WHAT’S INSIDE: The Science of Saving Biodiversity
Beavers as Ecosystem Engineers
How to Build Community with Books
IN JULY, from Vermont to the Valley, heavy rains brought intense flooding that swelled rivers and ravaged agricultural fields. As extreme weather events become more frequent, we need long-term solutions that include conserving and stewarding our lands and waters. And, we need the funds to do that on a large scale.

Massachusetts Congressman James McGovern and New Hampshire Senator Jeanne Shaheen have introduced legislation in Congress to create the Connecticut River Watershed Partnership Act (CRWPA). This act would enhance partnerships between nonprofit land trusts, community members, and state and federal agencies to increase climate resilience, protect wildlife habitat, and promote access to outdoor recreation throughout the Connecticut River Valley. Formal collaborations like this are already established in other U.S. regions that are protected by federal legislation, including the Delaware River Basin and Chesapeake River Watershed.

The Connecticut River Watershed spans 7.2 million acres surrounding the Connecticut River and is home to 2.4 million people, as well as hundreds of types of plant and animal species, many of which are priorities for state and/or federal protection. Led by the Friends of Conte, a coalition of watershed-based partner organizations including Kestrel Land Trust, the intent of the CRWPA is to proactively tackle the effects of climate change and more effectively conserve our regions’ natural resources.

We’re hopeful this legislation will pass, helping ensure that Kestrel and our partners can accelerate the pace of protecting the lands that are critical to a sustainable future for our entire region.

Kristin DeBoer
Executive Director
Finding Community in Books

The written word has the power to inform but also to reach the heart. Research shows that fiction readers, by immersing themselves in another person’s perspective, tend to be more compassionate. Yet, reading is a solitary pleasure.

That’s where book clubs like “Kestrel Reads” come in. Unpacking a good book by sharing ideas with others deepens and enriches the story or content, generating insights that you can bring into other aspects of your life.

In fall 2022, with the expert help of volunteer Cheri LeBlond, Kestrel Reads discussion group launched with a focus on books that explore nature and our relationship to the land. A former bookstore owner from Kansas City, Cheri has moderated book clubs for almost 10 years. She moved to Amherst at the start of the pandemic and took solace in the many trails around the area. “I wanted to give back to an organization that preserved all that beauty. Happily, my book club experience fit in with Kestrel’s vision of exploring the natural world through the arts,” she said. “I found my community and Kestrel Reads found its moderator.”

Cheri creates book clubs that provide a common, respectful space to listen and be heard, as well as to disagree amiably. “I love when you walk into a discussion with one impression of a book and leave with another—or leave completely validated. What I enjoy most about Kestrel Reads is the expertise and knowledge of participants in the room. I can learn as much from my fellow readers as I did from the book.”

Since Kestrel Reads’ quarterly program began, participants have explored nonfiction books including Braiding Sweetgrass by Robin Wall Kimmerer, Finding the Mother Tree by Suzanne Simard, Pastoral Song: A Farmer’s Journey by James Rebanks, and The Trees in my Forest by Bernd Heinrich. They also tackled the sweeping novel The Overstory by Richard Powers. In February 2024, the group will discuss Power’s follow-up novel, Bewilderment.

There’s still plenty of time to read this book and register at kestraltrust.org to join the next Kestrel Reads conversation!

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Sign up for our biweekly email so you don’t miss these events! kestraltrust.org/email-list-signup

Kestrel Welcomes New Board & TerraCorps Service Members

New Board member Mary Ann Cofrin has lived in the Valley for a total of 26 years. She left in 2014 but was happy to return in 2022 to the place she thinks of as home. With a background in social work, she feels strongly about diversity and inclusion. She’s also passionate about climate justice work, as well as protecting the environment and the wildlife it supports, which is why she feels a deep commitment to Kestrel’s mission. She has served on many boards as an active community member and philanthropist, and is currently assisting Kestrel with its Conservation Cemetery project. Mary Ann lives in Williamsburg on 14 acres where she’s creating a sustainable wildlife habitat for birds and bears.

New Board member Nancy Pick, the author of several books about science and history, describes herself as a “nature nut.” Her newest book, Do Plants Know Math?, is coauthored with a physicist, a biologist, and a mathematician. After graduating from Amherst College in one of the first classes to admit women, she was a journalism fellow at Yale Law School. As a longtime member of Sunderland’s Conservation Commission, she helped improve boat access to the Connecticut River and create the town’s beautiful river pathway. She and her husband, who have two grown sons, live in an old farmhouse powered by solar panels, next to Mt. Sugarloaf.

Emily Biggs, TerraCorps Youth Education Coordinator
Emily grew up in the Valley and earned a degree in History & Museum Studies from Smith College. Emily then worked in a variety of visitor-facing museum jobs including Chicago’s Museum of Science and Industry. It was there Emily found a passion for youth science education that they’re excited to continue while serving with Kestrel.

Liz Brozksi, TerraCorps Land Stewardship Coordinator
Liz became interested in land stewardship when she started volunteering at Kestrel in 2022. She holds a B.A. in Biology from Wheaton College and is especially interested in terrestrial ecology. As a resident of Amherst since 2019, she is looking forward to engaging with other local members of the community on Kestrel’s conserved lands and trails.
To slow the biodiversity crisis, bold conservation action is supported by the latest tools.

ONE OF THE REASONS many of us love living in the Valley is knowing that wildlife of all kinds have a home here too.

Our region’s forests and wetlands provide habitat for a wide range of animals from moose and bear, to porcupines and river otters, to bats and flying squirrels. Wetlands and rivers are home to rare and important reptiles and amphibians, like bog and wood turtles and yellow spotted salamanders. Deep interior forests provide habitat for resident and migratory songbirds including black-throated blue warblers and wood thrush.

However, birds, insects, fish, mammals, and even plants are losing ground in terms of their populations—and they’re literally losing ground as habitats are developed, polluted, fragmented, and destroyed. One of the best ways to support all of this biodiversity is by conserving the lands and waters that provide the homes, food sources, breeding grounds, and conditions species need to thrive. Fortunately, habitat conservation is also a natural solution to climate change, which itself is a grave threat to biodiversity.

There are more than 430 species listed under the Massachusetts Endangered Species Act today, and that number could easily grow. This fall, Governor Maura Healey announced an executive order that directs the MA Department of Fish and Game (DFG) to review existing conservation efforts and elevate goals that will sustain a full array of plants, animals, and their habitats over the next three decades.

Regional land trusts play a critical role in assisting the Commonwealth with wildlife conservation efforts, using the most up-to-date scientific tools to identify the most important lands for wildlife and threatened species. One of these tools is called BioMap.

BioMap is the primary guide for strategic protection and stewardship of lands and waters that support biological diversity in Massachusetts. Produced by MassWildlife and The Nature Conservancy, BioMap uses innovative mapping capabilities and on the ground scientific data about species locations to deliver an interactive map that identifies areas with the most important habitat for conservation efforts.

BioMap sorts lands according to two primary categories: **Core Habitat and Critical Natural Landscape (CNL):**

- **Core Habitat** identifies areas that are vital to sustain rare species, exemplary natural communities, and climate-resilient ecosystems.
- **Critical Natural Landscape** identifies large landscape blocks that are minimally impacted by development, as well as lands that provide a buffer around core habitats.

These lands safeguard habitat connections between core habitat areas.
and improve resilience: the ability for the land to withstand disturbances while sustaining the health of its plant and animal communities.

When Kestrel works with landowners to assess their lands for conservation, our team relies on BioMap to find out whether the land is likely to provide habitat for threatened or endangered species or provides a buffer around those areas. We also look for undeveloped land connections between these higher priority habitats, which can provide critical corridors for wildlife to move across the landscape as climate changes modify their usual range.

Bigger Is Better for Biodiversity
Western Massachusetts forests are nested within the Northern Appalachian ecosystem, which is among the largest remaining areas of intact ecologically significant forest in the world. These lands provide vital pathways for wildlife to migrate and adapt to a changing climate. Kestrel is part of two regional conservation partnerships working to protect these lands:

- **The Berkshire Wildlife Linkages** "Staying Connected Initiative" focuses on lands within a 1.58-million-acre forested landscape from the Green Mountains in Vermont to the Hudson Highlands in New York.
- **The Quabbin to Cardigan Partnership** focuses on the 2 million acres of lands in the Monadnock Highlands of north-central Massachusetts and western New Hampshire, including the Quabbin Reservoir. Kestrel recently protected 197 acres in Sunderland, Leverett and Belchertown, including a 90-acre forest with three certified vernal pools as well as habitat for several rare or threatened species.

The Mountain Waters Project: IN PROGRESS

RIGHT NOW, OUR TEAM IS WORKING ON PROJECTS around the Valley that will support the biodiversity of our region, including this landscape-scale initiative that aims to permanently protect 1,054 acres of wild and working lands primarily in Southampton.

Two-thirds of the parcels to be conserved through this project provide Core Habitat and nearly 100% are designated as Critical Natural Landscape. They generally have high climate resilience and provide valuable landscape connectivity, as well as clean drinking water for the Tighe-Carmody Reservoir and Barnes Aquifer.

In collaboration with the Town of Southampton, Kestrel is working with several landowners to conserve multiple parcels, including:

- **Smith Family Forest: 236 acres** of BioMap Core Forest Habitat, which will be open to the public for passive recreation. Justin Smith, of Northampton, will place a Conservation Restriction held by Kestrel to preserve his family forest for future generations.
- **Garfinkle-Minard Forest: 117 acres** of BioMap Forest Core Habitat and Prime Forestland in the Town of Westhampton will be owned by Kestrel with a CR held by MassAudubon. An additional 157 acres in Southampton will be owned by the Town, with a CR held by Kestrel. This land ranked the highest for climate resiliency and provides valuable habitat connectedness and landscape diversity. A local naturalist documented a number of unique and rare plant species here.
- **Pomeroy Mountain:** A beloved and iconic landscape feature in Southampton, cared for by the Geryk family for generations, the Town has identified this area as a high conservation priority for more than 20 years. 150 acres on Pomeroy Mountain in Southampton and Westhampton will be conserved including the majority of its breathtaking summit.
- **Glendale Ridge Vineyard:** Known for its excellent wine and dramatic views, Glendale Ridge is a popular destination in Southampton. Owners Ed and Mary Hamel’s lands contribute to the scenic and agricultural character of the town. 77 acres of the vineyard and woodlands will be protected by Kestrel and the MA Department of Agricultural Resources. This project includes 53 acres of BioMap habitat—showing that farms are also a critical resource for wildlife.
Beavers as Ecosystem Engineers

Along with humans, beavers are one of the few species that can alter their environment on a large scale. In recent years, we've finally begun appreciating the benefits that these “ecosystem engineers” provide—but we all know that sometimes beavers’ plans for the landscape conflict with our own.

Case in point, the Pond Loop Trail at Kestrel’s headquarters on the Sweet Alice Conservation Area. In March 2023, a small culvert crossing the trail at the mouth of the pond was replaced, allowing more water to flow through a narrow channel to the pond.

Ever sensitive to changes in the water around them, the resident beavers got to work constructing a dam that eventually spanned 20 feet through the existing marshy woods on the pond’s shore. Their solid construction quickly flooded a significant portion of the trail and created a new mini-pond in the woods. The beavers removed a number of mid-size and small trees as well, leaving behind the tell-tale “pencil points” of gnawed tree trunks.

The largest member of the rodent family (averaging 50 pounds), beavers are adapted to an aquatic environment with broad tails, webbed hind feet, and un-webbed front feet that allow them to dig and carry materials like mud and grass.

Beavers thrived in New England before colonization by European settlers, but by 1800 trapping decimated their populations. Beavers were reintroduced to Massachusetts in 1932 and are now found in most of the Commonwealth.

Beavers build dams to create deeper ponds that won’t freeze at the bottom so that they can access the underwater entrance to their lodges. They feed on the twigs, leaves, and bark of woody plants and aquatic plants. In the fall, they collect branches from their preferred food trees (aspen, willow, birch, alder) anchoring them at the bottom of the pond near the entrance to their lodge for winter feeding.

The Benefits Are Significant

Beaver activity has a surprising range of benefits for many species, including humans. The ponds they create provide new habitat for amphibians, turtles, fish, muskrats, herons, wood ducks, and otters—all of which have been spotted at Plum Brook Pond. Their engineering also supports wetland and aquatic plant species, with one study finding 33% more variety of plants in wetlands created by beavers.

Because beavers remove some trees, they also help create new “early successional” forest habitat—patches of young trees and shrubs—that are increasingly rare and critical for many bird species.

Humans benefit from beaver wetlands because they improve water quality by filtering and trapping sediment, chemicals, and excess nutrients. During periods of heavy rains, beaver infrastructure helps to store and slowly release flood waters, reducing downstream flooding. These wetlands can also recharge and maintain groundwater and support streamflow even during droughts. And, in an era of climate crisis, beaver dams and the wetlands they create are an important storage area for climate-warming carbon emissions.

For all of these reasons, we value our beaver neighbors at Plum Brook Pond. This fall our stewardship staff and volunteers constructed a new 165-foot boardwalk above the new extended pond so that human visitors can once again enjoy the full loop trail—and the beavers can continue their work as ecosystem engineers.
FOR 40 YEARS, I’ve volunteered with land conservancy programs in the communities where I’ve lived, including California, British Columbia, and Florida. When I moved to Amherst in 2009, I reached out to Kestrel’s Executive Director Kristin DeBoer. Her vision, kindness, and openness convinced me that Kestrel was the right place to focus my time as a volunteer.

I began volunteering 12 years ago as a Land Monitor and I loved getting to know the land in the Valley—about 15 different places. I still monitor six conservation lands, and I totally enjoy getting out to see what changes have taken place there each year.

When I retired in 2021, I had the idea to lead walks in the woods with kids and families who don’t usually get outdoors. This evolved over the past several years to become Kestrel’s Revive Outside program, which provides mindful, sensory-based walks for mental well-being in partnership with Northampton/Hadley Family Connection and other family-focused organizations.

One special moment stands out for me during a Revive Outside walk at Fitzgerald Lake Conservation Area with a group of parents and young children from the Northampton Parents Center as we walked to the lakeside dock. We paused, and as everyone quieted—including the children—a trio of Canada geese flew across the lake honking as the wind soughed in the trees, and the water lapped at the dock. Clouds moved across the sky in an ever-changing display. The moment stretched out as we all felt the magic of being attuned to nature. As the spell lapsed, we all looked at each other and smiled.

That’s why I’ve continued volunteering. Walking in the woods, listening to the sounds of wind, birds, and streams, taking a moment to be in the presence of our more-than-human neighbors is always rejuvenating to me. I enjoy sharing that with others, too. I believe that caring for the land, and keeping connected to the land, is so vital for us and our communities.
Stephen Schneider

Sweet Alice Pond in Winter, ACRYLIC PAINTING

My career has been in astronomy, but I’ve been doing plein-air painting for more than 20 years. I’m intrigued by the interplay of natural shapes and colors, the visual cues that suggest scale and depth, and the overall patterns that give a sense of balance. Unlike studio work, plein-air painting has an immediacy of engaging with the environment as birdsongs, smells, cold, and wind crowd in. My goal is to compose a piece that evokes the sensations and harmonies of being in a place at a particular time.

This piece was painted at the winter 2022 Amherst Plein Air Society event at Kestrel’s headquarters in the Sweet Alice Conservation Area.