Locals help tag the horseshoe crab

By CHASE WRIGHT

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STAMFORD -- Take a stroll with Stamford resident Hilary Starks through Southfield Beach this spring, and you're likely to see dozens of horseshoe crabs mating as the tides come in.

The smaller males will clasp to the shells of the larger females and fertilize up to 20,000 eggs, which the females deposit into sunken holes on the beach.

"While I'm walking my dog during high tide I see tons of them on the shore," said Starks. "It seems like I'm seeing more this year than last year."

That's good news for Jennifer Mattei, Ph.D., chair and associate professor of the department of biology at Sacred Heart University, who studies the horseshoe crab through her region-wide initiative -- Project Limulus. An ongoing study, Project Limulus is being conducted along coastal Connecticut, including Stamford's shores, in an effort to track and preserve the vitality of this ancient creature.

At 350 million years old, the horseshoe crab predates the dinosaur and is one of the oldest creatures still inhabiting earth.

"They're called living fossils," said Mattei. The horseshoe crab is one of the most dynamic creatures on the plant, she said, because they've changed very little over time and have continued to adapt to a changing climate.

Yet the horseshoe crab isn't spawning along Connecticut shorelines in the numbers it used to, she said.

"They've survived major mass extinctions," said Mattei. "I would hate to see them disappear in our time."

The horseshoe crab deserves our conservation efforts because they provide a number of benefits to us, both economic and ecological, she said.

Their blood is blue and used in biomedical research to detect bacterial contamination in vaccines, said Mattei. In fact, U.S. law requires that intravenous drugs be tested on horseshoe crab blood before they reach the public.

Certain properties of the shell have also been used to speed blood clotting, and researchers have begun testing horseshoe crab blood as a means to treat certain types of cancers, said Mattei.

"Everybody's health depends on this creature," she said.

Draining the blood of a horseshoe crab does little harm to the creature. The process has only a 10 percent mortality rate, she said.

If the horseshoe crab were to suddenly disappear from the shorelines, harm would be done in a number of other ways. Migratory shore birds count on the annual spawning as a food source, fish eat the juveniles and eel and conch fisherman use the adults as bait.

The horseshoe crab is a migratory species itself and has been known to travel across state lines, and can even cross the sound.

"It's a difficult species to manage," said Mattei. "We're trying to get an idea of density -- how many horseshoe crabs there are state-to-state across New England."

To do that, Project Limulus calls on the community and nonprofit groups to help in its tracking efforts.

Some of the most experienced groups lead tagging efforts in their communities.

Tagging involves poking a hole in the shell of the crab with an awl and pushing a white, circular tag through the hole. The tag includes information for Mattei and a six-digit number for data collecting purposes. Anyone

finding a tagged horseshoe crab is urged to call or e-mail Mattei with the information on the tag.

For the less-experienced, or for those who cringe at the sight of these creatures and refuse to touch them, volunteers can count and record the horseshoe crab's location from a distance.

Leading the way at the local level is SoundWaters, which recently held its first horseshoe crab information and training seminar at Cove Island Beach in Stamford.

SoundWaters has been partnering with Mattei and the Connecticut Department of Environmental Protection to assist in Project Limulus for the past three years, but horseshoe crabs have been a major attraction for this coastal education center since the late '80s, said SoundWaters Executive Director Leigh W. Shemitz.

"Our connection with the horseshoe crab has been going on since we began," she said.

In 2006, SoundWaters was awarded a $150,000, three-year federal grant to jumpstart its comprehensive horseshoe crab program. The program reaches out to all of Stamford's school age children to teach them about this fascinating specimen, said Shemitz.

"Every Stamford student will have touched a horseshoe crab at some point in their youth," she said.

Shemitz called Project Limulus and the horseshoe crab programs at SoundWaters, "a great opportunity for the public to connect with the Sound."

"There's a huge ecological event happening on our beaches right in front of us," she said of the crab's yearly spawning cycle. "This event connects us to the environment and to the Long Island Sound in a very important way."

To be a part of the SoundWaters team and participate in the annual horseshoe crab count, contact Dianne Selditch by phone at 203-406-3302 or by e-mail at dianne@soundwaters.org.