

FALL/WINTER NEWS 2021

Central & Western New York Update

The Nature
Conservancy 

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Nature Unites Us



Dear Friends and Supporters,

It's no secret that Central & Western New York is defined by water. Lake Erie and Lake Ontario border us to the north and west. Great rivers like the Niagara, St. Lawrence, Genesee, Susquehanna, Black, and Mohawk originate here before making their way to the mighty Atlantic. And

Upstate New York is a land of lakes, including the Finger Lakes and many other lakes that dot this landscape.

Water is life. We drink it, use it to irrigate our farms, and enjoy recreational fishing, boating, skating, and swimming. The scenic beauty of the view over a lake or river is also a huge part of what makes living here special.

Throughout the world, climate change is increasing pressure on our waters. Sometimes there's not enough water, other times too much. In 2021, many parts of our region experienced moderate drought. But when the rains came, they came hard; floods in late summer devastated communities in the Finger Lakes and Southern Tier.

The changes are also putting water quality at risk. Harmful algal blooms driven by more intense storms, invasive species, and higher temperatures are affecting our beloved lakes and rivers.

In Central & Western New York, water is The Nature Conservancy's highest priority. In this newsletter, you'll read about our efforts to protect lands that are vital to water quality, as we're doing at Owasco Lake. You'll also read about a new acquisition of floodplains along the Seneca River near Syracuse, which will ensure that this important wetland complex continues to store floodwaters and support biodiversity.

We're piloting new approaches, too, by working with farmers to better understand barriers to the adoption of soil health practices. And we're coordinating with local communities to ensure that municipalities are teaming up on issues like septic system standards, across the watersheds they share.

It's often said that water is our greatest connector. We agree. Now more than ever, water needs friends like you. Thanks for all that you do to support The Nature Conservancy and our mission of conserving the lands and waters on which all life depends.

A handwritten signature in black ink that reads "Jim Howe". The signature is fluid and cursive.

Jim Howe
Director

A handwritten signature in black ink that reads "Laurie Dann". The signature is cursive and somewhat stylized.

Laurie Dann
Board Chair



Owasco Lake offers families a beautiful place to swim, fish, boat, and experience nature. It also provides drinking water for more than 50,000 people. But, like many of the Finger Lakes, Owasco faces urgent water quality challenges. Land conservation here is a strategic investment in the region's future.

Planning for Climate Change in the Floodplain

Climate-threatened birds and vulnerable communities in Central New York just got a big boost, thanks to The Nature Conservancy's protection of 88 acres on the east side of the Seneca River. The parcels, which lie in the river's floodplain, are located about 14 miles from downtown Syracuse and will help safeguard people and property during and after storms by absorbing floodwaters. After we complete a planning process, the area will be opened for public access, bringing economic and quality-of-life benefits to the region.

The parcels are located across the river from the Conservancy's 222-acre Seneca River Preserve—an oasis for blue-gray gnatcatcher and wood thrush—both of which are declining in the region, due to climate change.

“Adding these parcels into an assemblage of protected wetlands in the area will mean the floodplain can continue to absorb floodwaters well into the future and will help safeguard local

residents and businesses from flooding dangers,” says Stevie Adams, a climate adaptation specialist with The Nature Conservancy in New York.

Almost 14,500 people live within the county's floodplain. In the last decade, the area has been included in three federal disaster declarations related to excessive rain and waters. The Northeast Regional Climate Center at Cornell University estimates that by 2050, extreme precipitation will increase by 15–20 percent, and what are now 100-year flood events will double in frequency.

Maintaining the natural wetlands and the existing floodplain in this area are especially important because flooding can impact both the Seneca River basin and Onondaga Lake. “Floodwaters can back up both into the lake and areas upstream,” explains Adams. “Keeping those areas free from development is a smart way to plan for a climate-ready future.”

PROTECTING DRINKING WATER IN THE OWASCO LAKE REGION

With partners at the New York State Department of Environmental Conservation, we conserved a critical parcel in the Owasco Lake region that will help protect public water supplies and secure key wildlife habitat. We purchased this 161-acre parcel in the town of Sempronius (Cayuga County) with funding from New York State's Water Quality Improvement Program that specifically targets the protection of source waters.

The property, which consists of native woodlands and some 40 acres of freshwater wetlands, includes vital habitat for numerous wildlife species. Its preservation helps create a healthier lake, protects the water supply, reduces the potential for harmful algal blooms, and contributes to local economies that depend on quality recreational opportunities.

The protection of this parcel is part of our larger effort to maintain and restore the health of lands and waters in the Owasco Lake region.



The Nature Conservancy and the St. Lawrence Eastern Lake Ontario Partnership for Regional Invasive Species Management have been working with 19 regional and international partners, including Tribal communities, nonprofits, government agencies and others to gain a holistic understanding of important native fish like cisco and whitefish and their habitat use. Unlocking this information is key for native fish restoration and for the detection and management of invasive species – both locally and within the larger Great Lakes basin.

Message in a Molecule: Using Modern Science to Unlock the Mysteries of Fish Populations

A drop of rain trickles down from a hemlock branch and splashes into the river below, leaving tiny ripples that radiate gently. Near the streambank, a great blue heron is poised, statue-like, waiting to catch its morning meal. This idyllic scene is the site of a mystery that Nature Conservancy scientists are working to solve.

Rivers such as these—the tributaries of eastern Lake Ontario and the Upper St. Lawrence River—flow through the most undisturbed landscapes in the bi-national Lake Ontario watershed. The Tug Hill, northern Adirondacks, and Indian River chain of lakes along the St. Lawrence are heavily forested with more than 30 streams, rivers, and bays that feed pure, cool water downstream. Some, like Chaumont Bay, provide spawning and nursery areas for cisco and whitefish, native fish that once fueled Great Lakes economies and now are on the long road to recovery.

But we don't know which native fish may be present in these waters, whether they use these tributaries for spawning, or whether aquatic invasive species affect their use of these habitats.

“Without answers to these questions, we don't have a full suite of information to help bring back important native

fish throughout our waters for the benefit of people and the wildlife that depend on them,” says Philippa Kohn, sustainable fisheries ecologist for The Nature Conservancy in New York.

As a result, The Nature Conservancy is using an innovative process called environmental DNA (eDNA) monitoring, which allows scientists to detect fish species without ever seeing or catching them.

According to Brittney Rogers, aquatic resiliency coordinator for The Nature Conservancy in New York, “Aquatic species shed their DNA into the water whenever they are present, through scales, feces, eggs, and mucus. By collecting a water sample, we can extract their DNA and determine if they have been there.”

Kohn adds, “This exciting, cutting-edge research will enable us to identify priority sites for protection, restoration, and invasive species removal. The information gathered here will not only inform current efforts but may also change the course of our work.”

Very soon, we hope that the secrets of these waters and the fish that use them will no longer be a mystery.

Swimmin' to a Clean Water Future in the Finger Lakes

Every summer, some 300 women don swimsuits and brightly colored bathing caps to take part in Women Swimmin', a 1.2-mile event in Cayuga Lake near Ithaca. The benefit raises funds for Hospicare & Palliative Care Services, an organization in the Finger Lakes region. But toxic algae blooms are becoming more frequent and widespread here, which leaves event organizers increasingly on edge.

Sara Worden, Hospicare's acting director of development and community relations, explains: "Though we've never had to cancel or reroute the swim because of harmful algal blooms, it all comes down to the day of the event." The organization sends kayakers out early in the morning to scout for the toxic, aquatic plumes. "The health of the lake has a big impact on the health of our organization and our ability to deliver services," adds Worden.

To prevent and decrease the effects of harmful algal blooms, it's important to first understand their causes. In the Finger Lakes, these include the presence of phosphorus and nitrogen in the water, says Olivia Green, The Nature Conservancy's Finger Lakes water quality specialist. Pollutant-heavy topsoil, chemical fertilizers from lawns and farming, and sometimes manure can make their way into the region's lakes, rivers, streams and ponds.

Conventional septic systems contribute as well. So do invasive species, such as zebra and quagga mussels, that dig

into the sediment at the bottom of lakes, stirring up latent phosphorus and nitrogen for algae to feast on.

And then there's global warming, which is heating up water temperatures, enabling algal blooms to grow more quickly and to appear both earlier and later in the season, Green says. Climate change also causes bigger rainstorms in New York, bringing more polluted runoff into the water system.

Fortunately, there are solutions. Property owners in some areas can replace outdated septic systems with new technologies that treat both nitrogen and phosphorus. Boaters and anglers can follow recommendations to stop the spread of aquatic invasive species.

Another important solution is to conserve and restore natural areas that serve as buffers between land and water, as The Nature Conservancy and its partners have done through projects like the restoration of Honeoye Inlet. In the Owasco Lake region, we are working with farmers who are developing new agricultural practices to protect the watershed. In addition, all of us can get involved in the effort to combat climate change.

Dampening the source and scourge of harmful algal blooms across the Finger Lakes means not just safe water to drink but also the incalculable pleasures of a swim on a hot summer's day. And it means Hospicare can continue to hold the Women Swimmin' event safely, year after year.



Getting to Know Conservancy Student Trustees Ashmita Das and Jordan Jessamy



Q: Ashmita, what are you studying currently?

A: My research focuses on how policymakers and ecosystems interact with and influence one another. Humans are not separate from nature, and the things that we do impact the things happening in nature and vice versa. It's important to remember the human dimension affects ecosystems. That might sound simple, but it gets forgotten a lot of the time.

Q: Has nature always been a big part of your life?

A: I grew up in New York City, and I felt disconnected from nature like a lot of city dwellers. But just because I wasn't aware of or thinking about nature doesn't mean it wasn't around me and influencing me.

In high school, I began visiting Central Park every day. It was magical in the sense that no matter how stressed out I was or how chaotic things seemed, just being in the park was a restorative experience for my physical and mental wellbeing. It's where I started to appreciate and care for nature because I felt like it was caring for me. I'm passionate about conservation because everyone should have the opportunity to have those kinds of experiences.

Q: What does conservation mean for the future?

A: Beyond personal experiences and on a broader scale, the next generation will continue to experience and benefit from the natural resources and all the other things that nature offers. Protecting nature is so crucial for supporting the health of our planet but also ourselves. You can't have one without the other.



Q: Jordan, what attracted you to The Nature Conservancy?

A: My research focuses on urban forestry and the dynamics between urban tree health and communities. I'm interested in seeing what The Nature Conservancy does in cities to increase involvement with people and promote greater stewardship. By collaborating, encouraging, and being more involved with communities, we can work toward achieving the Conservancy's ambitious 2030 goals.

Q: How did you come to care about the environment?

A: I credit my high school Ecology teacher who involved my class in a lake cleanup. It wasn't just the water we were focused on, but also the surrounding a forest area, too. That was my first introduction to environmental work and I really enjoyed it. From there, I determined that SUNY ESF would be a good fit for me.

Q: What do you hope to accomplish as student trustee?

A: Gaining a behind the scenes look at a nonprofit, but also helping to direct and guide it. The Nature Conservancy is formulating how to instill their new 2030 goals and I'd like to provide my perspective and expertise to help fulfill those goals.

Q: Do you have any advice or words of wisdom you'd like to share?

A: First, I'd like to thank the kind, generous donors who allow The Nature Conservancy to do its work. Second, I'd say be sure to enjoy nature and impart your love for nature with others. One of the greatest things you can do is spread the love of the world.

By the Numbers

7 million

trees in New York City identified as part of NYC's urban forest; a new partner-wide plan that aims to put funding in place to care for and expand this natural asset

103

different species of plants in a 100-square-meter plot at a fen at our O.D. von Engeln Preserve at Malloryville, rivalling the tropics in term of its biodiversity

300+

Bio-control beetles released by the Conservancy and partners to help control invasive species, purple loosestrife and restore a priority wetland

2,000

stakeholders informed the *Blue Plan*, an unprecedented effort for Long Island Sound conservation work in Connecticut and New York

10,000

acres enrolled in our *Working Woodlands* program to keep forests healthy and absorb carbon emissions

5

Emerald Ash Borer monitoring stations established in the Adirondacks to aid in the early detection of this invasive species

\$303.5 billion

from Department of Transportation programs for highways, roads and bridges will help further Conservancy goals across the U.S. for natural infrastructure, resilience, reducing carbon emissions and wildlife crossings

25

states engaged in U.S. Climate Alliance to advance national climate and clean energy policies through our role on New York's Agriculture and Forestry Advisory Committee

13 pounds, 8 ounces

– the weight of a new state record bowfin caught this summer by an angler along the Lake Ontario shoreline in Monroe County

30 x 30

conservation goal mirrors the federal goal to conserve 30% of our nation's lands, waters and ocean by 2030

\$3 billion

Environmental Bond Act to appear on New York's 2022 ballot

80,000+

acres responsibly stewarded through conservation easements in the Adirondacks

45,000

individuals enjoyed our trails at Mashomack—a milestone in TNC-NY preserve visitorship

600+

culvert surveys being completed in the Lake Champlain basin for potential replacement

20

different lichen species observed in the Adirondacks' Spring Pond Bog Preserve owned by The Nature Conservancy



Young Minds, Big Ambitions



The Nature Conservancy is pleased to be joined by two student trustees who hail from the State University of New York College of Environmental Science and Forestry. These bright students will serve a two-year term on the board of trustees in Central & Western New York.

We caught up with Ashmita Das who is pursuing a master's degree in Coupled Natural and Human Systems and Jordan Jessamy, whose research is focused on Urban Forestry, who told us a little bit about what inspired them to join this inaugural position, and what propels them to care for conservation.

A big thank you to SUNY ESF Professor Emanuel J. Carter Jr. for helping us launch the new Scholar Trustee program.

Learn more about them on page 6.