 below).

#### Websites:

- 1) <https://boxturtle.uncg.edu/> – This is The Box Turtle Connection website and focuses on the long term conservation of the species. You can download *The Box Turtle Connection* book for free from this site.
- 2) [https://en.wikipedia.org/wiki/Box\\_turtle](https://en.wikipedia.org/wiki/Box_turtle) - Wikipedia provides an excellent overview on box turtles
- 3) <http://www.cresosnake.com> – Click on the *Turtles of Anderson County, TN* and go to the last page. There you will find 10 ways you can help box turtles.

