

Horseshoe Crab Survey

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HSC spawning. Photo by Ken Sigvardson

Project Summary

Why Do Horseshoe Crabs Matter?

Not crabs at all but more closely related to spiders, horseshoe crabs are Delaware's state marine animal and are found throughout the Inland Bays. Horseshoe crab eggs serve as a vital food source for migratory shorebirds, resident bird species like laughing gulls, and various fish species such as striped bass. Additionally, an extract from their blood, limulus amebocyte lysate (LAL), is used to test for bacterial contamination in drugs, vaccines, and medical devices, literally saving lives! Historically, horseshoe crabs have been used as bait in local fisheries for generations. For millions of years, horseshoe crabs have made their journey to spawn on the sandy beaches along the Bays. However, this prehistoric pilgrimage is now under threat from climate change, sea level rise, and development. Protecting these spawning sites is crucial to restore horseshoe crab populations in the Inland Bays.



HSC embryos
Photo: Master Naturalist John Hoyt

How Do We Complete the Survey?

In May and June, horseshoe crabs travel to sandy beaches in the Inland Bays and congregate in mass spawning events that peak at high tide near the full and new moon. On these peak nights, volunteers move along the beach's high tide line counting and sexing the horseshoe crabs found within one-square-meter "quadrats". Following each survey, a portion of the horseshoe crabs are tagged and released as part of U.S. Fish & Wildlife Service population surveys.



Survey Goals

The goals of this project are to assess current horseshoe crab population levels and sex ratios and monitor any changes over time. The data collected during the Center's horseshoe crab surveys can be compared to and shared with data collected by other nearby National Estuary Programs.

Participatory scientists surveying HSC

Legend

LOCATION

HIGHEST NIGHTLY

TOTAL COUNT

PENINSULA

457

1,263

TOWER ROAD

1,375

5,384

ELLIS POINT

1,259

6,409



2025 total horseshoe crab counts by sampling site

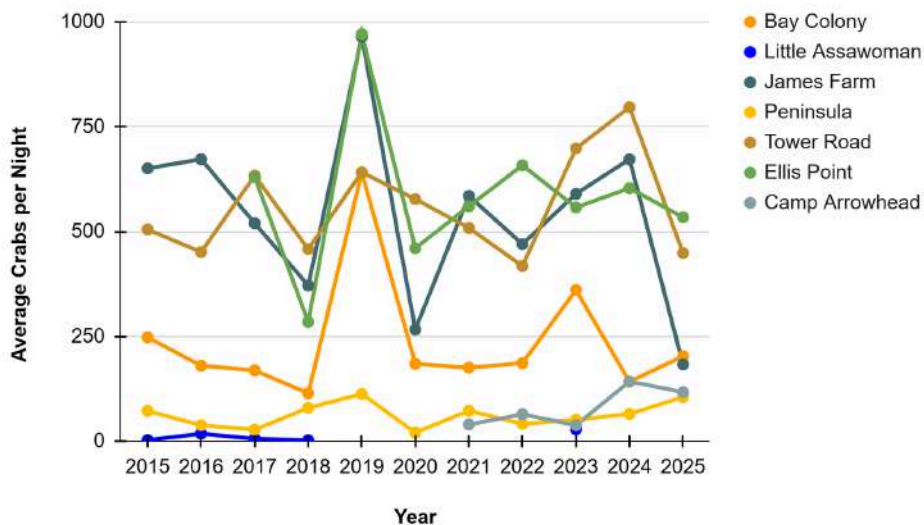
2025 Survey Highlights

- 19,086 HSCs counted—16,559 males & 2,527 females (compared to 36,323 total HSCs counted in 2024)
- Over 1,500 HSCs were tagged
- The survey site at Ellis Point had the highest total number of horseshoe crabs counted this season with 6,409 HSCs
- Tower Road had the highest number of crabs counted in one night with 1,375 crabs.



Tagged HSC

Yearly Comparison of HSC Counts



Average counts of horseshoe crabs per night for each survey year

Want to Get Involved?

Help us count and tag horseshoe crabs! We are always looking for volunteers. If you see a horseshoe crab with a tag on it, report it to USFWS. For more information, go to inlandbays.org.



DELAWARE CENTER FOR THE INLAND BAYS

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The Delaware Center for the Inland Bays is a non-profit organization established in 1994 to promote the wise use and enhancement of the Inland Bays and its watershed. With its many partners, the Center conducts public outreach and education, develops and implements restoration projects, encourages scientific inquiry and sponsors research. To learn how you can get on board with the bays go to inlandbays.org.