



## Take time to appreciate, protect turtles in trouble

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A saying in nature conservation is that developing a sense of place leads to having pride in that place, which then leads to living in place. This basically means our behaviors need to change to protect our local environment (living in place).

This change is brought about by caring about our environment (pride in place), which results from learning about the environment (sense of place). Living in the Hudson Valley, we do not lack reasons to be proud of our local environment. For example, even though the region occupies only 13.5 percent of New York, it holds 85 percent of its biodiversity.

The region is also home to a large number of rare species, including the timber rattlesnake and the bald eagle. But one group of animals really puts us on the map.

The Hudson Valley is home to 10 species of freshwater turtles; an eleventh species, the red-eared slider, also occurs in the region but it is not native. What is so remarkable about our region's turtles is that the diversity (number of species) is one of the highest in the world. These include spotted turtles, box turtles, musk turtles, wood turtles, diamondback terrapins, map turtles, snapping turtles, painted turtles, bog turtles and Blanding's turtles.

What's even more impressive is the number of rare turtles in the region. Bog turtles are classified under the Endangered Species Act as threatened and by the New York Department of Environmental Conservation as endangered. The Blanding's turtle is classified as threatened and the spotted, wood and box turtles are classified as species of special concern.

We have so many types of turtles because of the valley's diverse habitats. Map turtles and diamondback terrapins are found in the Hudson River; bog turtles are found in a rare type of wetland called a fen; wood turtles live in larger creeks and streams; spotted turtles, box turtles and Blanding's turtles are commonly found in swamps and vernal pools; painted turtles are common sights at ponds and lakes; and snapping turtles are found in just about all of the above.

## **Eggs often laid in dry areas**

In addition to these wet habitats, many turtles also require dry, upland habitats to lay their eggs. Nesting areas tend to be hot and dry places many of us would consider inhospitable. Fields, construction sites and other places where there has been ground disturbance are appealing locales to a female turtle looking for somewhere to lay her eggs. Many turtles also nest along the Metro-North railway.

To reach nest sites, female turtles migrate long distances - some even miles. During their migrations, they are subject to many dangers. Predators, including household pets, collection by curious children and entrapment in structures such as in-ground pools and storm drains, all pose major risks for turtles moving across land. Many turtles are also killed every spring as they try to cross roads. This has had a large impact on turtle populations because not only does an adult female die, but so do her offspring.

Turtles are long-lived, with many surviving more than 50 years, and they can take more than 10 years to reach sexual maturity. So the loss of a mature female represents a huge loss to the local population in terms of her reproductive value. Because of their long-lived nature and reproductive abilities, many scientists regard protecting adult turtles as the most important measure to conserving turtle populations.

While protecting adult turtles is crucial, the survival of the young is also becoming a concern. Predators of turtle eggs and juvenile turtles such as raccoons are increasing because they thrive in our developing landscape. This abundance of predators has resulted in the almost complete disappearance of juvenile turtles because many turtle nests are dug up and the eggs eaten. The loss of adults to road mortality coupled with the lack of young entering populations represents a double-whammy for our turtles.

In addition to dangers from vehicles and nest predation, the Hudson Valley's turtles face a number of threats, with habitat loss and fragmentation being perhaps the most significant. As development proceeds, there is less habitat available for wildlife, and as we continue to chop up the landscape with driveways and roads, we are cutting off the migratory routes turtles have been using for thousands of years. This increases the probability they will eventually encounter a vehicle.

Besides these direct threats, indirect effects to their habitats also pose a challenge to turtles' survival. While many wetland habitats are protected by federal, state and local regulations, pollutants are still accumulating in wetlands. Moreover, increased development in watersheds is altering the natural hydrologic cycles of wetlands - resulting in too much water in some wetlands and too little in others.

To protect the turtles of the Hudson Valley it will be necessary to not only protect their primary wetland habitats, but also their migratory corridors and nesting areas. This should be done in a proactive manner by identifying key populations of turtles and their habitat complexes and then protecting these areas.

Identifying these areas will require long-term rigorous studies to dissect the habitat use and movement patterns of turtles. But conservation research such as this requires two things that make their implementation in land-use planning difficult: time and money.

The turtle story typifies many of our conservation challenges because the only way we will achieve success is if we begin to recognize and appreciate turtles' importance and be willing to invest in the resources necessary to develop appropriate conservation measures. Only through public support will policymakers be willing to enact meaningful initiatives to conserve our region's tremendous diversity.



A spotted turtle. (Courtesy of Michael Rubbo)

### **IF YOU FIND A TURTLE:**

- Do not run over it with your car. Be wary of "rocks" in the road in late spring and early fall, they just may be a turtle.
- If you can, safely move the turtle across the road in the direction it was heading. This is very important, because if you put it in the opposite direction, it will simply turn around and head back to the road.
- Do not take it home. It is illegal to remove animals from the wild.
- Don't move the turtle to a place you think is better habitat - turtles only know the home they grew up in, so moving them can be a death sentence.
- Do get an injured turtle help. Cracked shells can often be repaired. Contact a licensed wildlife rehabilitator or vet, and make note of where the turtle was found. A current list of local wildlife rehabilitators can be found at [www.nyswrc.org](http://www.nyswrc.org)
- Turtles bought from pet stores should never be released into the wild. Often they are non-natives, and will not survive a harsh winter. Some turtles, such as the red-eared slider, do survive, and have become established in local ponds. This can have a negative effect on native turtle populations as pet turtles can carry diseases and compete with native species for food.
- Enjoy the moment, admire the turtle, photograph it and consider yourself lucky.

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