



New York Sea Grant (NYSG) is a collaborative program of the State University of New York, Cornell University, and NOAA (National Oceanic and Atmospheric Administration).

With 3,400 miles of coastlines, New York is the only U.S. state bordering both the Great Lakes and the Atlantic Ocean. More than 85% of NY's population lives in a coastal region.



NYSG provides research, education, and extension services enhancing coastal community economic vitality, environmental sustainability, and citizen awareness of NY's marine and Great Lakes resources.

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NYSG Focus Area for this project:
Sustainable NY Fisheries, Aquaculture and Seafood Businesses
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New York Sea Grant Bay Scallop Mortality Research Sustains New York Fishery

New York Sea Grant co-funded research used to identify drivers that cause mass bay scallop die-off and to provide a solution to build long-term resiliency in the fishery.

Commercial fishing businesses operating in Peconic Bay, New York, experienced total economic displacement in the aftermath of multiple unprecedented mass die-offs of bay scallop. The bay scallop is an important seasonal fishery product that helps to sustain coastal economies on the East End of Long Island.

Substantial restoration efforts by managers from the mid-1980s to 2018 had rebuilt the natural bay scallop population, resulting in a resurgence which yielded steady commercial landings ranging between 80,000-115,000 pounds per year, with dockside value of

\$1.6 million at its peak. Reports of mass die-offs of adult bay scallops in 2019 and 2020 forced an immediate suspension of this fishery.

New York Sea Grant participated in a Peconic Estuary Program panel of technical experts and co-funded rapid response research efforts assessing the possible drivers of mass mortality in the bay scallop fishery. This research investigated biological and environmental parameters around the time of the die-off to rule out unrelated effects and identify most likely factors. The results were presented at a public workshop co-facilitated by New York Sea Grant and the Peconic Estuary Program.

Thirty-five participants attended the workshop, at which researchers conveyed information about the bay scallop marosporida parasite that has been isolated and since confirmed to proliferate under prolonged elevated ocean temperature. While other extraneous factors were ruled out, high density of the bay scallop marosporida parasite under stressful conditions will kill bay scallops. Managers are applying methods developed under previously-funded New York Sea Grant research to identify resilient strains of bay scallops for restocking programs in order to build long-term resilience in the fishery.

Project Partners:

- Cornell Cooperative Extension of Suffolk County Marine Program
- New York State Department of Environmental Conservation
- Peconic Estuary Program
- Stony Brook University Marine Animal Disease Laboratory



L to R: Southampton Town Trustee and local bayman Edward Warner, Jr.; New York State Department of Environmental Conservation Shellfish Unit Chief Debra Barnes; Cornell Cooperative Extension Suffolk County Marine Program Aquaculture Director Harrison Tobi; and Stephen Heck, Ph.D., Stony Brook University School of Marine and Atmospheric Sciences, discuss bay scallop research and management response in Riverhead. Photo: Sumayyah Uddin/ New York Sea Grant