

Volunteers' fence saves thousands of horseshoe crabs

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The horseshoe crab 'kill zone' was claiming thousands of spawners every season – as shown in this photo from 2017. Organizers say that at least 5,000 spawners per season, possibly more, were becoming stranded and dying on the small stretch of beach. Submitted photo

LITTLE CREEK — According to organizers, a scheme to close off a horseshoe crab “kill zone” on Pickering Beach has been a thumping success.

In late April a partnership including DNREC, Pickering Beach residents and the Ecological Research & Development Group (ERDG) — a 501(c)3 non-profit organization focused on horseshoe crab conservation efforts — installed a 350-foot wooden temporary storm

fence across a stretch of beach to prevent deadly horseshoe crab strandings.

According to ERDG president and Little Creek Mayor Glenn Gauvry, Pickering Beach is one of the most prolific horseshoe spawning beaches in the world during the spring months.

Over the course of several years (and several sand-shifting nor'easters) a sandy protrusion several dozen yards wide had formed on the beach that was causing the horseshoe crabs some navigational problems.

When the tide rolled in, spawning horseshoe crabs arrived at the beach in large numbers and climbed out of the water.

But because the beach peaks at a certain point and leads down to a pond and

stream on the other side, the spawners would sometimes get confused.

The results, locals noticed, were often disastrous.

“A few years ago, there was a ditch that was open here and this wasn’t a problem because they would just follow the tide back out to the bay,” said Mr. Gauvry.

“But since it has filled in, a lot of the spawners get stranded when the tide goes back out. They try to hunker down in the wet sand so they can breathe, but it dries out by the next day and they die.

“They also try to find refuge in the pond on the opposite side, but the salinity isn’t right and they die there, too. It ends up being a killing zone because it’s so easy for them to go the wrong way.”



After a season with the temporary fence deployed, organizers are proclaiming the project a success because spawners were prevented from stranding themselves beyond the fence. Submitted photo

Although the exact number would be difficult to calculate, Mr. Gauvry believes the obstacle was killing at least 5,000 horseshoe crabs per season, possibly more.

Female spawners can lay between 60,000 and 120,000 eggs in batches of a few thousand at a time. Hatchlings take up to 12 years to become reproductively mature, making the impact of the small “kill zone” exponential.

As the spawning season comes to a close, Mr. Gauvry claims the fence worked exactly as intended and likely prevented many thousands of horseshoe crab deaths.

Over the past few months, Mr. Gauvry and several volunteers closely monitored and photographed the fence. He notes that the fence allowed tide waters to continue to flow freely, but prevented horseshoe crabs from wandering too far from the shoreline and fatally stranding themselves.

Some debris accumulated against the fence over time, but volunteers only needed to rake it once, Mr. Gauvry said.

At an estimated total population of 20-to-25 million adult horseshoe crabs, Mr. Gauvry notes that the Delaware Bay's horseshoe crab population is "stable."

"There was a point in time where we were harvesting almost a million per year out of the bay," he said. "The rebound in population has almost everything to do with regulations that helped reduce that number."

Mr. Gauvry believes simple projects like the temporary fence can help ensure that spawning conditions along the bayshore stay ideal for the ancient species.

"The Delaware Bay has the optimum spawning conditions and is historically incredibly productive for the species," he added. "It has over 150 miles of sandy beaches, low energy in terms of waves that can flip them over, the salinity levels are good and the food resources for juveniles are good too."

"Also, a lot of the bay is shallow so juveniles can slowly venture out as they get older and go into deeper waters. It's the perfect nursery."

Sticking around?

Originally, DNREC agreed to let Mr. Gauvry and the volunteers to leave the fence up for the season, removing it before winter storms would likely down it. But, as Mr. Gauvry briefs DNREC on the project's success, he is advising to leave it up until the end of the 2019 horseshoe crab spawning season.

“The condition of the barrier fence and post are solid and the quality of the materials and installation is such that it should easily be able to withstand the winter months, which would preclude the necessity to reinvest in materials and labor to reinstall the barrier fence for the 2019 horseshoe crab spawning season,” he said.

Already a modest investment at about \$1,000 in equipment and supplies (via a donation from a small group of concerned citizens), those involved see no reason not to get the most for their money.

The installation process engaged half a dozen volunteers because the fence needed to be buried a foot deep along its length — a step the volunteers would like to avoid repeating unnecessarily.

If DNREC agrees, Mr. Gauvry says he will continue to monitor the fence on a monthly basis and report on any changes.

“By monitoring the barrier fence throughout the winter month, when the topography of this area encounters the most change, we will learn how the barrier fence holds up to weather and time, as well as what modifications could be made in future years to improve the design i.e., design, materials, installation and location,” he said.

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