

2011 “YEAR OF THE TURTLE”

Box Turtles



Florida Box Turtle (Terrapene carolina bauri)
Micanopy, FL
photo: Molly O'Connor

Box turtles are one of the most recognized turtles in Florida. This is probably because they do so well in suburban environments; people find them in their yards, flower beds, and driveways. Box turtles are the other “land turtle” of Florida and are often confused with the gopher tortoise. These turtles can be distinguished from tortoises in several ways. One, their carapace is more domed, “rounded” than the gophers. Second, their plastron is hinged and can be completely closed – gophers, nor any other turtle in Florida, can do this (see figure above of the Florida Box Turtle). Third, their size... a *large* box turtle may obtain a carapace length of 20-cm where gophers can reach much larger sizes of 40-cm carapace length. Habitat selection is yet another difference between these two; gophers prefer open spaces where the sand is drier and well drained and they can dig their burrows. Box turtles on the other hand prefer more dense wooded areas and do not dig burrows, but shallow depressions biologists call *forms*.

There is one species and four subspecies found in the southeastern part of the United States and reports of all four in the state of Florida. The Florida Box Turtle (*T.c. bauri*; fig. 1) is found in peninsular Florida and can be identified by the “sun-ray” like pattern of the yellow markings on the carapace. The Gulf Coast Box Turtle (*T.c. major*) is the largest of the subspecies (reaching a carapace length of 20-cm where most reach only 16-cm) and is found along the coastal counties of the panhandle. The yellow markings of this subspecies are spots and the posterior end of the carapace is flared (fig. 2). Some biologists suggest those to be the only two subspecies actually found in the state, but others include the Eastern Box Turtle (*T.c. carolina*). This subspecies is very common north of the Florida border, but there are reports of this animal actually in Florida; those reports come from several areas in northern Florida. Some biologists have reported the Three-Toed Box Turtle (*T.c. triunguis*), a species more common west of Florida, to inhabit the state in the far reaches of Northwest Florida. At Roy Hyatt Environmental Center Molly and I have found both the Gulf Coast and the Eastern and consider them both to be common. We have actually found individual Florida Box Turtles at RHEC and in the wooded areas off Summit Boulevard near the airport. We do not think that the Florida Box inhabits this area but rather they were released by folks who brought them home as “pets”; a problem that is very common with box turtles. We have never found a three-toed and do not know for certain if it exists here, but according to some sources, if it does – it should be in Escambia County.



“flared” carapace margin

Gulf Coast Box Turtle (Terrapene carolina major)
Roy Hyatt Environmental Center, Cantonment, Florida
Photo: Molly O'Connor

As mentioned, box turtles like warm, humid, woodlands, and seem to become more active during and after a rain shower. The home range of box turtles has proven difficult to monitor. Data does suggest variation with northern populations having smaller ranges than those of the southern part of the state; females seem to have larger home ranges than males. Males can be distinguished from females by the concave shape of their plastrons, the larger size of males, and the fact that in northern populations the males retain red eyes – where females have brown. Box turtles lay fewer eggs than most turtles (typically they lay 2 eggs!) and they seek out higher elevated areas to protect the nest from flooding. They tend to feed on a variety of foods including snails, fungi, worms, plants, fruit, insects, and even carrion. Predation, as with most turtles, is usually on the nest and young; mammals and birds being the top predators – though there are reports of some snakes taking eggs and young. Due to the hinged plastron few of these predators can tackle the adults, though there are reports of dogs and raccoons being successful. Fire is a friend to the gopher tortoise but does not appear to be so for the box turtle. Gophers can retreat into their burrows but a form is not deep enough to protect these turtles. Many box turtles have been found with charred shells after a prescribed burn.

Quantitative studies on box turtle populations and densities are not common but most believe that in northern Florida they are considered “common”; their status in southern Florida is somewhat unknown. They are not currently listed in the state of Florida but do afford protection under FWC Ruling 68A – 25.002.



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