

THE PROBLEM

Habitat loss along Connecticut's shoreline and killing by a handful of seasonal commercial fishers are causing local populations of horseshoe crabs to crash. The Atlantic States Marine Fisheries Commission has downgraded the stocks of horseshoe crabs in the New York Region, which includes Long Island Sound, in each of the past three assessments, from Good in 2009 to Neutral in 2013 to Poor in 2019.

The latest news confirms this disturbing trend: The number of horseshoe crabs spotted during the spawning season at Long Island beaches in 2022 reached the lowest level in 20 years, according to Molloy University's Center for Environmental Research and Coastal Oceans Monitoring.

"Due to very low population numbers the horseshoe crab is functionally extinct in Long Island Sound," reports Dr. Jennifer H. Mattei, a biology professor at Sacred Heart University and head of Project Limulus, which has conducted counts of local horseshoe crab populations since 1998. That means they can't fulfill their crucial ecological role in providing food and shelter for many other species "The density of spawning horseshoe crabs is so low that the females cannot find mates and therefore this population is not reproducing at its maximum potential," Mattei added.

A COMPREHENSIVE SOLUTION

In 2022, legislation to prohibit the hand capture and killing of horseshoe crabs from the waters and shoreline of the state passed by a unanimous vote in the CT House of Representatives. Unfortunately, the bill, championed by Stratford Rep. Joe Gresko and 23 additional bipartisan co-sponsors, did not get called in the Senate and never made it across the finish line. The legislation's many supporters have pledged to reintroduce the legislation for the 2023 session. Four CT communities have already enacted laws prohibiting the local catch of horseshoe crabs, among them Milford Point, Stratford, Sandy Point in West Haven, and Menunketesuck Island in Westbrook. Those local actions clearly have not been enough to halt the crashing population.



Atlantic horseshoe crabs spawning at Compo Beach, Westport, CT, in June 2021

'LIVING FOSSIL' PLAYS VITAL ROLE

This 300-million-year-old species has long played what biologists call a "dominant role" in ensuring the health of the Long Island Sound ecosystem as well as the survival of a number of species of migratory shorebirds who depend on the horseshoe crab's eggs to fuel their yearly journeys from the Southern Hemisphere to breeding grounds in the Arctic.

A female horseshoe crab can deposit around 20,000 eggs a night and up to 100,000 eggs each mating season. In addition to feeding shorebirds, like the endangered red knot, their eggs, larvae and juvenile crabs are also consumed by a range of crustaceans and fish, from rays and skates to sharks and sturgeon. Horseshoe crabs are also a major component in the diet of loggerhead turtles, and their carapaces are used as mobile homes for anemones, barnacles, oysters, seaweed and other marine organisms.

MORE ABOUT HORSESHOE CRABS

Residing in local populations up and down the East Coast and facing relentless pressure from both bait fishers and the pharmaceutical industry, which uses the crabs' unique blue blood to make vaccine-testing drugs, Atlantic horseshoe crab populations are currently listed as vulnerable by the International Union for the Conservation of Union's Red List of Endangered Species.

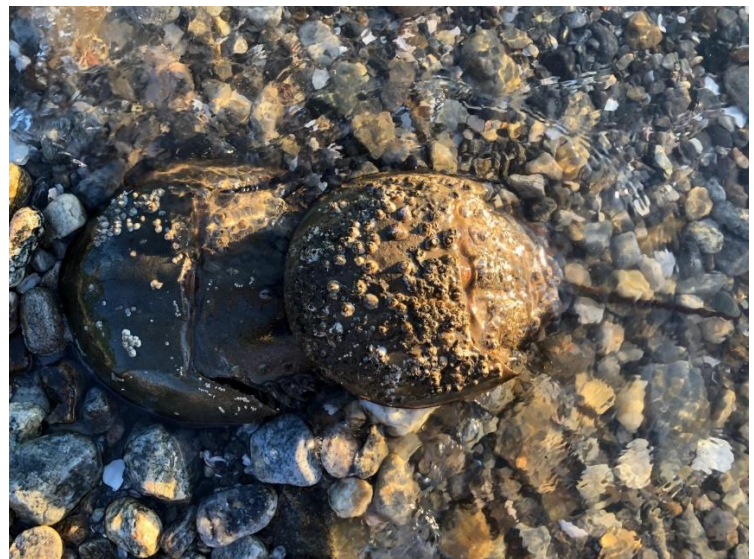
Connecticut issues about 15 permits a year to fishers to kill horseshoe crabs so they can be used as bait, despite other options. Local fishers acknowledge they can effectively bait their traps for whelk and eel using forage fish; there's nothing special about horseshoe crabs as bait other than the fact that they are easy to harvest by hand. As for the need to harvest horseshoe crabs for medical use, many European nations now use a proven effective synthetic alternative. No CT horseshoe crabs are currently utilized for this purpose. Connecticut lags behind its neighbors in efforts to protect this imperiled species. New Jersey declared a moratorium on horseshoe crab harvesting in 2008. Connecticut's quota for its annual haul is an appalling 48,689.

Advocates for a total ban on the killing of horseshoe crabs also argue that a quota system, seasonal limits during high-tide periods or the taking of only males opens the door to widespread poaching and the illegal killing of females, given a lack of oversight and enforcement by inadequately staffed state wildlife agencies, including CT's Department of Energy and Environmental Protection.

"Connecticut has to stop their slaughter statewide so that horseshoe crabs can recover and continue to fulfill their crucial role in the local ecosystem"

FAST FACTS

- ◆ Horseshoe crabs can live up to 20 years but don't reach sexual maturity until about the age of 10.
- ◆ The shell, or carapace, of the horseshoe crab doesn't grow with them. They molt an average of 16 times before reaching maturity.
- ◆ Their name is actually a misnomer, as *Limulus polyphemus* is more closely related to spider, ticks and mites on the evolutionary tree.
- ◆ The bulk of Connecticut's horseshoe crab cull is sold as bait, used to catch whelk and American eel, itself a depleted species. The whelk, or conch, are sold to restaurants to make fritters.
- ◆ Eels captured in pots using horseshoe crabs as bait are sold as a smoked delicacy in European markets and as bait to catch game fish.
- ◆ As many as 30% of horseshoe crabs that are used for medical bleeding don't survive once returned to the water.



Female horseshoe crabs, which grow larger than males, can deposit around 20,000 eggs a night and up to some 100,000 eggs in each mating season, roughly April through June.

MORE INFORMATION

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