



[HOME](#) [BACK ISSUES](#) [BAY JOURNAL RADIO](#) [SUBSCRIBE](#) [CONTACT US](#) [ABOUT US](#)

SEARCH

[Home](#) > [September 2006](#) > Out of the Pots and into the Fire

Out of the Pots and into the Fire

Even with limits on their harvest, diamondback terrapins are still threatened by development targeting their habitat

By Lara Lutz

Once diamondback terrapins were relentlessly harvested to provide the key ingredient for terrapin stew, and as recently as 1938, a Maryland candidate for governor called for "a terrapin in every pot." Today, state officials say they would rather try to keep the reptiles in every coastal marsh.

Although terrapin meat rarely shows up in the market today, concern is rising that the diamondback terrapin, hunted nearly to extinction a century ago, may again be in jeopardy, leading the Maryland Department of Natural Resources to issue regulations providing added protection for the turtles.

The regulations, issued Aug. 1, establish a shorter season, new size limits and a stricter permitting and reporting system. But the action has done little to quell the controversy about how to protect the popular species of turtle, with some turtle advocates calling for a harvest moratorium.

Named for the markings on its shell, the diamondback terrapin is the Maryland state reptile, and is the only turtle that specifically thrives in tidal marshes and estuaries, where fresh and salt water mix. As the nation's largest estuary, the Bay is considered to be the most important habitat for the reptile.

A small but growing commercial harvest in Maryland sells terrapin meat to Asian markets at home and abroad. Terrapin harvesting is illegal in Virginia. But the turtles face other problems that cross state lines. Shoreline development continues to destroy critical nesting habitat, while many terrapins succumb to highway mortality, accidental deaths in crab pots and boat strikes. Natural predators, such as fox and raccoon, destroy a large number of terrapin nests. In some places, the terrapin population has dropped sharply, although their Baywide status is unknown.

The new DNR regulations came in response to pressure from legislators who wanted policies to be consistent with the 2001 recommendations of the state's Diamondback Terrapin Task Force.

"We are light years ahead of where we were for five years ago, when nothing was happening," said state Delegate Virginia Clagett, sponsor of a bill that triggered the new regulations.

But Clagett and many others would prefer to see a complete halt to the commercial harvest, at least until more is known about the status of terrapins

Font Size: [A](#) | [A](#) | [A](#)

Tools:

- PRINT VERSION
- MAIL TO A FRIEND
- SEND COMMENTS

Images:

(Click thumbnails for full-size image)



in the Bay.

“A moratorium is not an extreme suggestion. It was the primary recommendation of the task force five years ago,” said Marguerite Whilden, co-director of the nonprofit Terrapin Institute.

Both Clagett and Whilden were members of the task force, which recommended 18 actions to protect the terrapin. The first was to establish an immediate moratorium on the harvest. The second was to fund a general stock assessment.

“Fundamental fisheries management requires an estimate of the total stock so you can predict mortality,” Whilden said. “They don’t have that information for the terrapin. You can’t write checks without knowing what’s in the balance.”

DNR officials support a reduced harvest, but declined to close it completely.

“We have some good information on a localized level about areas where the terrapin is depleted, but we don’t have the science to support a Baywide moratorium,” said Gina Hunt, assistant director of the DNR Fisheries Service.

Hunt contrasted the situation with Maryland’s past moratorium on striped bass.

“We had an overwhelming amount of information to show that the striped bass was in crisis, and we put forth the moratorium,” Hunt said. “We were sued, but we won because of the evidence. It wasn’t arbitrary, it wasn’t capricious. That’s completely different from the terrapin.”

The DNR has begun work on a comprehensive management plan. A Baywide stock assessment is not in the immediate future, although the agency has applied for a federal research grant.

“These regulations are not meant to be an end-all in terrapin management,” Hunt said. “They are meant to be an interim measure until we can get a better handle on the population that is out there. There needs to be a study, but you need the money behind the study. It’s not a small undertaking.”

One problem in assessing the overall population is that terrapins live in small groups that stay close to their local base. The health and status of these groups can vary widely, depending on local conditions. A more comprehensive assessment would require the time and resources to locate and study a large number of localized populations.

Research so far has added to an understanding of Bay terrapins in recent years, but only on a localized basis.

Paula Henry of the U.S. Geological Survey, led a nesting survey on the Eastern Shore in 2002 and 2003. From 2003 through 2005, she used a mark-and-capture program to study terrapin populations on Smith Island and the Eastern Neck National Wildlife Refuge. Michael Haramis, also a USGS researcher, studied terrapin hibernation grounds in Tangier Sound.

“Our work is focused at these sites, so we can’t really say much about the whole Bay. I wish we could, but we can’t,” Henry said.

But some local studies have raised alarm. Willem Roosenburg of Ohio University has studied terrapins in the Patuxent River for nearly 20 years and recorded a 75 percent drop in population over the last decade.

Roosenburg argues that more studies aren’t needed to justify halting the harvest.

“The new regulations are a tremendous improvement from what we had previously, but I feel strongly at this point that there is certainly enough information—and lack of information—to make a moratorium the wiser



See Also:

- [Out of the Pots and into the Fire](#)
- [They Check In and They Don't Check Out](#)
- [History Lessons for the Future](#)

route,” Roosenburg said.

According to Roosenburg, it’s a matter of biology. Turtles are long-lived and reach maturity slowly, at 8 or 9 years of age. They also have very low reproductive rates.

“The only way these species can exist with a stable or slightly growing population is through extreme longevity and high survivorship of adult females,” he said. “If you decrease adult survivorship by as little as 1 to 2 percent, the population is going to decline.”

This makes terrapins vulnerable to the effects of any problem—such as harvesting and loss of habitat—that impacts the population. Even small changes can deliver long-term damage.

“Knowing the Baywide picture doesn’t really matter,” Roosenburg said. “Sustainable harvest is simply an oxymoron for this particular species and for turtles in general.”

While the new regulations fall short of a moratorium, they limit the harvest in ways that some say effectively bring it to a close.

The previous nine-month season included winter and spring months, when watermen could easily dislodge hibernating terrapins or catch them as they emerged from the mud. Terrapin at least 6 inches in size could be harvested in unlimited numbers.

The new regulations set a three month season between Aug. 1 and Oct. 31, eliminating the winter and springtime harvest.

“It pretty much puts watermen out of business, as far as catching terrapin, because they closed the harvest at the only time when you can really catch them,” said Larry Simns, president of the Maryland Watermen’s Association. “It’s just a farce. For all intents and purposes, they put a moratorium on them.”

The regulations also limit the catch to turtles 4–7 inches in size. This “slot limit” protects the youngest and oldest turtles, especially the large, reproducing females—though some people question whether midsize turtles will now have the opportunity to grow up.

Terrapin aren’t a major catch for Maryland watermen, but dealers have reported an increase in their harvest, which leaped from 378 pounds in 2002 to 9,020 pounds in 2005. The dockside value of the catch grew from \$756.00 to \$14,205.00. In 2004, the harvest reached 14,664 pounds and was valued at nearly \$29,000.

The DNR issued 18 permits for terrapin harvest during the current season.

Simns said the regulations will impact 5 percent to 10 percent of the watermen’s income, at a time of the year when every dollar counts. And he questioned how much the terrapins will benefit.

“If they don’t do something about all the people who are bulkheading their property, there aren’t going to be terrapin anyway,” Simns said. “We don’t mind making the sacrifice when they are doing other things to bring the terrapin back, but when all they’re doing is coming after us, it’s discouraging.”

Terrapin advocates generally agree that protective measures must extend beyond the harvest, but those issues remain difficult to tackle.

The DNR’s Hunt said that private property owners should preserve natural shorelines instead of using bulkheads and rip rap. Crab pots are required by law to include “excluder” devices, which allow terrapin to escape safely, but Hunt worries that the public has forgotten about the law or never learned that it exists.

“People could really help out, but I’m not sure they know how,” Hunt said.

‘It’s a cool animal, there’s no getting around that’

“As good as a gold mine”

— From a 1902 Washington Post article on terrapins

The diamondback terrapin (*Malaclemys terrapin*) has long attracted attention in the Chesapeake Bay, as both a valued food source and an attractive, charismatic creature.

It lives in estuaries and tidal marshes, where salt and fresh water mix, from Cape Cod to Texas. The Bay offers extensive habitat potential for the terrapin, which in most locations finds habitat only along a narrow strip of the coast.

"The Bay has always been considered a stronghold for the species," said Willem Roosenburg of Ohio University. "Some areas of the Bay have the largest terrapins that can be found throughout the range."

The Bay's terrapins were once so large and abundant that they were a staple of colonial diets. Native Americans roasted whole terrapins over coals. Colonists learned to enjoy terrapins the same way, and fed large quantities to slaves and indentured servants. One 18th century account tells of Eastern Shore slaves who protested their relentless diet of terrapin.

By the 1800s, terrapin was a delicacy, served in a stew laced with cream and sherry. The commercial harvest soared. Approximately 89,000 pounds of terrapin were harvested in 1891 alone.

The terrapin population was plummeting, but respite lay ahead. Prohibition eliminated key ingredients from terrapin stew, and the Great Depression curbed expensive tastes. The market for terrapin meat shrank rapidly.

Recent generations have shown little interest in cooking the turtles, except in some Asian markets. Instead, the turtle has become a Maryland state icon and conservation poster child. The terrapin has been affiliated with the University of Maryland since 1933, and became the university mascot and official state reptile in 1994.

Even scientists who catalogue the terrapin's biological traits respond to an intangible appeal. "It's a cool animal, there's no getting around that," Roosenburg said.

For starters, the line of its mouth sports a curve that looks much like a smile. Black spots and wavy lines cover its whitish skin, in a pattern unique to each animal—much like human fingerprints.

The shell is marked with concentric, diamond-shaped rings that log the turtle's age and give the species its name. The top of the shell is light brown, gray or black, with an underside that ranges from yellow to olive green.

Males grow 4– 6 inches long. Females reach 6–9 inches and mature between 8 and 13 years of age.

Both genders spend the winter hibernating in the muddy bottoms of rivers and creeks. They mate in the spring, and the females emerge from the water in search of sandy nesting sites. Successful terrapins lay five to 22 pinkish eggs in a 6-inch hole above the high tide line. Only a few of the eggs will survive.

In 60 to 120 days, inch-long hatchlings head for the water. The temperature of the nest determines gender—warmer nests produce females and cooler nests produce males.

Terrapins can live for years, but the odds are stacked against them. Commercial harvest, loss of habitat, highway deaths, natural predators, boat strikes and accidental drowning in crab pots all threaten survival. According to the National Aquarium at Baltimore, survival rates for the first year are estimated to be as low as 20 percent.

"Terrapins play an important role in the salt marsh ecosystem," Roosenburg said. "For one thing, they are predators of snails, and snails eat the marsh grasses. You lose salt marsh if the snail density is too high."

Terrapins eat other hard-shelled prey like crabs and mussels, as well as fish, marine worms and plants.

Marguerite Whilden of the Terrapin Institute said that, while terrapin are struggling, they have the character of survivors. Turtles as a species have survived more than 200 million years, and she has personally retrieved the same tagged terrapin from markets who contacted her on three separate occasions.


“For me, it’s become a metaphor,” Whilden said. “The terrapin is symbolic of our ability to restore a species for its own inherent qualities, rather than our use.”

Lara Lutz is a writer and editor who lives on the South River in Mayo, MD.


Read [more articles by this author](#).

Have a comment on this article? [Send it](#) to the Editor

Tools:

 [TOP OF PAGE](#)

 [PRINT VERSION](#)

 [MAIL TO A FRIEND](#)

[HOME](#) | [BACK ISSUES](#) | [BAY JOURNAL RADIO](#) | [SUBSCRIBE](#) | [CONTACT US](#) | [ABOUT US](#)

The Bay Journal is published by the Alliance for the Chesapeake Bay for the Chesapeake Bay Program.

[Terms of Use](#) | [Privacy Policy](#) | [RSS Feeds](#) | © Copyright 2006 - Bay Journal