

# Scientists, Shellfishermen Seek Strategies to Sustain Ocean State's Dwindling Bay Scallop Populations

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Jo Detz

January 6, 2022



Bay scallops are bivalve mollusks that live in shallow bays and estuaries. They are significantly smaller than sea scallops. (istock)

**By TODD McLEISH/ecoRI News contributor**

In the Great Salt Pond on Block Island, native bay scallops are thriving like nowhere else in Rhode Island. Scientists from The Nature Conservancy survey the 673-acre tidal harbor every autumn and have recorded hundreds of scallops each year, despite as many as 50 recreational shellfishermen harvesting scallops from the pond each November and December.

The same cannot be said of the rest of the Ocean State's waters, however, where bay scallops are few and far between.

On Block Island, Diandra Verbeyst leads a three-person team of Nature Conservancy scuba divers and snorkelers who monitor 12 sites around the Great Salt Pond. They have counted an average of 225 scallops annually since 2016, up from just 44 observed by previous observers in 2007, the first year of monitoring.

"There are slight rises and falls from year to year, but the population is pretty stable," Verbeyst said. "Based on the 12 sites we monitor, the population is indicating that there is spawning happening each year, and there is recruitment to the population."

In addition to scallop data, Verbeyst and her team also collect information on water quality and other environmental conditions during their surveys.

"The scallops are an indication that the ecosystem is healthy and doing well, and for me, that's fascinating in itself," she said. "No matter where you are in the pond, there's a good chance you'll see a scallop."

Bay scallops are bivalve mollusks with 30-40 bright blue eyes that live in shallow bays and estuaries up and down the East Coast, preferring habitats where eelgrass is abundant. They are short-lived animals — most don't live more than two years — and are significantly smaller than sea scallops, which are found farther offshore and are harvested by the millions by New Bedford, Mass.-based fishermen.

Chris Littlefield, a Nature Conservancy coastal projects director and former part-time shellfisherman on Block Island, recalled collecting scallops as a child in the Great Salt Pond 50 years ago, and he has been gathering them in small numbers for his family's consumption ever since. He said the scallop population received a boost in 2010, when immature scallops grown at the Milford Laboratory of the National Oceanic and Atmospheric Administration were dispersed into the pond in a project funded by the Natural Resources Conservation Service.

"That project broke through some kind of threshold," Littlefield said. "Scallops weren't as abundant before that, and they used to be confined to certain key locations and that was it. But now they're more abundant and more people are finding them and harvesting them."

Unlike Nantucket, Martha's Vineyard, and a few locations on Cape Cod and Long Island, where regular seeding of immature bay scallops has resulted in thriving commercial fisheries, Rhode Island has a tiny commercial fishery for bay scallops — fewer than three fishermen participate — and the fishery is not sustainable.

Anna Gerber-Williams, principal marine biologist for the Rhode Island Department of Environmental Management's Division of Marine Fisheries, just completed the first year of a three-year effort to assess the state's bay scallop population. She is focused primarily on

the salt ponds in South County, especially Point Judith Pond and Ninigret Pond, which historically had healthy bay scallop populations.

“We manage and regulate the bay scallop harvest, but besides Block Island, we haven’t had an actual assessment of what the population looks like in Rhode Island,” Gerber-Williams said. “We know it’s pretty low, and we know the actual commercial harvest numbers are very low. But we don’t have anything to base our management on. The hope is that this project can turn into more long-term monitoring, similar to what’s done on Block Island, and maybe lead to restoration efforts.”

Based on her first year of surveys, Gerber-Williams said there are self-sustaining populations of bay scallops in Point Judith Pond, and their abundance can fluctuate significantly from year to year.

“Scallops are very habitat dependent,” she said. “The habitat in the salt ponds is very patchy, and those patches are very small.”

Unlike clams, which bury themselves in the sand, bay scallops sit on the seafloor and can swim around by rapidly opening and closing their shell, making them difficult to track and count. Gerber-Williams said they are threatened by several varieties of crabs, which can easily crush the scallops’ shells with their claws.

“Part of the scallop’s strategy is to hide from the crabs in the eelgrass,” she said. “When they’re younger, they attach themselves to eelgrass blades to keep themselves above the bottom and out of reach of predators.”

Dan Torre at Aquidneck Island Oyster Co. experimented this year with growing bay scallops in cages in the Sakonnet River off Portsmouth. He bought scallop seed from area hatcheries last July, and they are approaching marketable size now. He has contracted with one local restaurant to buy his experimental crop, with hopes of scaling up the operation next year.

“I believe there’s a market, but it’s a niche market,” he said. “Normally with sea scallops, you sell just the shelled adductor muscle, but with bay scallops you sell the whole animal. The shelf life isn’t the longest, but it seems like there are a bunch of restaurants that are eager to try them.”

In an effort to figure out how best to restore wild bay scallop populations in the region, the Rhode Island Commercial Fisheries Research Foundation is collaborating with The Nature Conservancy to synthesize what is known about the history of the bay scallop population and fishery in Point Judith Pond.

According to Dave Bethoney, the foundation’s executive director, it will be combined with information about scallop fisheries in Massachusetts and Long Island, N.Y., as a first step to developing a restoration plan.



Eelgrass habitat is important for the survival of bay scallops. (Diandra Verbeyst)

“How to make them sustainable is the real puzzle,” Bethoney said. “Even successful efforts on Long Island are based on a seeding plan — getting scallops every year from aquaculture facilities to replenish them. They have successful populations, but they’re not self-sustaining. I don’t know how we change that.”

Gerber-Williams agreed.

“In my opinion, the way to boost populations here and keep them at a level that’s sustainable for a good fishery in Rhode Island, we would have to have a seeding program similar to what they have in Long Island and Martha’s Vineyard,” she said. “Every year they put out thousands of baby bay scallops. They seed their salt ponds every single year to keep a decent fishery going.

“So the next step for us would be to do that kind of seeding program in Rhode Island. We’re in the process of creating a restoration plan for various species of shellfish in Rhode Island, and my hope is that bay scallops are a part of that.”