

# Massive diamondback turtle die-off threatens local population

May 18, 2015 by ELLEN YAN / [ellen.yan@newsday.com](mailto:ellen.yan@newsday.com)



About 100 diamondback turtles from Flanders Bay have washed ashore since late April in a rare die-off and one expert said it could take a century for the numbers to recover.

The carcasses of these terrapins, which grow to about 10 inches for females and seven for males, have been discovered primarily in Riverhead, said Karen Testa, founder of Turtle Rescue of the Hamptons, based in Jamesport.

"They're freshly dead and they're in perfect condition," she said. "These terrapins are the puppy dogs of the turtle world. They have personality, they recognize people.

"It's just makes you want to close your doors and say it's too great for us to fight."

Testa sent all the turtles to Cornell University for testing while, separately, the state Department of Environmental Conservation has collected seven for necropsies.

"If additional terrapin carcasses are found, DEC will test them as well in an effort to confirm the cause of deaths in this terrapin die-off," said agency spokeswoman Lori Severino.

State officials said early test results are inconclusive but point to saxitoxin, a marine biotoxin produced by an algae eaten by shellfish.

The turtles awaken hungry from an eight-month hibernation and start dining on mollusks, oysters and other shellfish. Diamondbacks are the only turtles in Flanders Bay to eat shellfish, experts said.

In enough quantities, saxitoxin paralyzes muscles -- drowning the turtles. "Their first meal kills them," Testa said.

In humans, symptoms range from tingling of the lips to problems breathing, dangers that led DEC to temporarily ban harvesting of shellfish and flesh-eating gastropods in about 4,000 acres off Riverhead, Southold and Southampton.

But there's a mystery. Elevated levels of saxitoxin are found annually here. Experts want to know why diamondbacks died in droves this year.

Along with the DEC and Cornell University researchers, Suffolk health officials and a herpetologist from Hofstra University have been brainstorming.

County officials said water samples collected from Flanders Bay and its tributaries on Friday had high concentrations of saxitoxin-producing algae.

"For terrapins, I've never heard of large scale die-offs like this that are not easily explained," said Russell Burke, chairman of the biology department at Hofstra University.

Two other die-offs of up to 50 diamondbacks have been reported this winter, in Massachusetts and Maryland, he said. Experts think these turtles may have been "cold stunned" while hibernating during an especially brutal winter, he said.

"They may be unconnected," Burke said. "Right now we're trying to figure out if this is all one thing or not."

Testa said she's afraid to release the recovering diamondbacks in her care.

Burke said the deaths of egg-laying females deaths is a big loss: "It'll take a long time for the population to recover from this -- many decades, maybe a hundred years."

Bayman Will Caldwell said he sees only one dead diamondback every other year but two weeks ago, the tides had piled up 30 bodies on Iron Point, a spit of land where Peconic River meets Flanders Bay. It's a sign of too many lawn chemicals and waste polluting the waters, he said.

"The system is stressed, and it's basically collapsing on itself," said Caldwell, who showed DEC officials where to collect carcasses for study.

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