Disappearing Gems of the Forest

outdoor turtle enclosure

In the spring of 2006, volunteers from the Mid-Atlantic Turtle & Tortoise Society (MATTS) spent two days constructing a custom-designed enclosure for our three captive, female turtles – Tripod, Cinco, and Patches – next to the McCann Wetlands Study Center.

Why do you have this enclosure? To help people understand why the box turtle population is declining and what can be done to reverse this trend.

Sinking the corner posts for the box turtle exhibit.

I thought we weren't supposed to keep turtles as pets. Why can't you just release them? Because wild turtles live within a "home range," which means a specific area familiar to the turtle. A home range can vary from 2 acres to 25 acres. If a turtle is removed from its home range, it will try very hard to return to it, even risking death by crossing dangerous highways. Since we don't know the home ranges of Tripod, Cinco, or Patches, we can't release them and feel confident that they will survive.

Jim Kohler excavating the pond site.

I can't find any turtles in the enclosure. Why did you put in so many plants? Turtles are forest-dwellers, so that means our enclosure must have lots of shade and just a few sun spots so they can warm up when needed. You might have to look hard to find them, but that's just the way they like it!

Is there anything special about the enclosure? Yes! The enclosure's location takes the best advantage of the sun's warmth – from a turtle's point of view, of course ❖ The wall boards are made of eco-friendly recycled plastic lumber ❖ The concrete blocks at the bottom keep predators out – and the turtles in ❖ The pool is topped by a screen just under the water's surface so the turtles can wade through it ❖ MATTS President Sandy Barnett carefully designed the landscaping to resemble a native forest floor as closely as possible.

Ray Bosmans installing the predator guard.

Sandy Barnett creating the turtle wading pool.

What do the turtles eat? A varied but carefully controlled diet of greens, squash, carrots, apples, berries, and other fresh veggies. No cruciferous vegetables, though, so they don't have to eat their broccoli. The veggies are mixed with a turtle "brittle" and then sprinkled with vitamins. Occasionally, earthworms and wild Russula mushrooms are a special treat.

EASTERN BOX TURTLES @ JUG BAY

Box Turtle Research

- Since 2000, we have tracked the movements of 86 box turtles through radio telemetry.
- In 1995, We began marking individuals using a notching system on shells to log life history, including habitat preference, population size, and survival rates. The current count tops 550.
- Through our research, we advanced the knowledge concerning home range size and habitat use. One turtle even swam across the river!

  Box Turtle Home Ranges

  Females: 15 acres
  Males : <3 acres
  Juveniles: <4 acres

- We discovered that females make substantial use of the tidal wetlands at Jug Bay after egg laying. This suggests the importance of freshwater marsh protection to box turtle conservation.
- We also observed that box turtles tend to overwinter close to the same site every year, and that the sites is often on the edge of their home ranges within the forest.
- Our discoveries support the idea that loss and fragmentation of habitat are major causes of the decline in box turtle populations in Maryland and elsewhere.

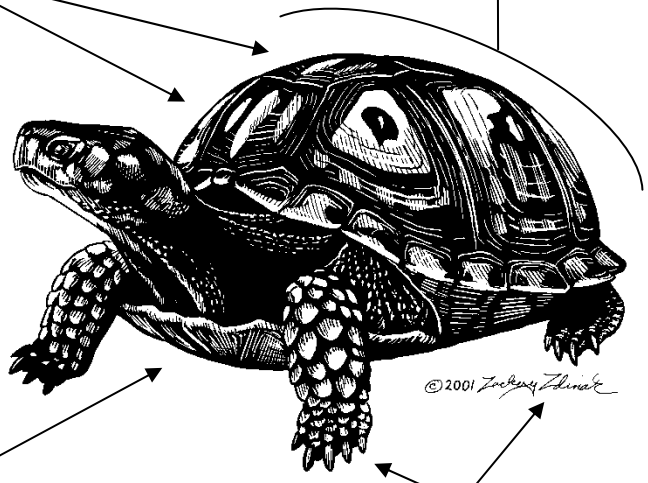
Two hatchlings found in the box turtle enclosure in late summer 2009

Carapace

The dorsal (top) portion of the turtle shell (over the back) is made of bony plates that are fused to the ribcage and backbone of the turtle. The seams of the bony plates do not necessarily line up with the seams between the scutes.

Scutes

Large scale-like structures made of keratin (like fingernails) cover the shells of turtles. Scutes do have nerve endings, allowing the turtle todetect something touching its shell.



Beak

A turtle has no teeth, but its beak can cut through a large variety of foods, including earthworms, mushrooms, berries, and more.

Plastron

The ventral (bottom) portion of a turtle's shell is made up of bony plates and covered with scutes. Usually an even number down sides, but can be odd.

Scaly Skin and Claws

Like other reptiles, a turtle's tough skin acts like an armor, and claws (five in front, four in back) allow the turtle to forage for food and dig in the ground for shelter.