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Profile of a Conservationist

Mark Bryer
Chesapeake Bay Program Director

In his more than two decades with The Nature Conservancy, Mark has worn many hats, served in many roles and led many interesting projects. However, in late 2020, Mark found himself responsible for managing a truly unique project, unlike any he had led before.

Supporting Oyster Aquaculture and Restoration (SOAR) is a partnership between TNC, The Pew Charitable Trusts, private donors, and state agencies including the Maryland Department of Natural Resources, who came together to support a growing aquaculture industry. Oyster farming is an important industry for conservation. It offers a huge potential not just for producing food for a growing planet, but to provide livelihoods to coastal communities, and to help recover lost ecosystem services like water filtration.

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Oyster grower Scott Budden of Orchard Point Oysters shucks an oyster during a Chesapeake Bay Oyster Alliance demonstration day. Orchard Point Oysters is one of nearly 20 Maryland aquaculture operations participating in the SOAR program. © Severn Smith/TNC

Supporting Oyster Aquaculture and Restoration In the Chesapeake Bay and Beyond

When Covid-19 shuttered restaurants, Chesapeake Bay oyster growers found themselves faced with a grim reality: no place to market their shellfish, which were beginning to grow too large for raw bars. Suddenly their industry—in which it can take up to three years to grow an oyster to the ideal size to sell to restaurants—was in dire straits.

Oyster aquaculture in the United States provides jobs in coastal communities, provides a sustainable source of seafood, and can help improve the health of our oceans and estuaries by providing habitat for fish and improving water quality. The Nature Conservancy supports oyster aquaculture as a sustainable industry that takes the pressure off of wild oysters that have been overharvested for centuries.

This past winter, TNC worked with private donors and other partners to purchase more than 5 million surplus farmed oysters from growers in Maine, New Hampshire, Massachusetts, New York, New Jersey, Washington and Maryland. All of the oysters purchased from Maryland oyster farmers will be placed on sanctuary reefs in the Chesapeake Bay, helping those reefs grow to meet restoration goals.

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“Maryland is excited to be a partner in TNC’s SOAR Program. SOAR will help our oyster growers recover from pandemic setbacks by providing a market for their surplus oysters, while boosting our oyster restoration efforts by planting these oysters on three sanctuary reefs. The value of this program extends beyond this project, as it will serve to connect oyster growers and the restoration community, creating partnerships that will result in new market opportunities and enhanced conservation efforts in the years to come.”

Karl Roscher, Assistant Director, Fishing and Boating Services
Maryland Department of Natural Resources



The Fishing Bay Wildlife Management Area is an example of protected marsh habitat that falls within the Atlantic Test Range.
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REPI Challenge

Protecting 4,000 acres of resilient marsh migration zones in Maryland

Maryland's Lower Eastern Shore is home to more than 75% of the state's remaining tidal wetlands, which provide critical habitat for a variety of species. Coastal marshes also provide a first line of defense against coastal hazards, such as storms and flooding that are increasing in frequency and intensity because of sea-level rise. Conservation of these critical coastal habitats is a top priority for The Nature Conservancy.

“We can only succeed in conserving wildlife on a landscape level through partnerships with organizations like The Nature Conservancy and the Department of Defense’s REPI Program.”

Christina Ryder, U.S. Fish and Wildlife Service Biologist

In late 2020, The Atlantic Test Ranges and Naval Air Station Patuxent River were awarded a \$3 million grant from the Department of Defense’s Readiness and Environmental Protection Integration (REPI) Program to protect land on Maryland’s Eastern Shore. The funds will be used to purchase easements on 4,000 acres of land, establishing a resilient and con-

connected marsh migration corridor and preventing incompatible development within the Navy’s fly zone. The U.S. Navy will partner with TNC, the U.S. Fish and Wildlife Service, and others on the protection effort.

Since the award was announced, TNC has completed a land prioritization mapping exercise to identify the parcels that will provide the highest return on investment for people and nature. With TNC staff working on the ground with landowners, the Maryland REPI partnership is ready to begin the ambitious work of protecting 4,000 acres of critical coastal habitat.

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Oyster reefs provide critical habitat for fish, crustaceans and the animals that feed off of them.
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Wild oyster populations in the Chesapeake Bay have declined to less than 1% of their historical numbers. With that decline, the Bay has lost the oysters’ capacity to filter sediment and algae and remove nitrogen and phosphorus—harmful pollutants in excess—from the water. TNC’s oyster restoration efforts in the Bay have primarily focused on restoring wild oyster populations. The Bay’s oyster aquaculture industry—one of the largest on the East Coast—can also contribute to conservation, while providing sustainable seafood and green jobs.

From 2016 to 2018, TNC partnered with the Virginia Institute of Marine Science (VIMS), and four Virginia oyster growers, to study the environmental impacts of oyster farm operations including water currents, clarity and chemistry, sediment, and habitat. The published study concluded that oyster aquaculture is a low-impact way of producing animal protein.

The data indicate that the oyster aquaculture industry can help to restore water quality in our rivers and bays. For every 100,000 oysters grown and harvested annually, six pounds of nitrogen and phosphorus pollution are removed from the Bay. Oyster farms may also reduce wave energy and help protect vulnerable shorelines. As oyster aquaculture grows, so will the food and water quality benefits to the Bay.