

Eyes on the Road . . . Turtles Crossing

By Frederick Boyce

Spring is a favorite time for most creatures, human and otherwise, and while most anyone can certainly enjoy the sunshine and warmer temperatures, spring holds special joys for those who love animals and nature. This is when the world comes alive again—when the migratory birds and butterflies return (and the migratory humans), and all the things that have been asleep all winter are waking up and starting to bloom and bud or move around. It is the time I long for each year as my reward for patiently enduring another dreary winter devoid of turtles, snakes and lizards. Sadly, however, the joy that I experience is increasingly tempered by the dreadful and depressing certainty that I am bound to see many of my favorite creatures being crushed and mangled on our roadways, each one representing another notch down in what are already declining populations, especially here in the increasingly crowded confines of Bogue Banks.

There is no question that most reptiles are getting more difficult to find in the county, and next to habitat loss, road mortality takes the greatest toll. One animal that is especially and perilously conspicuous on the roadways each spring and fall is our official state reptile, the eastern box turtle, *Terrapene carolina carolina*. These terrestrial relatives of the common pond sliders of local waterways can be extremely colorful (especially the males), and are about the size of a softball. They have rather grumpy and antisocial dispositions and much prefer to be left to themselves, but are shy and inoffensive creatures whose main defense is to withdraw entirely into their shells, which they are able to close up tightly like a box (hence the name) with the aid of a flexible, fleshy hinge that divides the lower shell (the plastron). The upper shell is tall and domed, and not flattened as it is with aquatic turtles, helping to better conserve water on land. It is structurally much stronger as well, such that these land turtles are better able to withstand the pressure of being stepped on by a large animal.

This time-tested design, however, which has served these hardy turtles well for some 15 million years, offers virtually no protection from the ubiquitous brainchild of Henry Ford. It is a sad thing to see a crushed box turtle in the road. These erstwhile sturdy little animals can easily live 50 years or more, a life-span comparable to a human's, and there are credible instances of their having lived for more than a century. A well-known female from the West Tisbury woods of Martha's Vineyard had dates from 1861, 1881, 1932 and 1955 carved into her shell. This turtle was seen and photographed as recently as 2006 and was the subject of two articles in the *Vineyard Gazette*, one in 1989 and an earlier one in 1932 that included an interview with the man who had carved the 1881 initials when he was a boy 14 years of age. His family had known two of the young men who had carved their initials in 1861, just before going off to die in the Civil War. Box turtle shells are living, feeling tissue made of bone overlaid with a thin veneer of semi-translucent scutes (dermal bony plates) made of keratin, the same protein that comprises our fingernails, and carving into them would be a painful and cruel thing to do, but people did not know any better in those days.

Box turtles can be found in woodlands across all of North Carolina, from the mountains to the sea, so they are indeed a fitting choice for the NC State Reptile, but their populations are steadily declining. Eastern box turtles are highly variable, typically being some combination of yellow, white, black and brown, but some flamboyant specimens will have lots of orange or red. Males often, but not always, have red eyes, while the eyes of females tend to be brown, and males will usually be larger and more elongated in shape, with the rear edge of the shell being flared. Females normally have shorter, rounder shells. The lower shells of the males are deeply concave, which helps a lot during breeding (think about it), while the females have flat bellies, providing more room for eggs.

Although small and attractive to people, box turtles do have a fierce and determined sort of dignity and really do not like being picked up, so I try to avoid doing so unless it is absolutely necessary. If you spot one crossing the road, you

can help by stopping your car while it crosses. What are a few minutes of impatient screaming and honking from other motorists when we are talking about an animal that could live for more than 100 years? Besides, this is the beach and no one should be in a hurry anyway. If you think the turtle needs some help crossing, place it as far off the road as possible on the side toward which it was moving. Check it carefully for injuries, and if you see blood or other signs of injury, the turtle should be immediately taken to the Outer Banks Wildlife Shelter (OWLS) off of Highway 24 at 100 Wildlife Way in Newport (phone: 240-1200). Be sure to note the exact location so they can release it later. Box turtles occupy a small home range and will not survive if moved more than a mile away from where they were found. Do not take them home unless you have no plans for the next 50 to 100 years or so, but you can encourage their presence by leaving some unmowed natural areas with native plants (they love blackberries) in your yard, and a compost pile with lots of veggie scraps, such as watermelon rind, strawberries and tomatoes, which will be greatly appreciated. They will also take cover and even overwinter under large piles of leaves or brush.

The Carolina Herp Atlas (carolinaherpatlas.com) is an online database available for anyone to log their box turtle and other reptile or amphibian sightings. Photographs, location information, and other details that you include are then available for biologists to view and monitor. Another good resource for general information is boxturtles.com.

Sources for this article: "Field Observations of North America's Eastern Box Turtle (*Terrapene carolina carolina*)" by William Belzer, Box Turtle Conservation Trust and ncwildlife.org/portals/0/Learning/documents/Profiles/Eastern_Box_Turtle.pdf.

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Above: A male box turtle relaxes on his "front porch" in a forest Down East. Below: Boxed up tight—box turtles can enclose themselves in their shells more completely than any other turtle. Note the hinge where the two halves of the lower shell come together.—Photos by Fred Boyce

