

# Pedal, Paddle and Hike

By Trent Carbaugh

*Not all who wander are lost – J.R.R. Tolkien*



## Turtles in the Mist

**Turtle**, (order Testudines), any reptile with a body encased in a bony shell, including tortoises. Although numerous animals, from invertebrates to mammals, have evolved shells, none has an architecture like that of turtles. The turtle shell has a top (carapace) and a bottom (plastron). The carapace and plastron are bony structures that usually join one another along each side of the body, creating a rigid skeletal box. This box, composed of bone and cartilage, is retained throughout the turtle's life. Because the shell is an integral part of the body, the turtle cannot exit it, nor is the shell shed like the skin of some other reptiles.

– From Encyclopedia Britannica

Although I enjoy being on the towpath or paddling on the Potomac at any time of the year I particularly enjoy the spring. In cold weather many of the creatures that share the park with us humans are hibernating, tucked away in the mud or in a nice warm hole in the ground. One of the things that I miss during winter trips on the canal is seeing all my reptile and amphibian pals out and about. I get delighted when the calls of frogs wake me up in the night, or I see a salamander crawling along and feel the need to roll around on the wet ground

with it to get the right angle for a photograph. Snakes are great to see and those goofy little rock lizards running around on some locks make me laugh. Toads have a special place in my world view, but that's a story for another time.

I recall a few years ago whilst camping somewhere on the western end of the canal I awoke to a foggy warm spring morning. I walked up to the towpath from the hiker/biker and saw through the mist off the water in the canal prism turtles lined up on a log. I immediately thought of Dian Fossey's book *Gorillas in the Mist* but with a C&O Canal kind of twist. I always think of this memory when there is fog on the canal or on the Potomac; my mind does sometimes work in strange ways. When I start seeing turtles, though, I know that spring has sprung. The blossoms will sprout, soon the trees will be green, and I'll need to invest in some mosquito repellent. So here's a little about these unique armored creatures that grace our local waterways and forests.



A red bellied turtle (*Chrysemys rubriventris*), painted turtle (*Chrysemys picta*) and a couple of cooters (*Chrysemys floridana*) on a log. All photos by Trent Carbaugh

## Turtle Species Seen Along the C&O Canal

### Terrestrial turtles:

Box turtle – common

Wood turtle – common

### Mostly aquatic turtles:

Bog turtles – threatened species

Eastern mud turtle – common

Eastern musk turtle – also known also as a stinkpot turtle – uncommon

Eastern painted turtle – common

Midland painted turtle – common

Red bellied cooter – common

Red eared slider – common

River cooter – introduced, mostly seen in the Potomac River – uncommon

Snapping turtle – common

Spotted turtle – uncommon

Striped mud turtle – only in Frederick County

Yellow bellied slider – common

260 million years ago the first proto-turtle appears in the fossil record. *Eunotosaurus*, the name of this first known turtle, looked like a flat sprawling lizard and had very wide ribs. This fellow was a streamlined burrower and digger with powerful front legs and long claws.

Over time *eunotosaurus*'s descendant's ribs and sternum fused into a carapace (upper shell) and a plastron (lower shell). Unlike all other vertebrates a turtles shoulder blades are under the ribs that have fused to produce the carapace. This is an evolutionary trade-off; a turtles breathing ability (as is overall speed) is compromised by not having flexible ribs to assist in breathing but it allows for extra strong muscle connections to develop in the forelegs. This allows our turtle friends to dig very well, be powerful swimmers, and has the added benefit of protection from predators. Turtles and tortoises have adapted to every environment in which cold blooded reptiles can live.

Just as a point of reference for those that might not know: turtles live in the water primarily and tortoises live on land. Tortoises often have a rougher shell with pyramidal or square-ish protrusions that add to the strength of the carapace. They can also thrive in arid environments. Turtles usually have smooth shells for more streamlined swimming. True tortoises are not naturally native to the C&O Canal and Potomac River watershed. Although, to blur the line a little, terrestrial turtles, notably the box turtle and wood turtle, both spend most of their lives on land.

According to the Maryland Department of Natural Resources there are nineteen native species of turtles in the state, with three other species that have been introduced. This includes everything from box turtles to five varieties of sea turtles. Fourteen of these live along the C&O Canal and Potomac River watershed.



*A red eared pond slider (*Chrysemys scripta*) posing majestically on a log.*



*Eastern box turtle (*Terrapene carolina*) traveling overland. Male box turtles usually have red eyes, females usually yellow/brown eyes.*



*The smartest and most adventurous of the local turtles, the wood turtle (*Clemmys insculpta*) is prone to wandering widely in search of gourmet invertebrates. Wood turtles are also some of the most friendly of turtles and often when I am in out of the way places they wander up to see what I am doing.*



*This snapper, about a thirty pounder, posed for a portrait on the edge of the towpath at Big Pool.*



*The spotted turtle (*Clemmys guttata*) a relatively rare turtle with a black carapace with bright yellow spots. This specimen has some damage to the front of its shell.*



*A fast moving snapper races along.*



Any place where the canal prism has water in it on warm days you can see turtles basking in the sun on logs, fallen trees, and sometimes rocks. Often quite wary, they will notice your presence and with a loud plop enter the water to avoid your gaze. But if you approach cautiously it is possible to observe them closely. Some of these fellows are quite large which is a sign of a good healthy population; turtles and tortoises, like most reptiles continue to grow throughout their entire lives. Big turtles are old turtles and this means the environment is being good to them.

Usually the most common aquatic turtles you will see in the waters of the canal will be the eastern painted turtle and the northern red-bellied cooter; red eared sliders, a non-native species, are also extremely common. The handsome spotted turtle, though rare, can be seen at times along the towpath.

Snapping turtles, a predatory critter that looks like a prehistoric creature that should be eating small dinosaurs, can often be seen swimming under the water (under the ice sometimes as well). In the spring snapping turtles sometimes move around on land looking for new hunting grounds and mating opportunities, or possibly just to cause trouble. Weighing up to 45 lbs. they can be quite startling to encounter on land. They will bite with their bolt cutter jaws if they feel threatened, so use caution should you have the good fortune to encounter one of these mighty beasts on land.

Terrestrial turtles are less common on the canal but it is not unusual to see an eastern box turtle or wood turtle on the

towpath at times. The eastern box turtle, and all of the local varieties around the country as well, is somewhat unique in the land of turtledom; their shells have a hinged plastron, the under part of the shell, that allows them to close up tightly into a “box” for protection from predators. Box turtles can live very long lives; known specimens have lived at least 100 years. Wood turtles prefer slightly wet areas and the margins of farmland. These fellows are excellent climbers as well and can get over 6-foot high chain link fences. Once hunted for food, wood turtle numbers declined but are happily on the rise now.



*The mighty snapping turtle (Chelydra serpentina) basking on a log. This shows how long the neck of these critters are, useful for snatching prey at high speed or biting unwary herpetologists.*

Turtles usually have very small ranges, mostly dependent on food sources. Watered areas of the canal prism are rich breeding areas for invertebrates, insects, crustaceans, and bait fish which are food sources for most turtles. Turtles are opportunistic feeders and most have an omnivorous diet, this is part of the reason they are such a successful species.

All turtles are egg layers and will dig a nest in mud, dirt, or sand. The eggs are typically rounder than bird eggs and have a soft shell. When they hatch a smaller

version of the full size animal digs it way out and heads to its preferred habitat. Attrition is high among young turtles as they are very vulnerable to predators when young and inexperienced.

So when you're out and about on the towpath this spring and summer keep an eye open for turtles and enjoy all of the wildlife around you (except maybe the mosquitoes).



*A hatchling snapper that unfortunately got trapped in a low spot on the towpath. He was successfully moved to the canal prism.*



*Large snappers often attempt to hitchhike along country roads. Don't be tempted to pick them up – it won't go well.*



*A stinkpot turtle or eastern musk turtle (Sternotherus odoratus). An aggressive turtle, prone to biting, with the ability to secrete a foul smelling yellowish fluid from glands along bottom of its carapace.*

**Turtles in the Mist** (Continued from previous page)

**References:**

*The Origin and Early Evolution of Turtles* – Olivier Rieppel, Department of Geology, The Field Museum, Chicago, Illinois; and Robert R. Reisz Department of Zoology, University of Toronto, Erindale Campus, Mississauga, Ontario, 1999

*Why Turtles Evolved Shells: It Wasn't for Protection* – Ed Yong, *The Atlantic*, July 14, 2016

*The Audubon Society Field Guide to Reptiles and Amphibians* – John L. Behler and F. Wayne King, 1989

*Maryland's Turtles & Tortoises (Order Testudines)* – Maryland Department of Natural Resources This web publication is an excellent resource to begin studying local turtles. Visit [dnr.maryland.gov/wildlife/Pages/plants\\_wildlife/herps/Testudines.aspx](http://dnr.maryland.gov/wildlife/Pages/plants_wildlife/herps/Testudines.aspx)



*A young cooter found in a mud puddle on the towpath. He was successfully relocated to the canal prism.*



*A lady eastern box turtle out for a water adventure.*



*There are those who say reptiles have no personality. I think that this young lady shows otherwise.*