Sarah Crosby Photo: Judy Benson

Sarah Crosby:

A SCIENTIST SOLVING PROBLEMS IN THE REAL WORLD

By Judy Benson

Witnessing her high school marine biology teacher's passion for the environment lit a flame in Sarah Crosby that still burns strong more than two decades later.

Growing up near Tod's Point in Greenwich, Crosby, 38, recalls spending many hours exploring the tide pools, but had little interest in understanding them as a scientist—until that class.

"My teacher was this force of nature, very interested in conservation," she recalled. "She had this 15-passenger van for the class, and she'd load us in and drive us to the shore and show us cool stuff. Something about that experience with someone like her, who cared so deeply about Long Island Sound, really made it come alive for me."

That class served as the touchstone that would influence Crosby's path through college, graduate school and a career in conservation and research focused on the same coastal environment she has loved since childhood. Director of conservation and policy at The Maritime Aquarium at Norwalk since April 2022, she maintains strong ties with Harbor Watch, the organization she led for eight years, and the other groups she worked with there that form the backbone of regional environmental collaboration in southwestern Connecticut.

"She is a great mentor of mine," said Nikki Spiller, who is Crosby's successor as director of Harbor Watch, a water quality monitoring and education program at Earthplace, a Westport-based nonprofit science education organization. "I learned a lot from her about how to be a good scientist, and also how she built relationships to creatively solve problems. We're very happy to still have her in our corner."

This spring, Spiller and Crosby were scoping salt marshes in the New Haven area for a joint research project funded by the Environmental Protection Agency's Long Island Sound Study and managed by Connecticut Sea Grant. They will be studying restored and natural marsh sites to better understand how foundational marsh grass species will respond to climate change-induced warming.

"Being out in the field with her is just fun," Spiller said.

Richard Harris founded Harbor Watch in the mid-1980s. When he stepped down in 2014, Crosby moved seamlessly into his position to expand both geographically and thematically on what he had established.

"Sarah popped up as a shining star, and I've been totally pleased ever since," said Harris, who now works as a marine scientist for the state's largest commercial oyster farm, Norm Bloom & Son of Norwalk.

When Harbor Watch began, its mission was focused on bacteria monitoring and source tracing in the waterways of Norwalk and Westport. Under Crosby, it expanded into salt marsh research and water quality monitoring in Fairfield, Bridgeport, Stratford and other towns in Fairfield County, always maintaining cooperative relationships with municipalities and other partners to address pollution problems. Harris recalled working with her several times to identify sources of contamination flowing into Norwalk harbor that could threaten shellfish beds.

"We identified the contamination in marine waters, and then she took it over into the fresh water and traced it to the leaking septic systems," he recalled. The work of Harbor Watch, Crosby said, was very satisfying, because it yielded tangible improvements in the local environment.

"You can see it in the water quality data when those problems get fixed," she said. "It's important work and Harbor Watch has carved out an active niche as a partner with municipalities and local groups that want to do the right thing, but don't always have the manpower or the resources."

In one recent project, Crosby wrote a successful grant proposal with the Norwalk River Watershed Association, a group she already had a strong relationship with from her time at Harbor Watch. The grant funds enabled the nonprofit, all-volunteer association to hire a consultant to prepare a plan to restore a degraded portion of public waterfront park in Norwalk.

"It was originally a salt marsh," said Louise Washer, president of the association. "We're hoping to restore the marsh and create a living shoreline. Sarah has taught me so much about how to do this work of protecting the river."

As a scientist, Crosby said, she is most gratified when she can apply research

Top, Sarah Crosby, right, and a fellow researcher collect data on marsh grass at a site in Groton as part of a 2021 research project. Photo: Judy Benson

Inset, at Veteran's Park in Norwalk, a plan is being prepared to restore a degraded area thanks to a successful grant Crosby wrote with the Norwalk River Watershed Association. Photo: Louise Washer

findings directly to solving real-world problems, and the main reason she chose a career in the nonprofit sector rather than in academia. The position at The Maritime Aquarium offered an appealing new challenge, she said, because it gives her the chance to write a conservation plan for the organization that will guide its work in the state's most important waterway.

"The aquarium's mission is centered on Long Island Sound and is about inspiring people to protect the Sound and the species that inhabit it," she said. "It's a great fit for me."

The theme of the conservation plan, she said, can be summed up in a single question: "How do we take the work we're doing here and bring it out to get people more involved in the Sound?"

One way that question will be answered is in the creation of a new Long Island Sound salt marsh exhibit in a portion of the aquarium that now houses a reptile collection. The marsh project was already planned when Crosby was hired at the aquarium, but she eagerly got involved. Salt marshes have been a research passion since her graduate school project at the University of Rhode Island took her to Fire Island. Her most recently completed salt marsh project began in 2020, when Connecticut Sea Grant funded her research into genetic variations of grasses used in marsh restoration. The findings, she hopes, will improve management decisions.

"When I was studying for my PhD at Brown University, I studied how marshes from Massachusetts to South Carolina are responding to climate change," she recalled. "That work opened up a lot of questions for me that I'm still exploring now."

Oftentimes when Crosby needs a break from crunching data or working on the conservation plan, she walks down the hall from her office to the aquarium's exhibit space. She passes tanks where sharks and sea turtles swim past children with noses pressed to the glass, smiling at diving seals and gathered around the touch tank reaching for cownose rays, crabs and other sea life.

"It's a joyful place," she said. "I love watching a kid touch a ray or see a seal for the first time."

Outside the aquarium building sits a stack of lobster traps that represent another of the projects she's involved in. Crosby is working with Project Oceanology, Save the Sound and former commercial lobstermen to find and retrieve abandoned traps, freeing any animals inside. The traps are either recycled or returned to their owners.

"We've done six trips so far, and pulled up 215 traps," she said. "We're looking at what's growing on the traps and creating a database of that information. We're just getting started on the project."

EDITOR'S NOTE:

This is part two of an ongoing series about offshore wind development affecting Connecticut. Projects proposed in nearby ocean waters include Revolution Wind, Beacon Wind and Park City Wind. Turbine arrays for all three and at least five other projects would be built in a federal lease area south of Cape Cod. Revolution Wind (a project of the Danish company Ørsted) and Park City Wind (a project of Avangrid Renewables LLC) are building staging and operational support areas in New London and Bridgeport, respectively. Long Island Sound is likely to be directly impacted by underwater cables that will transmit the energy to landing sites in New York and Connecticut. Part one of the series can be found at: https://seagrant.uconn.edu/?p=9850.

By Nancy Balcom

Above right, the screen of the simulator developed by offshore wind developer Ørsted shows the view of a fishing vessel heading towards a wind farm array. Photo: Nancy Balcom