

Caribbean Crab Species Found in Point Judith Pond

by TODD McLEISH / ecoRI News



When **Jim Turek** captured some fish, crabs, and other creatures from a salt marsh at Camp Fuller in South Kingstown during the Rhode Island Natural History Survey's annual BioBlitz on June 13, he didn't expect to find a crab species that had never been recorded in the state. In fact, he didn't even know he had.

Turek placed the specimens in an aquarium at the event to show visitors what was living in nearby waters. But when science teacher **Becky Lash** saw the crab, she immediately knew it wasn't the usual hermit crab that everyone assumed it to be. It was shy and remained hidden in its shell, unlike the usually aggressive native hermit crabs.

Eventually, it was identified by University of Rhode Island ecologist **Niels-Viggo Hobbs** as a **thinstripe hermit crab**, a species that typically lives in the Caribbean and ranges only as far north as Virginia.

Hobbs said the crab's discovery in Rhode Island waters may be a sign of a northward expansion due to warming waters, but it also may have been released by someone who bought it at a pet store. Several pet stores in the area occasionally have thinstripe hermit crabs in stock.

"It's too early to tell whether it's a range expansion or an accidental introduction by an aquarium hobbyist," Hobbs said. "In fact, with this one individual, we'll never know for sure. Both scenarios are entirely plausible, and both underscore dangers related to introduction and potential invasion."

Hobbs said it's difficult to predict how this species may impact populations of native hermit crabs, and it's uncertain whether the thinstripe hermit crab is even reproducing in the state. He revisited the area a few days after the crab was discovered and didn't find any other specimens.

"It is not a very common species in its native range, and it's also very shy compared to the most common native hermit crab, so it would probably have a tough time directly competing with native species," Hobbs said. "However, given the many factors that go into making a successful invader, it's not always easy to predict."

Bioblitz is a 24-hour event to assess the biodiversity of a parcel of land. The Rhode Island Natural History Survey has conducted the event using volunteer naturalists for 19 years, and the Camp Fuller site was the smallest parcel yet — about 85 acres. The 184 participating volunteers counted 1,007 species, including 18 mammals, 89 birds, 302 vascular plants, 66 beetles, 158 moths, 29 seaweeds, 47 mosses, 56 marine diatoms, 25 ants, 14 butterflies, 74 fungi, seven amphibians, and 23 fish.

"That's quite a lot of species for what is our smallest BioBlitz by acreage," said **David Gregg**, executive director of the Natural History Survey. "It reflects very diverse habitat — a little salt

marsh, a little sand flat, a little patch of beech woods, a little dry woods, a little peat bog, all together and packed into 85 acres."

Gregg called the discovery of the thinstripe hermit crab similar to the discovery of a mosquito fish at a pond in Little Compton during a previous BioBlitz.

"That Little Compton pond had been there with those fish for years and nobody had been there to look at it," he said. "You had to have a BioBlitz to find it. BioBlitz is essentially a game, and people do it for the fun of it, for the sense of adventure and exploration, and you often end up finding things you never would have looked for otherwise."

The thinstripe hermit crab wasn't the only rarity found during this year's BioBlitz, however. Two rare fungi were discovered that local naturalists were unable to identify until contacting an international expert in Norway. And four plants on the state's list of rare species were found where they had never been reported before.

In addition, the state's second record of the Asian needle ant was reported by Providence College ant expert James Waters, who also found the state's first record on the PC campus in 2016.

According to Gregg, most ants must be observed under a microscope to identify them, so Waters and his students collected numerous ants for closer inspection. The students took digital pictures of the ants and posted them to a website called iNaturalist, which uses volunteer experts to identify wildlife.

"Within 24 hours, a famous ant guy, Alex Wilde, happened to be looking at ants on iNaturalist and identified it as the Asian needle ant," Gregg said.

Native to Japan and elsewhere in Asia, the species is now found throughout the Southeast and as far north as New York. It's considered invasive, since it displaces native ants. The ant is known to infest homes and natural areas, and it has a painful sting.

"It has been spreading dramatically recently, and now it's fairly common in New York City," Gregg said. "We wondered whether the sighting in Providence in 2016 was a fluke or if it is seriously spreading our way. Now that we've found it on the shore of Point Judith Pond, it seems to be seriously spreading."

Those interested in participating in next year's BioBlitz should contact Kira Stillwell at the Rhode Island Natural History Survey at 401-874-5800 or kstillwell@rinhs.org.

Rhode Island resident and author Todd McLeish runs a wildlife blog.



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