

What Gives Me Hope

by Heather M. Leslie

We are facing the combined crises of biodiversity loss and climate change globally. These crises are evident in every one of the world's ecosystems and oceans are no exception. Here in Maine, warming and rising seas, critically endangered right whales, and coastal communities threatened by the combined impacts of climate change and social and economic change are just some of the challenges we face.¹ In light of these challenges, I often think about what gives me hope for the future of the coast and the communities that depend on these places.

When I think about what gives me hope, I think first of the water, the saltiness that I can feel and smell whenever I am on the shore. Whether the estuary waters are slipping in calmly after an early morning low tide or ruffled with wind and rising energy late in the day, the briny mist is palpable. I can taste it on my lips and know I will taste it again, tomorrow.

When I think about what gives me hope, I think of how intertidal places far apart are connected by young clams that float with the currents. I think of alewives, returning every spring. Thanks to the movement of these shellfish and fishes and the water itself, ocean ecosystems have a potential for restoration and resilience that we do not always see on land.

The town offices where shellfish committees and select boards gather also give me hope. In one such office, we launched the Damariscotta River Estuary Community Science Project in January 2019. Shellfish committee members from Damariscotta and Newcastle, and other municipal officials and harvesters and community members, began to imagine

together what we could do. We shared what we knew, what we didn't know, and what we needed to know to better steward the upper part of the estuary and its shellfish resources. This conversation catalyzed a community-led program² of social-ecological monitoring and knowledge sharing that continues today.

"We need to be thinking about the whole river," one shellfish harvester observed. "It's all connected."

Whole river thinking means paying attention to the many humans and nonhumans who call this place home. It means deliberately considering the needs of the humans who depend on it for sustenance, employment, navigation, recreation, and other activities that contribute to our thriving as individuals and communities. Whole river thinking recognizes that humans and nonhumans move—they aren't always in the same place within the river or its watershed—and are connected to other species and places within the ecosystem. Whole river thinking encourages us to stretch beyond what we know, to learn more about these complex, interconnected social-ecological systems and all who are part of them.

The deep knowledge that so many people have gained through their time on the river also gives me hope. I first began to understand this wisdom when I was an AmeriCorps/Maine Conservation Corps volunteer in 1997–1998, working with the Planning Alliance of the Damariscotta River Estuary (PADRE). PADRE, local land trusts, the University of Maine, and state agencies joined together to improve water quality and land stewardship through the estuary watershed. My work

with PADRE was perhaps my first exposure to whole river thinking, or what some of us refer to as marine ecosystem-based management.³

As an ecologist, I believe that by observing the river and its inhabitants, including humans, we can trace the many causes and consequences of ecosystem change. By paying close attention through such fieldwork, we are in a better position to manage change and where necessary, adapt and transform in response.

These efforts—whether you call them paying attention or social-ecological fieldwork—take time. And so, I come back to the water. The river and the people and more than human world connected to it have long histories. Together, we have many tomorrows, to think of and to pay attention to the whole river.

NOTES

- 1 Maine Climate Science Update 2021: An Interim Communication of Maine Climate Council's Scientific and Technical Subcommittee. Augusta, ME.
- 2 Risley, Sarah C., Kara E. Pellowe, Melissa L. Britsch, Meredith M. White, and Heather M. Leslie. 2023. "Community Science in Support of Ecosystem-Based Management: A Case Study from the Damariscotta River Estuary, Maine." *Maine Policy Review* 32(2): 221–230. <https://doi.org/10.53558/KITM8632>.
- 3 McLeod, Karen L., and Heather M. Leslie, eds. 2009. *Ecosystem-Based Management for the Oceans*. Washington, DC: Island Press.

Heather M. Leslie is a marine conservation scientist at the University of Maine's Darling Marine Center and a member of the Damariscotta-Newcastle joint shellfish committee. With her students and community partners, she conducts research in support of shellfish fisheries comanagement and other community-led resilience projects in coastal Maine.