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Horseshoe crabs gain respect

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On the Friday eve of Memorial Day weekend, Route 35 and Belmar Boulevard vibrated under the young crowd that drove in to get their party groove going at bars and house parties. A few yards away in the Shark River shallows, horseshoe crabs were already into Round Two of their mating season.

"It's great to see. They've been doing this for 200 million years here," laughed Kevin Maypothor, as he and other volunteers with the Shark River Cleanup Coalition suited up in waders to count the helmet-shaped animals crawling around the river shore.

"These (human) guys coming into D'Jais think they have a corner on the market. It's old-school."

Like that Ocean Avenue nightspot, the bulkhead at Heroy's Pond has its own mind-numbing beat, from cars that roar downhill too fast on Belmar Boulevard. But maybe the crabs like it. Maypothor and Ed Lippincott, who organizes the coalition's annual count, say the low spot just off the busy Route 35-16th Avenue intersection is a horseshoe crab love nest.

Horseshoe crabs come into shallow coastal bays and spawn during the spring months. That was just a fact of life on the East Coast until scientists linked an increasing harvest of horseshoe crabs for commercial fishing bait to declines in migratory shorebirds that feed on horseshoe crab eggs.

The epicenter of that conflict is Delaware Bay, where this spring the red knots, sanderlings and other birds seem to have the fullest plate of horseshoe crab eggs in years. The bait harvest has been sharply restricted, and now horseshoe crabs are being counted from Florida to Maine.

"Over the past decade the focus has been on Delaware Bay because of the shorebird issue, and as a result of the work there, we have a really good way of getting the data," said Glenn Gauvry, president of the Delaware-based Ecological Research and Development Group.

The methods used by Lippincott and the Shark River volunteers were exported from Delaware Bay, and adopted by state fish and wildlife agencies in New England as the Atlantic States Marine Fisheries Commission responded to the shorebird crisis by ratcheting down horseshoe crab harvests, Gauvry said.

"The states needed to understand their horseshoe crab populations so they could manage them," and not impose excessive burdens on fishermen or the biomedical industry that uses horseshoe crab blood to produce lifesaving bacterial test kits, Gauvry said.

While state agencies and universities manage the data collection and check its accuracy, volunteers are a huge part of the effort, Gauvry said — a tribute to the public spirit and sense of stewardship among coastal residents.

"I can get 30 or 40 emails a day from people around the country who want to share their backyard stories," said Gauvry, whose organization website www.horseshoecrab.com is a resource for volunteer

groups.

Lippincott recalled how the Shark River count started with a couple of Scouts who came up with the idea for their Eagle badge project. "They got the protocols from the state Department of Environmental Protection and the Delaware environmental agency," he said. "They did it the first year, and then we started doing it."

Memorial Day weekend happened to coincide with the new-moon phase and accompanying high tides, a prime time for horseshoe crabs to wade high up on bay beaches and mud flats to spawn and lay eggs. The season got off to a promising start when volunteers in early May found a crab at Memorial Park in Neptune City; it was carrying a tag showing that it had been examined and released before at Chincoteague, Va., Lippincott said.

"Oh, here we go. Here's two males. . .and here's two mating pairs," Lippincott called out as he and Maypothier scouted the bulkhead at the Heroy's Pond inlet.

Female horseshoe crabs are bigger than their male suitors, and the males cling to the end of their partners' shells during spawning. "They don't reach maturity until they're almost 10 years old," Lippincott says.

Shark River horseshoes pick up a burden: slipper shells that encrust that backsides of older crabs.

"It's not a bivalve, it's a mollusk," Lippincott said, as he examined the bottoms of crabs. Another female spun around on the bottom, turning donuts in the sand. Lippincott found she had picked up another occupational hazard for Shark River horseshoe crabs: a cherrystone-sized hard clam clamped onto one leg.

"She probably touched it when she was pushing through the sand, and he latched on," he said. "She's not happy about it." Lippincott pried the clam off and released them both. Coalition volunteers count crabs at several locations, starting with the L Street beach in Belmar.

"This is the least popular beach with crabs, probably because it's popular with people," said Cheryl Bergman of Ocean Township, who teaches environmental science and chemistry at the St. Rose High School and recruits students who help with the crab census.

The survey is done with a three-meter (39-inch) grid, plotted using a square of polyvinyl chloride tubing that volunteers use to pace off grids in the sample areas. When they find crabs, the square is laid down, and the crabs counted within. It's the standard sampling method now used all along the East Coast.

The full and new phases of the moon are prime time, Lippincott said: "Two days before, two days after." But the river was cool for much of the month, so "this is just the beginning of their cycle," Maypothier added. Maypothier is part of the group's tagging team, and they popped some 400 half-dollar sized discs onto crab shells last year. "If they show up again, it may show we have a distinct population of crabs in the Shark River." "We don't have an issue with red knots here," Lippincott said. "But the horseshoe crabs and their eggs are an important part of the food chain."

Groups like the Shark River coalition are part of a new wave of people who can apply the same conservation principles used on land for years to the marine environment, said Eric Stiles of New Jersey Audubon.

"You're finally seeing an ethic like Ducks Unlimited or Trout Unlimited, where you put the resource first," Stiles said. "People feel a profound connection to these estuaries. . .and we're at the point where we need to blow up the single-fish paradigm, where we manage these one species at a time for maximum extraction.

"Horseshoe crabs are being appreciated for their own sake, as an interesting critter that people have not thought of before," Gauvry said. "We all have this imaginary line that we draw, where certain

things we care about are above that, like red knots, and others are below, like the horseshoe crab was for so long.

"Red knots helped horseshoe crabs break through that imaginary line. And that's good for horseshoe crabs."
