

SPRINGS

THE RACHEL CARSON CENTER REVIEW

Issue #5 | 2024

June



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BEAVERING

Mary Beth LaDow

Springs

The Rachel Carson Center Review

5 • 2024

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Spring is approaching. The beavers have left a single stick about a meter long across the pond outlet, marking their intentions. “No mud yet, but we are back.” Like humans, beavers do not hibernate; they have spent the winter hunkered down in a warm lodge of their devising, a pair mated for life packed in with several kits and yearlings and the occasional muskrat, safe from predators. Now the long winter of mating and living on stockpiled branches is ending. We humans (my husband and I) pull the stick from the water and toss it aside. Our annual dance with the beavers has begun: for eight months, April through November, we perform a *Castor pas de deux*.

What we call the beaver pond is actually the middle pond of three. It sits in Mid-Coast Maine, the tide-pooled, deep-dark woodland region that inspired Rachel Carson to plumb the drama of life in *The Edge of the Sea* (1955) and *The Sense of Wonder* (1966). The beaver pond and its wonders lie further inland at the edge of a field, 3.2 hectares covered in native grasses, low-bush blueberries, wild strawberry vines, and cranberry bogs, punctuated by 30-meter-tall pine trees and a large cast of characters.

Deer, foxes, coyotes, porcupines, otter, fisher cats, herons, bald eagles, osprey, ducks, Canada geese, songbirds, woodpeckers, and flickers appear and disappear, along with renegade domestic guinea fowl, peepers and frogs, a flock of wild turkeys, the occasional pair of kestrels, a bobcat, lightning bugs and dragonflies, plus the annual scourge of black flies and mosquitoes, and, once, two gigantic, escaped hogs rooting for acorns.



(Left) A confusion of guinea fowl. © Mary Beth LaDow. All rights reserved. (Right) A northern green frog, one in a multitude that form a nighttime wetland chorus in spring and summer. © Mary Beth LaDow. All rights reserved.

The field is flanked by a long stone wall, a few pondlets (one with an island), a house, a barn, and stands of trees—birch, oak, maple, beech, spruce, fir, hemlock, wild cherry, and pine—that replaced the [old-growth forests felled](#) during four centuries of intensive New England logging. The pond is as wide as a football pitch and two and a half times as long, the largest of three ponds that sit like beads on a strand 800 meters long. Each regulates the wetland the beavers first created and acts as a giant sponge during drought or floods. The upper pond is long and skinny, maintained by a beaver dam with an earthen slide down the middle shared by the occasional snapping turtle; the lower pond, plugged by a short, ragged dam, forms a small, irregular glade.

This complex of ponds and fields is the evolving expression of decades, if not centuries, of beaver and human engineering. The beavers, for their part, have created an elaborate habitat including three dams, two lodges, and a network of trails, chutes, and channels that serve their nocturnal building and foraging.¹ Humans have also shaped the place for our own, irregular purposes, beginning with the Indigenous Wabanaki, who both hunted beavers and respected them as cosmological partners for thousands of years, followed by neo-European field-clearers and stone-wall builders, who sometime after the seventeenth century used the land for pasture, including, some 50 years ago, for horses.² Two twentieth-century rectangular coves, dredged out by machines, extend like an upturned claw from the middle pond into the open eastern shore, designed for training Labrador retrievers to fetch padded batons that stand in for game birds. Every week until late fall, and then resuming after the spring mud season, a caravan of vehicles arrives carrying bird dogs—some clueless, some graceful—and turns them loose for training.

A large beaver dam that should be at the foot of the middle pond is lost to the mists of time, replaced by a berm about nine meters wide. We imagine a muddy event featuring an explosion and lots of dredging. This further expanded the wetland, and though beaver activity still regulates the area, it relieves the beavers of some dam maintenance. The berm creates a walkway scored by a beaver trail and the little outlet stream, which empty into the lower pond. Near the outlet is a culvert that sneaks water out past the beavers through a buried black plastic pipe.



(Left) Beaver channel to the west. (Right) Human channels to the east. © Mary Beth LaDow. All rights reserved.

This is the stage upon which a quirky drama of beavers and humans—a symbiosis of sorts—unfolds each year.

Most every day, beginning at dusk and continuing throughout the night, the beavers cruise to the outlet stream and [weave a tiny dam](#) across it, a barrier of wood and mud, pulled-up pond grasses, and occasional rocks. We humans let them go at it until the pond is about to overflow, then muck it all out, flinging sticks and branches and sometimes whole dead trees onto a growing seasonal pile. This ritual pauses only when one party gets tired or has something better to do. Beavers never seem to get tired or have anything better to do. One year it felt like a dozen beavers were piling it on, laughing at us, building little Taj Mahals every night. The next spring they eased up, weaving a few sticks into feeble sieves. This went on for a few weeks. We didn't know why. Then they crushed us once again, the annual burn pile doubling to two piles.

Before it became a scientific term in the 1880s, *symbiosis*, from the Greek, meant simply “living together, or companionship.” Our evolving relationship with the beavers has come to feel somewhat like that, a passage out of a murderous North American past, touched with shades of science and seeds of wonder. We know that beavers pool water for protection, foraging, and food storage; that giant beavers the size of bears once roamed North America; and that the surviving genera are masters at clogging and flooding things humans don't want clogged or flooded. (A municipal worker in Oregon reputedly unclogged a single culvert almost daily for 30 years.) Beavers also possess fur and scent glands that humans have prized for centuries. Consequently, as the ancient rusting beaver trap hanging in our wood room attests, “something better to do,” for humans, often has consisted of extirpation. Beaver wetlands once covered as much as [60 percent](#) of North America. By the twentieth century, both the Eurasian and North American beaver were hunted to near extinction. “Living together” begins with humans letting beavers live.

One afternoon a couple of years ago, as we were walking around the far side of the middle pond, we observed several oaks that had been newly gnawed by the beavers. Every fall, they work on a big tree (or several), yet seldom fell them. It isn't clear why they choose some trees, in some locations, and not others. The same is true for dwellings, which they use for protection, warmth, and mating. Their two lodges are about 100 yards apart—one in the middle pond surrounded by water, one in the upper pond against the bank (a bank den)—and they seem to alternate every several years between the two. The beavers last departed the middle pond lodge a few years ago. A material scientist and engineer who studies beavers told me we are not sure why they do this, or why they engage in any number of other behaviors.³



Middle-pond lodge, which has remained vacant for several years. © Mary Beth LaDow. All rights reserved.

An elusive, long-term relationship with wild animals only glimpsed at dusk is like a shadow dance, choreography worked out with minimal visual contact and no spoken language. There are a few beaver references in our house. A beaver T-shirt that says, “Dam it” (more like a rag, actually, but still worn regularly); a beaver-themed WI-FI password; and “Wally,” a nickname for the beavers—they all have one name, though we respect them as individuals. But that’s about it. The beavers squeak and grunt among themselves. Otherwise, aside from the occasional warning slap of the tail, they glide across the pond in silence. To us, they are action-oriented. While there isn’t much to say, there is always something to do.



(Left) A beaver slaps its tail on the upper pond. (Right) Oak tree by Wallace T. Beaver. © Mary Beth LaDow. All rights reserved.

This year, we surrounded the remaining stand of oak trees with low fences. (Restoring [old-growth forest characteristics](#) requires, among other things, protecting mature trees.) But what about the beavers? A few days later, we had another idea. Pulling a black plastic sled fitted out with anvil loppers, a hand saw, and an electric chain saw, one of us (not me) cut hardwood saplings for the beavers. (Beavers do not like eating softwoods, though they will occasionally take a hemlock sapling and put it on the dam, like a Christmas tree on a construction site.) Then one of us (me) dragged the saplings down to the edge of the beaver channels like a delivery truck at the back of a grocery store. Within a few days, the saplings disappeared. No more gnawed oaks. Beavers may have earned their “busy as a beaver” aphorism, but they can also be opportunistic. “If there is an easier option, they will take it,” the same beaver scientist told me. It is her favorite fact about beavers.

The beavers, as if in exchange, occasionally ferry downed wood from the hillside to the daily dam, less work for them and saving us from moving it ourselves (though much is left to decay). A reminder that, in the bigger picture, beavers are emerging as vital partners as we [adapt to a changing climate](#).⁴ Beaver wetlands are not always an unqualified positive—moving north as the climate warms, they are increasing methane emissions on the [Arctic tundra](#). Yet their net effect is an air-cooling, carbon-sequestering, water-regulating, fire-mitigating bonanza, and humans across the world are beginning to [invite them back](#) to [American ranches](#), [Bavarian valleys](#), [Mongolian watersheds](#), and even near a [West London](#) shopping mall. It is also possible that beavers, or at least their methods, could help save China’s [sinking cities](#).

Our *Castor pas de deux* is really more of a quirky call and response. There is no strife, no hollering about saving the planet, no humans apart from nature. Inhabiting the same ground, we each trace

the tracks of the other. We think with our bodies. We tug on the same rough sticks. We cut and dredge and shape and build, and each goes home trailing bits of the same pond grass.



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Notes

¹ Beavers' impact on Earth has been significant for millions of years. A 125,000-year-old fossilized beaver dam containing the foot bone of a woolly mammoth was found in the Yukon, Canada, along with fossilized beaver-chewed sticks four to five million years old; a 150-year-old beaver dam in Michigan is still in active use; and the largest beaver dam on Earth, in central Canada, is half a mile long and visible from outer space. Emily Fairfax, "Beaver Fact of the Week: The Oldest Dam Fossil," *A Rattlin' Blog*, 9 December 2015, <https://arattlinblog.wordpress.com/2015/12/09/beaver-fact-of-the-week-the-oldest-dam-fossil/#more-281>; and Fairfax, "Beavers in the News: 150-Year-Old Map Reveals that Beaver Dams Can Last for Centuries," *A Rattlin' Blog*, 9 August 2016, <https://arattlinblog.wordpress.com/2016/08/09/beavers-in-the-news-150-year-old-map-reveals-that-beaver-dams-can-last-centuries/#more-1054>; Ian Frazier, "Deep in the Wilderness, the World's Largest Beaver Dam Endures," *YaleEnvironment360*, 11 December 2023, <https://e360.yale.edu/features/worlds-largest-beaver-dam>.

² Historian Calvin Martin argued in *Keepers of the Game* (1978) that some Indigenous people's relationship with beavers (not specifically the Wabanaki) changed radically during the fur trade (1600s-1900s), from a "mutually courteous relationship" and "fear of spiritual reprisal" from the beavers to unrestrained overkilling because they blamed beavers for epidemic disease, a subject of intense controversy among anthropologists and historians. Calvin Martin, *Keepers of the Game: Indian-Animal Relationships and the Fur Trade* (Berkeley: University of California Press, 1978), 18-19; and Fred L. Ragsdale, Jr., review of *Keepers of the Game: Indian-*

Animal Relationships and the Fur Trade, by Calvin Martin, *Natural Resources Journal* 23, no. 1 (Winter 1983): 281-83, <https://digitalrepository.unm.edu/cgi/viewcontent.cgi?article=2629&context=nri>.

³ From email correspondence with Jordan Kennedy, bioengineering and design scientist, 22 and 27 April 2024. She has studied the collective intelligence of beavers, or stigmergy (her analogy is mound-building termites), and promotes Indigenous-led conservation as a native of Montana's Blackfeet nation. She and Montana beavers are featured in *Beaverland: How One Weird Rodent Made America* by Leila Philip (New York: Twelve, 2022).

⁴ A growing literature features beavers as climate-management heroes, including a story of beavers parachuted into central Idaho in 1948. See Kelly Kizer Whitt, "Parachuting Beavers Created a Fire-Resistant Wetland," *EarthSky*, 30 July 2023, <https://earthsky.org/earth/parachuting-beavers-dams-fire-resistant-wetland/>; Daniel Cusick and E&E News, "The Beaver Emerges as a 'Climate-Solving Hero,'" *Scientific American*, 11 July 2022, <https://www.scientificamerican.com/article/the-beaver-emerges-as-a-climate-solving-hero/>; and media sources compiled by geology professor and ecohydrologist Emily Fairfax, <https://emilyfairfaxscience.com/media-coverage/>.



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Cite this article

LaDow, Mary Beth. "Beavering." *Springs: The Rachel Carson Center Review*, no. 5 (June 2024). <https://doi.org/10.5282/rcc-springs-6381>.

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ISSN 2751-9317

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