Local Volunteers Tracking Turtles To Save The Species

Patricia Houser

Like detectives finding clues at suspected crime scenes, volunteers for the terrapin tracking project, organized by the Maritime Aquarium at Norwalk, are trained to scan coastal landscapes for signs of life. But they are also prepared to find evidence of harm. These local volunteers have agreed to do some "detecting" once a week from April through August at sites along nearly the entire coast of Connecticut for the purpose of helping the survival of a valued local turtle species.

Terrapin nest with nearby depredated eggs. *Photo courtesy of WCSU.*

The northern diamondback terrapin (Malaclemys terrapin) is the only marine species of turtle that occurs in Connecticut. They play a key role in keeping our marsh ecosystems healthy, and there's a growing fanbase among residents who've encountered, for instance, the resident terrapin at Milford Point's Connecticut Audubon Center (see this column for Sept. 21, 2023, "There's Something About Franklin"). Unhappily, by 2015 population losses of terrapins in the wild in Connecticut prompted the state to label them as a "species of special concern."

In a hopeful turn of events for the turtle, by 2021 experts from four Connecticut organizations had begun a collaboration using volunteers from local towns to collect data to help better define and address one of the worst threats to terrapins. The Maritime Aquarium at Norwalk, Western Connecticut State University, the Connecticut Department of Energy and Environmental Protection and the Connecticut Department of Transportation are all partners in the community science tracking program.

One of the biggest hazards for diamondback terrapins in Connecticut comes in the warmer months when they are traveling to and from nesting sites, often crossing roads in the process. To help document the location and amount of loss from road strikes, volunteers from the terrapin tracking program are each assigned a particular half-mile stretch of roadway that has been identified as a so-called hotspot for diamondback terrapin mortality. Once per week each volunteer travels to their assigned site and walks up one side of the assigned stretch and down the other, looking for signs of terrapins while also taking note of other wildlife.

The brief entries that volunteer observers make on their rounds, recorded in an online app, sometimes offer clues of what a particularly happy day on patrol must be like. In an entry from July 2022, for instance, on a morning that was 83°F with 5 percent cloud cover (required notations), one terrapin tracker recorded the presence of a diamondback terrapin on the side of the road who was not just alive but in the process of laying eggs.

Based on records covering two years, volunteers' weekly entries are just as likely to contain grim details, like the notes for a 74-degree day in July 2023, when another terrapin tracker found the crushed body of a female terrapin at their assigned road. The comment section read, "Carcass clean and dried, death may have been 1-3 days after last tracking." A photo was added showing the turtle's remains on the stretch of pavement.

Even when live turtles or their remains aren't sighted, volunteers frequently do come across terrapin nests. The problem is, any visible eggs associated with most of those nests are cracked, with signs that the nest has been depredated, or plundered, most likely by a racoon, skunk or fox. While that kind of destructive outcome might be thought part of the natural course of things, it can be argued that those mammals have had easier access to terrapin nesting areas because of alterations to landscapes by humans.

Then there are the assigned routes where there is rarely a sign of turtles, eggs or nests. "A non-sighting is still valuable data," say the researchers at Western Connecticut State University, including the two leading graduate student researchers on the terrapin project, John Michael Arnett and Henry Schwendler. These dedicated and erudite young scholars have been tasked with sifting through and interpreting data provided by citizen scientists under the oversight of Principal Investigator Dr. Theodora Pinou, who is also the biology department chair at WCSU.

Connecticut's terrapin tracking project can be seen as part of a larger trend across the world today of tapping into the potential for citizen scientists to help with environmental challenges. A citizen scientist is any resident (even the term citizen is misleading) with any background (they are mostly not scientists by profession) who is interested in volunteering to find out more about wildlife or air or water in their region and sharing that information with scientists as part of an organized program.

As with most citizen science, volunteers from the terrapin tracking project are required to attend training sessions that are conducted in early spring through the Maritime Aquarium, including lessons on identifying terrapins and their nests and eggs and how to use the online app for recording data in the field (volunteers may submit paper reports if they prefer). Volunteers are then equipped, says wildlife educator Bridget Cervero, with reflective vests, a neon green drawstring backpack, a bit of gear, display for the car dashboard and a map showing their recommended parking spot.

That fluorescent green vest is "super important," says Marsha Borden of Guilford, who has been a volunteer in the tracking project since March of 2022. "It's shocking that cars do not slow down for you."

Rather than dwelling on bad drivers or the forensic-style roadside task involved, though, Borden emphasizes benefits of the volunteer experience in terms of remarkable sights and sounds in our coastal landscapes, including, "The privilege to be able to spend that undisturbed time outside...walking, noticing nature...looking, listening. It feels very intentional." She can justify taking this time once a week from an otherwise busy schedule, she says, because "I have this larger purpose...to track the terrapins."

For information on other community science programs at the Maritime Aquarium, see the page on their website titled "Community Science Opportunities." Volunteer opportunities focused on water quality around the state can also be found at the state Department of Energy and Environmental Protection's "Water Volunteer Monitoring Program Overview" as well as on Save the Sound's webpage on "Citizen Science."

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