

# Horseshoe crabs' annual spawning draws red knots, spectators to Delaware Bay shore

**MIDDLE TOWNSHIP** 5/28/10 - Mario and Aida D'Angelo, of Quebec, peered through binoculars, looking for what they had traveled 450 miles to see.

There, in the water's edge at Reeds Beach, lurked thousands, perhaps tens of thousands, of horseshoe crabs biding their time until Thursday's full-moon tide would signal the peak of the annual spawn. The crabs on this single beach are joining spawning crabs along the Delaware Bay this week in what some observers say is one of New Jersey's greatest wildlife spectacles.

Between waves there were glimpses of the helmet-shaped creatures with the alien eyes and the sharp but harmless tails lolling lazily in the surf.

The couple had timed their visit from Montreal to coincide with the crab spawn, which held the promise of seeing lots of shorebirds, particularly the red knot. Knots gorge on crab eggs every spring on their migration from the tip of South America to their high arctic breeding grounds.

"I read about it in a magazine," Aida D'Angelo said. "Last night there were quite a few crabs on the beach. This is our first time to New Jersey. We've seen red knots, but not in the numbers we expected."

A couple red knots picked the beach surrounded by scores of sandpipers, ruddy turnstones and bickering laughing gulls. When the shorebirds flock each morning and evening, it is spectacular - one massive cloud of feathers and wings that create their own thunder over the water.

It's all triggered by a crab that skittered among dinosaurs.

"The scene might have looked the same millions of years ago - long before there were humans," said Michael Gochfeld, a professor at Rutgers University.

He and Joanna Burger, also a Rutgers professor, co-authored a book, "25 Nature Spectacles of New Jersey," which featured the Delaware Bay's horseshoe crabs. He visited Cape May County last week to see the spawn again. The crabs are found in abundance throughout Cumberland County, too, in places such as Heislerville and Fortescue wildlife management areas and tidal creeks in between.

"It really is a spectacle when you see thousands of them in the high tide line packed in together," he said. "It's very special."

Burger helped to band shorebirds this week with geo-locaters that measure the sun's rays. Red knots nest in pairs far from others of their kind, making them notoriously difficult to find in their arctic breeding grounds.

But scientists who capture tagged knots can use the tag's information about sunrise and sunset to pinpoint exactly where they went. So far the scientists have recaptured four red knots they banded with geo-locaters in past seasons.

Horseshoe crabs are found in greater numbers in the Delaware Bay than anywhere else in the Mid-Atlantic region. Crabs that were tagged as far away as Virginia routinely make the slow creep to the Delaware Bay each

year to spawn. Acknowledging the importance of this region to the crabs, the federal government in 2001 created a 1,500-square-mile sanctuary protecting the crabs from fishing in federal waters at the mouth of the Delaware Bay north to Sea Isle City.

Seeing the crabs line the shore for miles is memorable, Burger said, but you don't have to be a professor of neuroscience to appreciate the crabs.

Four-year-old Sidney Mandel, of Philadelphia, rubbed a hand along the smooth shell of a dead crab that his grandmother, Carol Weinbaum, showed him. The base of the crab's shell was lined with sharp spikes just like Sidney's favorite dinosaur, the triceratops.

Weinbaum gave her grandson an impromptu natural history lesson about the crabs.

"How did he die?" Sidney asked.

"I don't know," she said. "Maybe it was sick."

Sidney seemed satisfied with the answer and hopped from one dead crab to the other as though they were stepping stones.

"Living near the shore, it's just something you should know about," she explained. "People aren't the only ones on the planet."

New Jersey lawmakers banned all fishing for horseshoe crabs in 2008 in a bid to help both crabs and red knots. The ban is unpopular with local fishermen, who use the crabs as bait to catch eel and conch.

Other states such as Massachusetts have joined New Jersey in passing stricter laws over crab harvests to encourage their reproduction.

Red knots have declined precipitously over the last decade to fewer than 20,000 birds. Some state biologists determined birds were not gaining sufficient weight to make the trip from Cape May to the arctic. But others think this two-week window into their 10,000-mile global trek might not tell the whole story about international threats to their survival.

The U.S. Fish and Wildlife Service determined the birds were deserving of protection as endangered species but did not list them because of the public costs associated with such protections.

"Here's a law that Congress passed that is not being enforced because they don't have the money," said Andy Sanford, a birder from Marblehead, Mass. He and a friend timed their visit to New Jersey to coincide with the crab spawning to see the knots.

They were rewarded Thursday with a disappointing view of three red knots mixed in with thousands of other birds that created a colorful carpet along the beach.

"I didn't think I'd see 1,000 red knots, but I was hoping to see more. Still, it's amazing. It takes you aback to see so many birds," he said.

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