

Shorebirds in Delaware: *A Pretty Good Year*

The 2007 shorebird season has drawn to a close.

In this essay, Kevin Kalasz, DNREC's Shorebird Project Coordinator, shares his impressions of this year's migration.



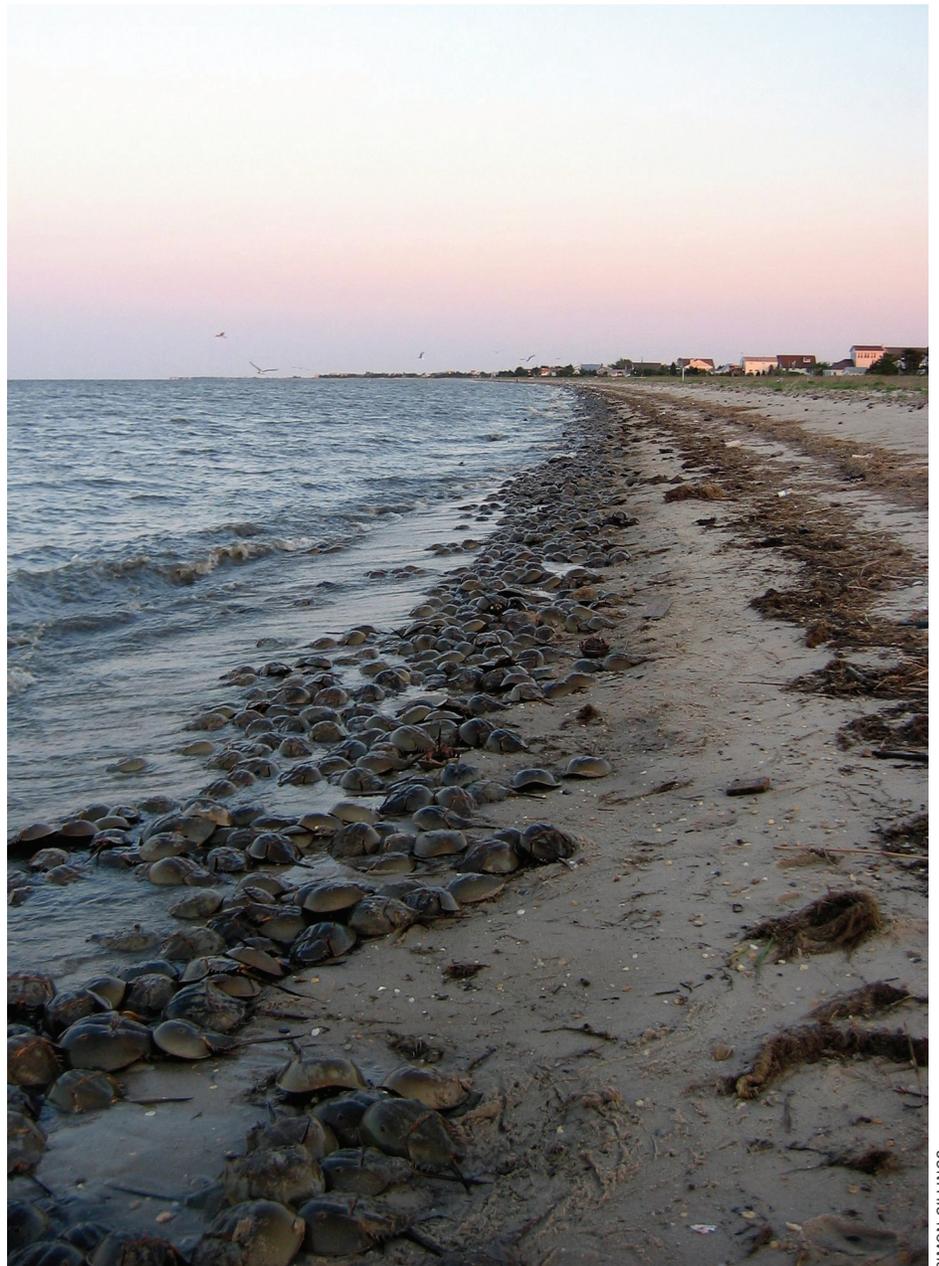
The Season Opens

On April 29th, I arrived at Mispillion Harbor to witness the first arrivals of shorebirds of the spring 2007 migration. I observed fewer than 120 birds. Most were Dunlin, along with a few Ruddy Turnstone. The numbers weren't impressive, but it was still early.

I moved on to Slaughter Beach. The tide was falling, exposing a large mudflat. There, among some 1,200 Dunlin, was a single Red Knot. In just a few short weeks, this one Red Knot would be joined by thousands more on their journey from places as far away as Tierra del Fuego at the southern tip of South America and Maranhao in Northern Brazil, and as close as the western coast of Florida. They stop on the Delaware Bay from May 1st through June 10th, on their way to their breeding grounds in the high Arctic. The Bay is their last stop on this long journey. The conditions they find here play a major role in how successful they will be nesting there.

The Delaware Shorebird Project Moves into Action

The Delaware Shorebird Project monitors the health and condition of migratory shorebirds in Delaware Bay during their



Horseshoe crabs spawning on Slaughter Beach on May 13.

SIMON GILLINGS



A Red Knot ready to depart from Mispillion Harbor on May 28...after one last snooze.

SIMON GILLINGS



spring migration. The DSP is comprised of staff from the Division of Fish and Wildlife, USFWS, and the Delaware Museum of Natural History, as well as a dedicated and highly skilled team of local and international volunteers.

Monitoring focuses on the species most dependent on horseshoe crab eggs for food: Red Knots, Ruddy Turnstones and Sanderlings. These species are captured at intervals of three to four days throughout May and early June to evaluate their condition and monitor how well they are gaining weight. In addition, each

A Ruddy Turnstone having its wing measured during a catch on May 13.

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is fitted and released with an individually-coded leg flag that can be easily observed in the field. Once released, the team works to relocate the flagged birds. Of particular interest is the Red Knot, whose numbers have declined dramatically since 1998.

Shorebirds by the Numbers

What a difference a month makes! Remember that first, single Red Knot I saw in early April? By May 22nd, a flock of over 12,000 Red Knots was seen in the Mispillion Harbor and Slaughter Beach areas alone. By the numbers, we saw about as many Red Knots as last year. But they were mainly just in those two areas. Few other places in Delaware Bay had any appreciable numbers of Red Knot. It is yet unknown whether Mispillion was the only location with plentiful food or whether it was simply the best location to provide all the resources the birds needed without them



KEVIN KALASZ

A scanning team in Mispillion Harbor searches for individually marked birds.



A flagged Red Knot observed in Mispillion Harbor on May 27th. Based on the code on the flag, it was banded on May 14, 2004, also in Mispillion Harbor.



GREG BREESE

A mixed flock of Red Knots and Ruddy Turnstones flying in Mispillion Harbor during the peak in migration.

having to look further.

Ideal weather and water conditions in Delaware throughout the migratory period promoted robust horseshoe crab spawning beginning in early May and continuing until after the birds left. Horseshoe crab eggs are the primary food of shorebirds. By May 25th, three days before their target departure date, we made a catch of 73 Red Knots. Their average weight was 180 grams, the weight they needed to reach the Arctic. The level of horseshoe crab spawning activity seemed to produce enough eggs to enable the shorebirds to put on enough weight to get them to the Arctic in good condition. Only time will tell if they found conditions in the Arctic suitable to successfully raise their young.

In addition to capturing birds to assess their condition, the Delaware Shorebird Project team spent hundreds of hours scanning flocks for individually-coded leg flags.

Next Steps

This year, the team recorded more than 20,000 sightings of individually marked birds. Many were seen several times

throughout the season. These observations will be combined with sightings from New Jersey and analyzed to determine how long the birds stay in the



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Red Knots feeding on horseshoe crab eggs on the beach in Mispillion Harbor on May 27.



Shorebirds feeding on the mudflat on Slaughter Beach at sunrise.

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Bay, when and where they go while they're here, and how many survive from one year to the next. Marking individual birds has dramatically increased our efficiency in gathering data and has decreased the number of birds needing to be captured. The large amount - and high quality - of data collected this year will greatly improve our understanding of the shorebirds' Delaware Bay stop-over.

On a Personal Note...

One thing I've learned over the four years I've worked with and coordinated the Delaware Shorebird Project, is that no spring shorebird migration in Delaware Bay is ever the same. Had the spring been cooler and the waters not warmed up to promote horseshoe crab spawning, the migration may have been much different; with birds struggling to find enough food to gain the weight they need to get to

their nesting grounds on time and in good condition.

Continued careful monitoring of the stopover is critical to determining whether the conservation and management measures we are taking to protect the shorebirds and the resources they need, are working. My hope is that, like the single harbinger Red Knot that arrived in April, the conditions found in Delaware Bay this season are a positive indicator for future seasons. So that one day, the numbers of shorebirds will return to what they once were. **OD**

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