
The Volunteer



Autumn 2006

Raising the Bar on Box Turtle Awareness

Meet Tripod. She is an eastern box turtle. Did you know that her kind evolved around 15 million years ago, and has remained virtually unchanged? Did you know that she could lay fertile eggs up to 4 years after mating? Or that while her eggs and young are preyed upon, her hinged shell as an adult is like a suit of



Our new resident box turtle, Tripod.

armor? How about that she could live to be over 100 years old? So you take this incredibly long life, and add it to the fact that adults are nearly indestructible, and box turtles should be taking over the planet in the near future, right? Wrong...dead wrong. Box turtles are actually considered a "species of special concern" in most of the states they live. Already listed as endangered in Maine, biologists from other eastern states are coming to the same grim conclusion. This reptile's slow-paced life is no match for our fast-paced society, where urban sprawl is consuming their forest habitat, where road travel increasingly contributes to turtle mortality,

and where they continue to be taken from the wild for pets. I have heard many Sanctuary visitors reflect, "...used to see a lot more box turtles."

The eastern box turtle (*Terrapene carolina carolina*) has been well studied here at Jug Bay Wetlands Sanctuary. Since 1995, staff and volunteer researchers have been generating valuable data on box turtle behavior. Using the notch-code recapturing method, each turtle encountered on the north side of Two Run Creek is given a unique set of notches along the edge of their top shell, the carapace. This "passive" study method allows for habitat data gathering every time a turtle is encountered. Radio-telemetry tracking is a more "active" study method that gives detailed information on the turtles being tracked. Each year approximately 10 turtles are selected to receive the transmitter that allows us to follow their movements for months at a time. Through our continuing research into the habits of box turtles we are gaining a better understanding of their survival needs, which in turn, will hopefully influence land use decision-making.

Working with the non-profit organization the Mid-Atlantic Turtle & Tortoise Society (MATTS), and with the financial backing of the Friends of Jug Bay, we aim to raise awareness of the societal factors that have contributed to box turtle decline through an outdoor exhibit "Disappearing Gems of the Forest." The new exhibit was designed and installed by MATTS President Sandy Barnett, Vice President Ray Bosmans and MATTS members Jim Kohler, Billy Heinbuch, and Keith Kelly. Since we released our own captive box turtle last summer, we decided that to be good box turtle role models, we would keep only those turtles that could not be released to the wild. According to MATTS and Maryland Department of Natural Resources biologists, the primary reason turtles are deemed unreleasable is because their "home range" is unknown. This is most unfortunate, because many rehabilitated turtles that could otherwise go free are forced to live a life of captivity. Research has shown that most relocated turtles die trying to return to the specific habitat they came from. Also, rehabbed turtles pose the threat of spreading disease to other wild populations if not returned to their original home.

Creating the Exhibit

Arriving at 10 a.m. one late spring day, MATTS volunteers were first challenged by the building supplies. Instead of the 16-foot long boards we had special ordered, they were only 12 feet long. Not to be dissuaded, crafty carpenters Ray Bosmans and Jim Kohler made some spur-of-the-moment design modifications and got right to work on the installation. The site location had been settled upon months earlier after tracking the sun, and considering various other factors. Nestled along the Mountain Laurel bushes by the side of the Wetland Center, I envisioned the draping branches of the Laurel effortlessly providing additional shade and weather protection to the inhabitants of the exhibit. Fending off the branches of the Laurel without damaging them was the next challenge, and after some light-hearted grumbling at the shrubs, the crew had dug the four holes for the corner 4x4 posts. They then jumped right into putting up the walls of the exhibit. The special order boards that frame the exhibit are not made of wood. After consulting the Friends of Jug Bay about the cost of creating the exhibit, they agreed that even though it would be more expensive, we could use recycled plastic lumber. Not only does this send a positive message to the community, but since box turtles can live so long we wouldn't want them out-lasting their home! Construction moved right along, and by lunchtime the walls were up, and the exhibit was really taking shape. As a finale to the day's work, trenches were dug along the outside of the walls to install a predator guard. Cement blocks were then laid along all the edges to discourage curious critters from digging under the exhibit.

After accomplishing so much the first day, I was eager to see



Sinking the corner posts for the box turtle exhibit.



Ray Bosmans installing the predator guard.



Jim Kohler excavating the pond site.

what these dedicated MATTS volunteers would do next. The second visit was equally productive, beginning with digging the hole for the pond. Another challenging task, the hole had to be dug, adjusted, tested with the pond in place, readjusted and retested many times until it was just right. Everyone worked diligently. Having box turtle enclosures of their own, Sandy, Ray and Jim knew what needed to be done and kept themselves busy. As Jim perfected the pond's resting spot, boards and screening were sized and cut for the roof. By the end of the day, the framework was nearly complete and it was time for Sandy Barnett to take her place as interior designer.

Meticulously, Sandy turned a 16'x5' box of dirt into a turtle oasis. She converted the two foot deep pond into a shallow wading pool with a cascade of rocks that hid the equipment that keeps the pond water clean. She hand selected logs, ferns, and other native plants to create a realistic forest floor habitat. The end result is beyond my

expectations. The enclosure turned out looking so good that visitors joke about living in such a nice place. Many thanks go to the Friends of Jug Bay and the dedicated volunteers of the Mid-Atlantic Turtle & Tortoise Society for making this exhibit possible!



Sandy Barnett creating the turtle wading pool.

So this brings us back to Tripod. Scooped up by a concerned citizen after being hit by a car, Tripod was taken in by MATTS for rehabilitation. She lost a foot, earning her the moniker Tripod, and was deemed unreleasable since her home range was unknown. She has christened the exhibit by being the first turtle to move in and has been a delight. A very active turtle, she can be seen walking around with her head held high or in the pool taking a dip. In keeping with replicating a natural setting, she will hibernate through the winter in the exhibit, under the soil to wait for warm weather to return. Tripod is the first of several unreleasable turtles we plan to house in the exhibit. An informative sign will be installed so passersby will get some insight as to why the exhibit is here. We are also accepting volunteers interested in helping to care for these turtles.

What can you do to help raise the bar on box turtle awareness? KEEP THEM WILD! Discourage friends and family from keeping box turtles as pets. Despite their many favorable characteristics, box turtles are not “easy” pets to be kept in a box or small aquarium. Take our new exhibit for example; to properly care for a box turtle requires ample space, proper habitat, and nutritious food – necessities that if not given, lead to the inevitable decline of the turtle’s health. Also, teach others about the importance of box turtle “home ranges.” Basically, most turtles spend their whole life in one area – feeding and drinking, finding shelter and mates – varying in size from 2 to 10 acres. As roads fragment forest habitat, and development eliminates it altogether, it is up to all of us to help box turtles survive. Encouraging other citizens to **safely** move box turtles to the side of the road is an easy way to take action. Always move a turtle to the side of the road it was facing, and

remember it is in its home range; do not take it away! If you find an injured turtle that a rehabilitator can heal, take detailed notes on where it was found so that it can be returned to its home range.

To learn more about these fascinating animals read [North American Box Turtles](#) by C. Kenneth Dodd, Jr. and visit <http://www.matts-turtles.org/index.html> for links to rehabilitators and more!



Jim Kohler adds hinges to the doors of the exhibit.

Box Turtle Facts

- Eastern Box Turtles can live to be over 100 years old.
- Generally, female Eastern Box Turtles have brown eyes, and males have red eyes.
- Baby turtles are completely independent from the moment they hatch, so there is no such thing as an orphaned turtle.
- Box Turtles have a home range of 1-20 acres. If a turtle is removed its home range, it will do all it can to find its way back to it, even putting itself in great danger by attempting to cross busy roads.
- If you find a turtle attempting to cross a road, you may move the turtle to safety in the direction it was heading. If you bring it back the other way, it will simply turn around and cross the street again.
- Box turtles can seal themselves within their shell to protect them from predators.
- Box Turtles are often injured when they are hit by cars, run over by lawnmowers, or picked up by dogs. They are also in danger of habitat loss due to new building construction and development.
- Turtles are cold-blooded. They are most active between 84°F and 100°F, mostly in the mornings and after rain. If they get too hot, they hide under decaying logs and leaves, crawl into mammal burrows, or into mud. When it is really hot, they go into shady pools and puddles to cool off.
- At night, box turtles scoop out a shallow indentation (form) to spend the night.
- Box turtles hibernate between and October and April.
- Box turtles are omnivorous, eating: snails, insects, berries, fungi, slugs, worms, roots, flowers, fish, frogs, salamanders, snakes, birds, eggs, and even carrion.
- Young turtles tend to be carnivorous until 5 or 6 years old, while older turtles tend to be herbivorous, but they eat no green leaves.
- A female may lay between 3 and 8 eggs at a time – called a “clutch.” She lays several clutches each year. Incubation time is about 3 months.
- Don’t eat a box turtle! They consume mushrooms that are poisonous to us, and the toxins can linger in their flesh.
- A box turtle’s carapace can regenerate if damaged or even destroyed.