

INSIDE:

Partnership and Indigenous leadership guide the future of the Slate River Forest

Researchers dive into Lake Superior in the quest to study kiwi

Field Notes
from **Michigan**

For Members of The Nature Conservancy in Michigan

Fall 2024 Newsletter

The Nature
Conservancy 

Hope for Nature

A Message from State
Director Helen Taylor



Even in times of great uncertainty, there is much we can do to achieve a future where people and nature thrive. That's why The Nature Conservancy's bold 2030 goals to mitigate climate change

and protect biodiversity rely on people, partnership and collaboration. Because, together, we find a way.

In this issue, learn about TNC's efforts to support the leadership of Indigenous Peoples as land stewards and the transfer of more than 700 acres of the Slate River Forest Reserve to the Keweenaw Bay Indian Community ([page 4](#)). Discover the ways farmers are working to supply your food products with grain grown through sustainable practices that provide a higher standard of land and water stewardship ([page 6](#)). Join a team of researchers from TNC, local Tribes, agencies and academia as they study kiyi to help restore the populations of this elusive native fish and improve the health of the Great Lakes fisheries ([page 8](#)). Meet the sisters taking action for forest conservation by protecting part of the historic forest where George Shiras III invented the method for nighttime nature photography ([page 10](#)).

I hope you find enjoyment and inspiration in these stories, for they show how much can be achieved when people come together for nature and for the future.

Yours in conservation,

PHOTO: Mary Macdonald Preserve at Horseshoe Harbor

At the tip of the Keweenaw Peninsula, the Mary Macdonald Preserve at Horseshoe Harbor is home to 11 threatened or rare species and five miles of rugged Lake Superior shoreline.

Here, a rocky ridge of exposed bedrock that is more than one billion years old creates a protective barrier for inland species and slower-growing plants. This preserve is a favorite among beach goers, hikers and geologists. © Michael George

COVER PHOTO: Autumn reflections near Munising.
© John Keuvelaar/TNC Photo Contest 2022

HEADSHOT: Helen Taylor © Matthew Mitchell

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Partnership and Indigenous Leadership in the Slate River Forest

The Nature Conservancy transfers 760 acres of Slate River land to Keweenaw Bay Indian Community as part of global commitment to support and respect Tribal leadership

As nature's first stewards, Indigenous people and their knowledge systems are critical for guiding conservation practices, which are vital for helping both people and nature. While Indigenous people make up about 6% of the world's population, they manage over 25% of the land on Earth, which is home to much of the world's remaining biodiversity. Respecting and supporting Indigenous leadership is therefore imperative as The Nature Conservancy (TNC) works to meet our 2030 goals and beyond.

As part of our commitment to these values, TNC's Michigan chapter recently transferred 760 acres of the Slate River Forest Reserve to the Keweenaw Bay Indian Community (KBIC).

"TNC has shown their understanding, commitment to, and respect for Tribal sovereignty with the transfer of lands within the L'Anse Indian Reservation exterior boundaries to KBIC," said Evelyn Ravindran, natural resources director for the Tribe. "We are honored by their trust in us as fellow caretakers of these lands, and it is with great pleasure and a grateful heart that I say, 'Chi-miigwetch,' to our esteemed allies."

In 2021, TNC purchased the 10,550-acre Slate River Forest property from a longtime owner as part of our goal to create a "conservation core and corridor" of protected lands throughout the Michigamme Highlands. We manage the reserve as a working forest, where we employ and demonstrate practices that sequester carbon and sustain the vitality, diversity and productivity of the forest.

From towering white pines and thriving populations of eastern hemlock, once a representative species of Michigan's old-growth forests, the Slate River Forest Reserve contains some of the highest quality remaining native hardwood trees in the state. The reserve protects crucial freshwater sources that flow directly into Lake Superior, including an extraordinary gorge, four miles of the cascading Slate River and three miles of the Ravine River. In addition, Slate River conserves large stretches of habitat that wide-ranging species such as moose, deer, wolf, pine marten and fisher need to thrive.

"TNC has committed to the continuance of good stewardship of these lands, which are open for the enjoyment of the whole community, and TNC is inclusive on decision making with co-stewards," Evelyn said.

Part of the purchase included a 760-acre parcel that lies within the KBIC L'Anse Indian Reservation, which was established under the Treaty of 1854. Less than half of the land holdings within the reservation are owned by the Tribe; the rest are owned by individual Tribal and non-Tribal members, local governments or area businesses. As such, TNC and KBIC had been working together on plans to repatriate the Slate River land parcel to the Tribe ever since.

"We are honored and humbled to return this land to the Keweenaw Bay Indian Community, whose members have been remarkable stewards of the land for generations," said Helen Taylor, TNC's state director in Michigan, who participated in the signing event during a tribal council meeting on June 12, 2024. "Their cultural teachings signify and honor the connection between people, wildlife and the natural world around us, and we look forward to many more opportunities for partnership and collaboration with their incredible team."

Members of KBIC are Anishinaabe, a group of culturally related Indigenous Peoples in the Great Lakes region, who have stewarded these lands and waters for centuries. A federally recognized Tribe, KBIC currently has more than 3,500

enrolled members, and they are part of the Three Fires Confederacy, which is an alliance of the Ojibwe, Odawa and Potawatomi nations. KBIC's primary land base, the L'Anse Indian Reservation, consists of approximately 59,000 acres and services members within the boundaries of the reservation in Baraga County, as well as members in Marquette, Ontonagon and Houghton counties.



TNC's Michigan State Director, Helen Taylor, signs the deed at a KBIC Tribal Council meeting. © Rich Tuzinsky/TNC

"KBIC is dedicated to the long-term protection of natural resources, healthy ecosystems and preservation of our traditions and culture for the generations to come, so all may flourish and thrive," Evelyn said. "We recognize the importance of working together with like-minded co-stewards to achieve goals across man-made

boundaries and look to developing and strengthening partnerships to realize our vision. The relationship between KBIC and TNC has grown organically, as both entities place great value on conserving our lands and waters in support of strong, resilient natural and human communities."

TNC's 2030 goals define crucial efforts needed to mitigate climate change, protect biodiversity and conserve lands and waters. As part of our goal to conserve 1.6 billion acres of land globally, we're striving to restore and improve management of working lands and conserve critical forests, grasslands and other habitats rich in carbon and biodiversity. This includes being committed to respecting and supporting the rights of Native communities to steward their environment, secure their rights to resources, and shape their future.

"Working toward shared, durable conservation outcomes is a powerful principle that is needed now more than ever as we confront unprecedented environmental challenges," Helen said. "We are proud to support the leadership of Indigenous and local communities, as we work together to tackle the impacts of climate change and protect biodiversity."



"We are honored by their trust in us as fellow caretakers of these lands, and it is with great pleasure and a grateful heart that I say, 'Chi-miigwetch,' to our esteemed allies."

—Evelyn Ravindran
Natural Resources Director, Keweenaw Bay Indian Community

Photos (left and above): Slate River Forest Reserve is home to mature trees and abundant cold water streams and rivers. © TNC



Photos © Randall L. Schieber, © Michael D. Jordan, © Fauna Creative

21 farms
8,560 acres
900k+ bushels of wheat

It's Grrreat!

Sustainable Wheat Pilot Program Ends with Record Enrollment

From breakfast cereals to gourmet bread loaves, wheat is an essential ingredient in a wide variety of beloved foods. As such, The Nature Conservancy (TNC) and Star of the West Milling Co. partnered on a “Sustainable Option Wheat” (SOW) pilot program that seeks to incentivize and reward wheat growers who implement regenerative agriculture practices. The three-year pilot ended this year with a record enrollment of 21 farms, totaling 8,560 acres, that produced 906,472 bushels of sustainably grown wheat.

“Better soil health is a win-win for the environment and farmers,” said Ben Wickerham, TNC’s agriculture program director. “By building back the natural soil ecosystem, we can sequester more carbon, reduce environmental impacts and help farmers maintain the health and productivity of their fields for future generations.”

Wheat’s origins in agriculture can be traced back over 10,000 years, and today it’s the third largest field crop sector in the U.S., after corn and soybeans. Wheat farming

occupies more than 37 million acres of land—including 600 million annually in Michigan—and plays an important role in everything from carbon storage to water quality.

“We chose wheat for the pilot program because it’s a great conservation commodity,” Ben said. “Wheat’s growing season is more flexible, so it’s easier to implement our suite of recommended practices, like no-till and cover crops.”

The program defines a set of best practices for farming wheat sustainably, and companies—including Kellogg’s—can then purchase this sustainably grown wheat through Star of the West Milling Co., a regional grain merchandiser and agronomy service provider. Growers who followed these sustainable practices were rewarded with premiums for their grain, averaging 12.5 cents more per bushel (about \$12.63 per acre), but TNC is evaluating more competitive market-based pricing in the future.

“We call it ‘nature-based bonuses,’” Ben said. “You get the same quality wheat flour,

but you can buy with confidence knowing that this grain was raised with a higher standard of land and water stewardship.”

In addition to the financial incentive, farmers who followed these practices also received an unexpected benefit: Their crop yield was higher than the state average.

“Our farmers outperformed state average yields every year in this program,” Ben said. “For example, last year, farmers involved in our program averaged 101 bushels per acre, which is really tremendous considering the state average was 85 bushels per acre. It just goes to show that you can still be a very competitive and productive and profitable farmer if you implement these conservation practices.”

With the insights gained from the pilot project, TNC is now working to improve and expand the program to other regions and grain merchandisers, and even to other commodities, such as food-grade soybeans or cereal grains such as oats, rye and barley.



The Sustainable Option Wheat program defines seven criteria, which are based on TNC’s soil health practices:

1. REDUCED-TILL OR NO-TILL

Tilling is a longstanding agricultural practice that prepares a field for planting by digging, stirring and overturning soil. This creates a homogenous, easily controlled environment for growing crops. However, there are long-term consequences of intensive tilling.

Tilling destroys a soil’s structure, making it less porous for air and water. In addition, tilling releases carbon that is stored in the organic matter of healthy soils back into the atmosphere. Over time, this results in hard, compact soil devoid of organic matter and causes the soil life—bugs, worms, microbes, fungi and bacteria—to collapse.

Reduced-till or no-till practices use specialized equipment such as disc seeders or agriculture drills to greatly reduce soil disturbance and maintain healthy soil structure and nutrients.

2. COVER CROPS

Cover crops increase the organic matter in soil, restoring nutrients and improving fertility and overall soil health. They also increase soil moisture and limit erosion and runoff, which reduces soil compaction and helps suppress pests. Growers must include a minimum of one species of cover crop on all fields enrolled in the program.

3. CROP DIVERSITY

When farms have more crops in their overall production portfolio, they don’t need to rotate crop species as often. These longer crop rotations can lead to increased pest resistance, and a diversity of crops provides different food sources for soil microbes, which improves overall soil health. Growers must plant a minimum three-crop rotation.

4. INTEGRATED PEST MANAGEMENT (IPM)

Because wheat is a food crop, it must meet strict quality standards, especially regarding pesticides. IPM uses a catalog of interventions, especially natural ones, to interrupt and diminish pest damage while also lowering the overall use and impact of pesticides. Growers must have an IPM management plan.

One IPM practice includes adding pollinator-friendly habitat around fields to attract predatory insects that prey on aphids, nematodes and other pests. Other practices focus on ensuring pesticide applications are being done thoughtfully and strategically.

5. NUTRIENT MANAGEMENT

Nutrient management refers to the 4Rs of fertilizer application: the Right kind of fertilizer, at the Right rate, in the Right place, at the Right time. This is especially important for protecting water quality, because excess fertilizer can run off into nearby water sources and cause toxic algal blooms or contribute to aquatic “dead zones” in coastal areas.

Star of the West offers agronomy services to SOW growers, so they can develop a nutrient management plan that’s right for them. Practices can include switching to a fertilizer blend that’s part synthetic, part compost and part organic, or shifting to split application where fertilizer is applied at different times of the year, instead of all at once.

6. EDGE OF FIELD RISK EVALUATION

Farmers in the program allow TNC to evaluate their edge of field to determine the highest risk areas for runoff and sediment loss, which can negatively impact nearby waterways. This information enables TNC to make recommendations that can help growers develop more effective field management plans.

7. DATA TRACKING

Growers work with Star of the West staff to self-report farm sustainability records and establish baseline operational information.

The Quest for *Kiyi*

Photos © Hayley Hanway/TNC



“Zero is still good data. For this project, it’s about testing different methods and trying new things.”

—Simon Freeman, Fisheries Assessment Technician, Bay Mills Indian Community

It was a clear, calm night on Whitefish Bay. Stars twinkled faintly through the dusk, mosquitoes gathered in swarms and a group of researchers readied their gear along the beach.

“This is worse than Christmas tree lights,” said Joseph Tolles, senior hatchery technician for the Little Traverse Bay Bands of Odawa Indians (LTBB), as he sorted lines for the fishing nets.

The researchers were there to conduct a “nighttime beach tow,” where, from 10:30 PM until 3:00 AM, they waded through the dark waters of Lake Superior, dragging refined mesh nets as they walked parallel to the beach to collect larval fish. They also set light traps, which are essentially plastic boxes with children’s glow sticks inside that attract photopositive fish. The traps are configured so that fish can swim in but have a hard time finding a way out.

It’s all part of a large, multi-organization project studying kiyi, an elusive deep-water fish found only in Lake Superior. The project is a collaboration between The Nature Conservancy, LTBB, the Bay Mills Indian Community (BMIC), the U.S. Geological Survey (USGS) and Lake Superior State University (LSSU).

“Whitefish, bloater, other kinds of ciscoes, have all been collected and reared for restoration efforts in the lakes, but kiyi has really eluded everyone, primarily because of how deep they spawn and where they’re located in Lake Superior,” said Kevin Keeler, fisheries technician for USGS. “This is more of a pilot study to see if it’s possible to collect and rear kiyi in the laboratories, so that kiyi restoration could become a viable fishery management restoration option in the future.”

Kiyi are a small silver fish with pink or purple-tinted scales along its back and large eyes. They’re a type of cisco that usually live at depths of more than 400 feet, and they grow up to 11 inches long. Kiyi play an important role in the ecosystem, as they kick-start nutrient cycling and are food for larger fish, which supports the Great Lakes food web.

“We currently have a lack of prey fish in Lake Michigan and Lake Huron,” said Matt Herbert, senior conservation scientist at TNC. “Since kiyi utilize different depths and resources than existing prey fish, restoring them can help to increase productivity in our prey fish populations.”

Kiyi used to be prevalent in all of the Great Lakes, except for Lake Erie, but like other native fish, the impact of invasive species and historic commercial overfishing caused their populations to collapse. Today, the remaining populations of kiyi are found only in Lake Superior.

“When we look at the population collapse of whitefish and ciscoes, it’s like you had \$10,000, and now you’re down to 10 cents. As far as the health of the lakes go, that’s very unstable,” said Kris Dey, hatchery manager for LTBB. “Everything is connected, so bringing these populations back could help stabilize things. The more species diversity you have, the more resilient the ecosystem is.”

The team’s goal is to find the best way to collect kiyi larvae and safely transfer them to a hatchery or a rearing facility for further study. If the larvae reach full adulthood, they could potentially be used as a broodstock, or breeding population, which could help restore kiyi populations throughout the Great Lakes.

The work is part of a larger ongoing effort to study kiyi. While this approach is focused on summer larvae collection, the team is also trying to collect adult

kiyi during their spawning window—unfortunately, in the middle of winter.

“To do egg takes, we boat 15 or 20 miles out from Pictured Rocks in December and January, which is never a great time to go out on Lake Superior,” Kris said. “So most of the time we actually get iced in, or the weather is too rough, so we can’t get out. Also, even if we do get out, we’re trying to pull fish up from 700 feet down, and because of the pressure, the eggs and sperm get squeezed out during the ascent. Basically, they explode.”

While the team has had some success collecting spawning adults in winter, they’re hoping the summer approach will produce better results. While adult kiyi remain in the deep waters, kiyi larvae, which are about an inch in size, hatch in late spring and early summer and travel to the surface to feed on zooplankton. Surveys done far offshore by USGS have had success collecting these larval fish, and now the team is hoping for similar outcomes in nearshore zones.

“Our crews and our smaller vessels can tackle these nearshore areas where we really don’t have a lot of data,” said Simon Freeman, fisheries assessment technician at BMIC. “We’re looking to see: Where do

these baby kiyi hang out, and what kind of numbers can we get?”

Along with beach tows and light traps, the team conducts boat tows. In a small vessel provided by BMIC, the researchers survey nearshore areas that range from a few feet to a few hundred feet deep. They drop nets specially designed to collect larvae on each side of the boat in a series of 10-minute increments, then haul them up and examine the micro-catch. But collecting larvae of any kind is often rare.

“Zero is still good data,” Simon said. “For this project, it’s about testing different methods and trying new things.”

For college students like Ellie Prow, an undergraduate studying fisheries and wildlife at LSSU, the research is also an opportunity to gain practical experience and network with professionals from a variety of specialties and organizations.

“Learning about all the different techniques and sampling protocols agencies use is really cool, and it’s fun using data from samples you collected to put two and two together and solve problems,” Ellie said. “Growing up in Michigan, being surrounded by the Great Lakes, fishing and outdoor activities are

such a part of life—so it’s great to be able to work on projects like this.”

Collection takes place over the course of a week several times each season. While weather can disrupt plans, particularly for the boat, the researchers will still brave many conditions, including rain and swarms of black flies.

“You develop more of an appreciation of what it means to do this kind of research,” Kevin said. “We can run hypotheticals in the lab, but actually going out there at fun hours, getting field gear ready, having water spill over your waders and get your clothes wet, trying to collect larvae and keep them alive in buckets on the deck—that’s what it takes.”

Most of the researchers share a rental house during the collection period. They cook meals together, and in between breaks watching Gordon Ramsey cooking shows, they spend hours discussing strategies and ideas.

“Everybody brings a unique skill set and unique expertise, so we come up with a lot of cool things,” Simon said. “Collaboration is what it’s all about in the Great Lakes.”



Sisters for Forest Conservation

A rainbow forms over a river on Sandy and Mary's property. © Sarah Jane Hurtubise



Sisters Sandy Breitenbach, a retired A.P. Biology teacher, and Mary Loyer, a former nurse now involved in holistic and medicinal healthcare, grew up enjoying local parks and exploring the U.P. Now, they're doing their part to participate in conservation. © Sarah Jane Hurtubise

During a family wedding weekend in 2021, Sandy Breitenbach and Mary Loyer set out with their younger sister Sarah on a quest to explore an old camp. They eventually arrived at the property's bright orange gate, which marked the beginning of hundreds of acres of forest that had been untouched for decades.

"Seeing that forest is like going back in time," said Mary. "It is really quite special, and we fell in love with the place."

For the first time in over a century, the property—which lies adjacent to The Nature Conservancy's (TNC's) Laughing Whitefish Preserve between Munising and Marquette in Michigan's Upper Peninsula (U.P.)—was up for sale. Although Sandy and Mary hadn't originally planned to own a property like this, they always valued the environment and felt that protecting this forest would be a natural continuation of their passions. Ultimately, they decided to purchase the camp and forest to ensure it could continue to grow and thrive for decades to come.

"It takes generations for forests like this to grow—you can't just replace them," Mary said. "Everywhere, we're losing forests, we're losing habitat, we're facing extreme climate change, so Sandy and I felt we needed to save this place. We wanted to do our part, because when people are able to come and enjoy a place like this, maybe they'll be more aware of what it means to preserve these spaces."

Through TNC, Sandy and Mary enrolled 64 of their 119 acres in the Family Forest Carbon Program (FFCP), created by the American Forest Foundation (AFF) and TNC. The FFCP supports family forest owners who commit to sustainable forest management practices as part of a 20-year contract. These practices increase carbon storage and sequestration and support wildlife habitat, forest health and water quality.

"We knew immediately that we wanted to be part of the program, because it's something that could really make a

difference, and it's a part of mediating climate change," Sandy said. "The people running the program have been so good about reaching out to us, connecting us to resources and giving us expert advice on how to actively manage the forest. It's been really helpful."

Most family-owned properties are too small to participate in registered carbon credit programs, but altogether, these properties make up more than 38% of U.S. forests. By working with landowners who own as little as 30 acres of forest, the FFCP is helping to address this gap, incentivizing and increasing the number of family-owned forests practicing climate-smart management. So far, Michigan has 29 landowners and almost 2,500 acres enrolled in the program.

"Part of the appeal for us was the security this program offers," Sandy said. "We thought this program was a good way ensure the land will continue to be well-maintained and cared for over the next 20 years."

In addition to the old camp, Sandy and Mary's property features sprawling beech-maple forest and thriving hemlock, a representative species of Michigan's old-growth forests. These forests provide important habitat for a wide variety of wildlife, including bald eagles, loons, black bear, river otter, beaver, leopard frog, as well as a host of warblers, thrushes and woodpeckers.

What's more, this area has deep historical significance. It was here in the late 1800s that George Shiras III, a congressman who established the legal foundations for the Migratory Bird Treaty Act, invented the method for nighttime nature photography. His wildlife photos helped advance the early conservation movement at a time when many species were going extinct because of habitat loss and unregulated market hunting.

"When you get out there, surrounded by the woods and the river and the quiet, it really calls healing into that space," Mary said. "And it's a space that's meant to be

shared. We can only enjoy it so much on our own."

Sandy and Mary are currently repairing and updating several buildings that are located on their property, including two cabins, to make it easier for people to come and stay and enjoy the forest. They hope to eventually host a variety of events and programs, such as wildlife photography sessions, meditation retreats, artisan residency, educational activities that teach people about conservation, and more.

"We saw an opportunity to participate in conservation and to share this special place with our family and hopefully other people, as well," Sandy said. "Our parents were always about giving back and sharing—they shared everything they had, which wasn't much, and that value was a big part of our lives growing up."

For more information on how to participate in the FFCP, visit: familyforestcarbon.org



Growing Mature Forests

The Family Forest Carbon Program (FFCP) encourages long-term maple/hardwood forest productivity by growing forests longer and with less timber harvesting than would occur in a business-as-usual scenario. This helps the forest develop larger diameter trees and sequester and store more carbon, while producing higher quality wood.

For FFCP members who qualify, this practice can be incorporated into their forest management plan. It is available for those in counties in the Northern part of the Lower Peninsula, as well as all of the Upper Peninsula and select areas of Wisconsin and Minnesota. To learn more and to see if your land qualifies, visit familyforestcarbon.org.

© Drew Kelly

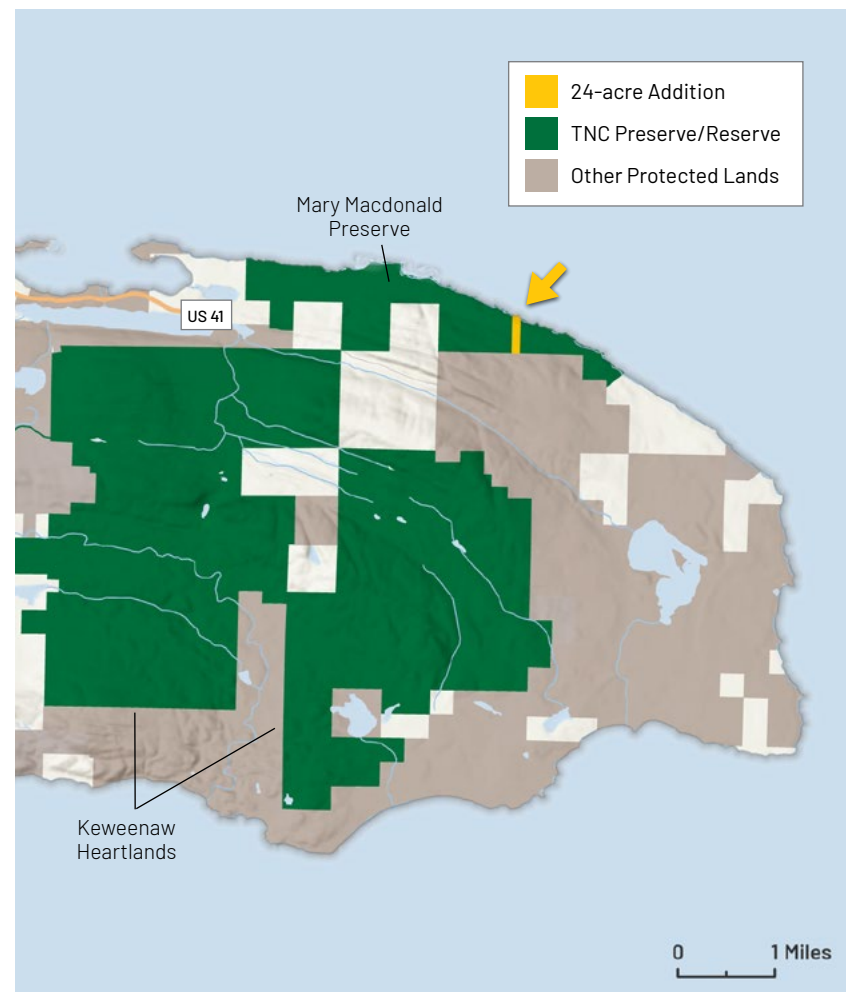
Protecting Pieces of the Puzzle

Small land acquisitions make a big impact

Imagine a puzzle that is close to complete, with one missing piece that will unlock its mystery, and imagine the elation of finding it. When the puzzle is a network of conservation land, you may understand why The Nature Conservancy sometimes acquires relatively small parcels in Michigan. Sometimes, those parcels are just the missing piece to complete the landscape we are preserving.

TNC often purchases small properties on behalf of partners until they can assume ownership. For example, we recently protected 46 acres near the Shiawassee National Wildlife Refuge and will hold the land until the U.S. Fish and Wildlife Service secures the necessary funding to take ownership in a few years.

Parcels may also be small but important inholdings at TNC preserves and reserves, such as two recent additions in the Upper Peninsula.



24 Acres at Mary Macdonald Preserve at Horseshoe Harbor



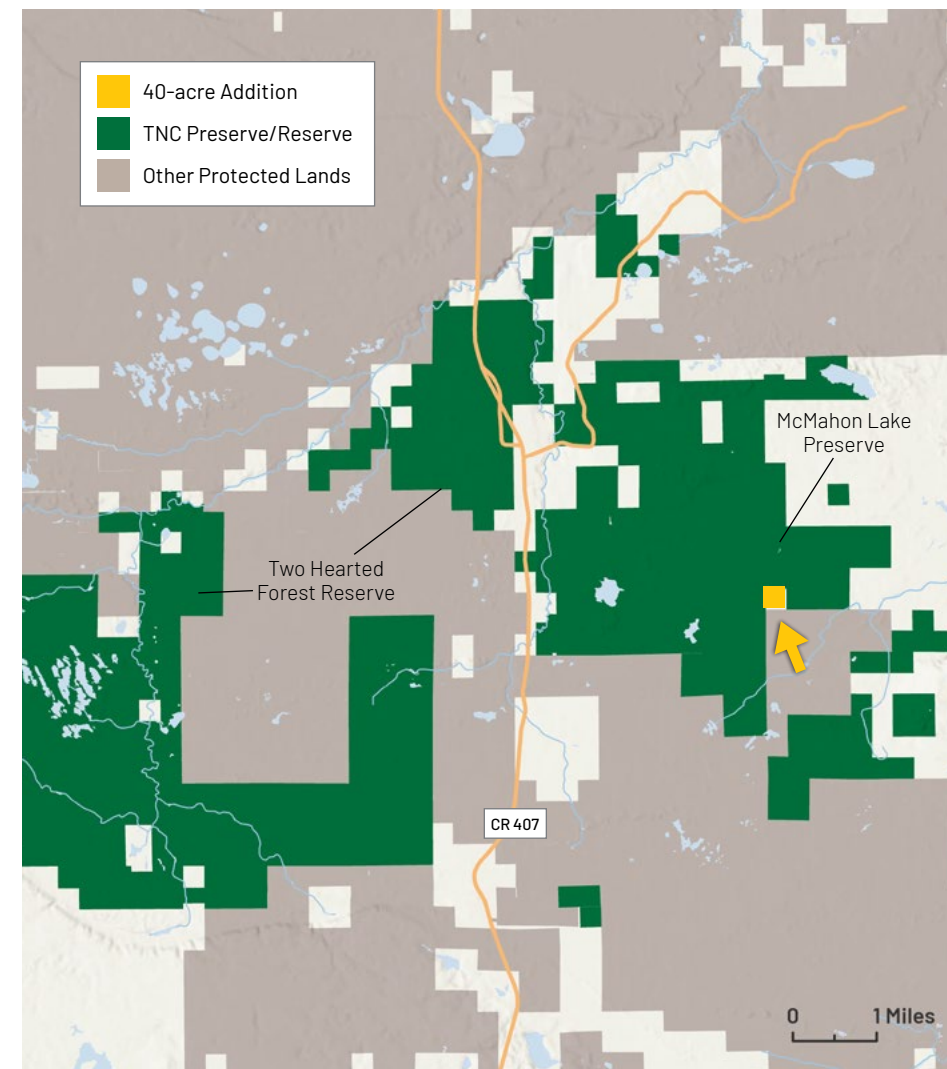
In August, The Nature Conservancy in Michigan acquired 24 acres at the 1,200-acre Mary Macdonald Preserve at Horseshoe Harbor on the Keweenaw Peninsula. Established in 1982, this preserve is home to 11 threatened or rare species and five miles of rugged Lake Superior shoreline.

Lake Superior winds have carved out a rocky beach, where hardy lichen grows on volcanic bedrock exposed by ancient glaciers and the unrelenting forces of Lake Superior. Rocky outcrops form small barrier islands that provide underwater structure and habitat for multiple Great Lakes fish species.

Behind the rocky ridge, Balsam fir, white cedar, white spruce and white birch thrive in cool, moist forest and provide habitat for black bear, snowshoe hare, peregrine falcon, ruffed grouse, crown kinklet, black-throated green warbler and yellow-rumped warbler.

Within the Mary Macdonald preserve, however, there was one inholding that bisected the property down to the shoreline, cutting off the eastern portion of the preserve from the western. Acquiring these 24 acres consolidates our ownership and allows us to manage the preserve as one contiguous unit. Most importantly, it creates five uninterrupted miles of protected shoreline, the second longest continuous Great Lakes shoreline on the Keweenaw Peninsula.

Consolidating protected lands like this often creates better and more connected habitat, more efficient management for restoration activities and clearer boundaries for public access.



40 Acres at McMahon Lake Preserve



Consolidated protection was also the goal of TNC's July acquisition of 40 acres adjacent to our McMahon Lake Preserve and within the watershed of the famed Two Hearted River. Such a small tract may not seem like much. Yet, it has a critical impact.

The 4,084-acre McMahon Lake Preserve has been preserved in part because it is remote and swampy. Lying within the Two Hearted River's watershed, it helps protect the river's water quality. The 40-acre tract contains wetlands feeding a tributary stream to the Two Hearted River and consolidates an inholding between the preserve and state forest land.

"While small, this is an important acquisition, as it fills in the 'donut hole' between our ownership and the State's ownership," said Rich Tuzinsky, director of land protection for The Nature Conservancy in Michigan.

A century ago, the area was immortalized in Ernest Hemingway's short story, "Big Two-Hearted River," published in his 1925 collection "In Our Time." It draws upon his fishing trips to the area upon returning from WWI, as the main character Nick Adams does in the story. While the actual river that Hemingway



fished in 1919 "is really the Fox above Seney," as he wrote in a letter to his father, it was that whole landscape that captivated him.

"We were only 15 miles from Pictured Rocks on Lake Superior," he wrote to a friend in 1919 after the trip. "Gad that is great country."

In 1993, The Nature Conservancy purchased the McMahon Lake Preserve with the help of an anonymous donation and additional land donations. In 2005, TNC negotiated the "Big U.P. Deal" to conserve more than 270,000 acres in the Two Hearted River watershed, of which TNC retained over 23,000 acres as the Two Hearted River Forest Reserve.

Amidst these larger tracts of conservation land, 40 and 24 acres may seem small. Thanks to these strategic acquisitions, though, we've added the puzzle pieces to conserve 5 miles of contiguous Lake Superior coastline and headwaters to one of Michigan's most pristine rivers.

For more information about these preserves and how to visit, go to: nature.org/miplaces



Connecting with Nature

Thanks for joining us at our recent events! We had a blast hiking at our Ross Coastal Plain Marsh Preserve, learning about the ecology of Echo Lake Nature Preserve and pulling invasive species around the Point Betsie Lighthouse, among other outings.

For the latest event notices and Michigan nature news, subscribe to our monthly e-newsletter at nature.org/naturenews. Or check for upcoming events at nature.org/mievents. We hope to see you out there!



Climate Heroes The Power of Trees

(Grade levels: 3-8) Made possible with support from Carrier. Adapted for print. Find the full guidance at nature.org/naturelab.

Trees provide so many benefits to our everyday lives. They keep the air clean and help us stay healthy. Trees are also an important natural solution in our fight against climate change because of their ability to soak up climate-altering carbon from the atmosphere—as much as 48 pounds of carbon a year, each. So, the more forests the better! In this activity, learn more about the power of trees and how you can help protect them.

WATCH

First, take a virtual field trip with TNC, from Louisville, Kentucky, to St. Vincent and the Grenadines in the Caribbean. Find out why trees are our climate heroes, how we can harness their superpowers and how we can get involved in our communities to protect and restore the health of trees: youtu.be/ilXeGlybjJQ

INVESTIGATE

It's your turn! Use the suggested links and activities to answer the following questions.

1 | Why do we need trees?

What trees do you see in your community? Paint or draw a picture of some of the trees you see and the benefits they provide to people and wildlife. Or make a list!

2 | How do trees help?

Use the Tree Benefit Calculator (arborday.org/calculator) to investigate some of the ways the trees in your neighborhood contribute to a healthy community!

3 | What threats do trees face?

Watch "Insects, Disease, Drought, and Fire" (youtu.be/e_c0MAioE54). Do you see signs of any of these threats to trees in your own neighborhood? Use SelecTree (selecttree.calpoly.edu) to identify potential threats the species in your area might face.

4 | How can I help protect trees in my community?

Create a map of your neighborhood. Survey the trees in your neighborhood and note their location and type on your map. (Tip: try assigning each species a number and using that number to identify tree locations). Are there places that would benefit from more trees, or different species? Are there threats that you could help reduce? Use your map to help you brainstorm actions you could take to support healthy trees.



Nature Lab is The Nature Conservancy's youth curriculum platform. Visit nature.org/naturelab to access lesson plans, worksheets, videos and more.



GO BEYOND

Plant a tree! Watch this video (vimeo.com/78368570) to learn what factors need to be considered when planting or adopting a tree in an urban community.

ADDITIONAL RESOURCES

- Leafsnap—a tool for identifying tree species based on their leaves: leafsnap.com



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Midwest Stories of **Hope**—for people and nature



Decades ago, bobcats were hunted to near extinction across the Midwest. Thanks to increased protection, they made a comeback.

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Positive achievements for nature and people can—and are—happening right in your backyard. Every day we are:

- Protecting high-quality habitat. TNC has conserved more than 90,000 acres of land across the Midwest since 2020;
- Restoring critical wetlands that provide clean water and support biodiversity;
- Working with nature to lessen the impacts of climate change.

Read more stories of hope:
nature.org/midwesthope



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