

*central & western new york*  
**Nature**

FALL/WINTER 2015

**A Year in Review:**  
*The world we depend on depends on us.*

# Nature: Our Wish for You

It's harvest time in upstate New York—the time of year when we reap the results of hard summer work. We gather the fruits of our labor, and trade our water sandals and sneakers for winter boots and snowshoes.

It's also a time for reflection and gratitude. We are lucky to live in a place with abundant fresh water and forests, where beauty shifts and changes each season. You know the feeling—the rush you feel hiking through autumn foliage, the tranquility that washes over you as the first snowflakes fall on a river, or the joy of a fall walk through one of your favorite city parks. In those moments we feel connected to the world and part of something much bigger than ourselves.

This connection with nature shapes who you are—and it is the reason The Nature Conservancy exists.

When we talk to members like you, you tell us you're worried about the world you'll leave your children and grandchildren. You tell us you feel a sense of responsibility to preserve our natural treasures. You tell us you don't want to see the trees and wildlife you love disappear forever.

Together, as partners in conservation, we're making these dreams reality. In the following pages, you'll read about some of the many successes you made possible in Central and Western New York this year:

- Saving critical lands on Tug Hill, Syracuse and in the Eighteenmile Creek watershed in Erie County
- Harnessing green infrastructure to improve water quality on one of our Finger Lakes
- Using our 30,000 acres of preserves to gather critical data, create habitat for pollinators and build new trails and outdoor access.



Jim Howe and Susan van der Stricht © JAN MILLER/TNC

It's no secret that threats to nature are intensifying, making it critical that we accelerate the pace of conservation more than ever in 2016. So in the spirit of the season, we're looking back in thanks for the results you've made possible, while also looking forward to the hard work ahead.

Supporting The Nature Conservancy is one of the most effective things you can do to ensure the natural world you enjoy and treasure is protected for generations to come... for nature and people. We hope you will be inspired by the wish list and stories in the following pages. They represent just a few of the many gifts we'd like to see delivered for YOU—our members—and the beautiful region we call home.

Susan van der Stricht  
Board Chair

Jim Howe  
Executive Director

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24.7 trees  
preserved for  
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43.3 lbs water-borne  
waste not created



770.7 lbs  
solid waste  
not generated



2,123 lbs net  
greenhouse  
gases prevented

# Holiday Wish List

Your year-end gift can help us make these and more of our conservation wishes come true.



## Build a Lake-To-Lake Trail

Thanks to you, we're close to completing Rob's Trail West – a new trail linking Canadice and Hemlock Lakes, the only undeveloped Finger Lakes and the source of Rochester's drinking water. Your year-end donation helps us complete this project and offer a one-of-a-kind visitor experience.



## Keep Honeoye Lake Clean

The Honeoye Restoration Project has applied for a grant to fund this unique green infrastructure project. The Nature Conservancy must now raise matching funds for the implementation phase. Your year-end gift will help achieve a healthier Finger Lakes future.



## Protect an Unbroken Forest

This fall we added 400 acres of forests to our holdings on Tug Hill. Help us add 683 acres more! We need to raise matching funds to activate a \$1 million North American Wetlands Conservation Act grant that will save a total of 3,387 acres on Tug Hill.



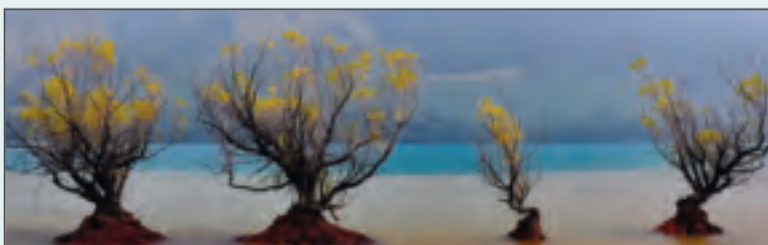
## Drive Conservation Success in Lake Ontario

On-the-ground science demands safe and reliable transportation. Your year-end gift could put us in the driver's seat, allowing us to purchase a vehicle with towing capacity for field work in Eastern Lake Ontario.



## New Technology for Nature

Is a drone on your holiday wish list? It's on ours! A remotely piloted camera would be an invaluable tool for monitoring our 30,000 acres of preserves, scoping out potential protection projects, collecting data for ecological management and creating inspiring videos of the places you've helped us protect.



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The Nature Conservancy cannot render tax or legal advice. Please consult with your professional advisor before making a charitable gift. Image credit: © Cherie Palmer. PHOVQ16FY01APGHOXX

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# A Winter Wonderland Protected

## *Team work secures critical lands on Tug Hill*

Did you know you can visit a dramatic conservation area the size of Utah's Zion National Park without leaving Central and Western New York?

Nestled in the 'North Country' between Lake Ontario and the Adirondacks, Tug Hill is a region of unbroken forests and pristine wetlands drained by a vast network of cold-water streams. One of the three largest, intact forests in New York State, Tug Hill safeguards the water quality of more than 4,000 miles of rivers and streams, including the drinking water supply for the city of Rome. It also provides habitat for wide-ranging mammals such as bobcat, pine marten and black bear; woodland birds including blackburnian warblers and goshawks; and freshwater treasures like eastern pearlshell mussels and native brook trout.

Thanks to you, this spectacular conservation area will soon be almost two square miles bigger.

The Nature Conservancy is collaborating with Tug Hill Tomorrow Land Trust and Ducks Unlimited on a three-part project to expand the protection of Tug Hill. This fall, we completed an important step: We added a 400-acre forested property in West Turin to our Tug Hill Conservation Area, securing a critical piece of the 150,000-acre forest.

This tract is exciting in its own right but it will also be used as part of the match needed to activate a \$1.0 million federal grant from the North American Wetlands Conservation Act (NAWCA) recently awarded to Tug Hill Tomorrow Land Trust. The Nature Conservancy will then use funds from that grant to purchase another 683-acre tract of critical forest land adjacent to our preserve.

"This project is a testament to the teamwork needed to preserve a place like Tug Hill," says Andy Wheatcraft, The Nature Conservancy's critical lands coordinator in Central and Western New York. "It will allow us to keep the forest intact and healthy while providing opportunities for hunting, fishing and hiking."

Our organizations will be helping to acquire six tracts that will be open to the public, three of which will become part of the The New York State Department of Environmental Conservation (NYS DEC) State Forest system, two that will become part of The Nature Conservancy's 16,000-acre Tug Hill holdings and one that will become part of the NYS Wildlife Management Area. Conservation easements will be placed on several surrounding properties to expand the network of protected land. All told, the project will protect 3,387 acres and the headwaters of the Black, Sandy and Salmon Rivers.



**PHOTOS:** Tug Hill in winter. © MAT LEVINE/TNC,  
Tug Hill recreation map. © MAT LEVINE/TNC.



## Science-based Solutions for Snowballing Threats

Tug Hill is famous for its heavy snowfall. As frigid winds blow over Lake Ontario, they pick up moisture and deposit lake-effect snow on Tug Hill's 2,000-foot plateau. Over 200 inches of snow falls here each year, and it is not uncommon to see second-floor entries on the area's oldest cabins.

The threats to this remarkable place have been stacking up, too. In some areas, unsustainable timber harvesting practices have altered forest composition and reduced the amount of mature forests. Encroaching invasive species and the impacts of climate change could alter this special place forever.

Thanks to you, we'll continue to protect land in this unique winter wonderland and use it as a living laboratory for studying the effects of atmospheric deposition and climate change. We're also studying the movements of mammals on Tug Hill—including black bear, moose and river otter—so that we may better understand their habitat and connectivity requirements.

**Did You Know?** The Nature Conservancy began focusing on Tug Hill in 1998. Four years later we purchased a 45,000-acre property that comprises one-third of Tug Hill's core forest. At the time, it was the Conservancy's largest-ever acquisition in New York and served as a model for how we can protect important landscapes while meeting local needs.



**Left:** Blue-gray gnatcatcher. © KELLY COLGAN AZAR VIA A FLICKR CREATIVE COMMONS LICENSE. **Above:** Northern waterthrush. © KELLY COLGAN AZAR VIA A FLICKR CREATIVE COMMONS LICENSE

## A New Sanctuary for Syracuse

### *Two-mile stretch of Seneca River to be protected for birds and people*

The Nature Conservancy is pleased to announce that we're acquiring two miles of continuous undeveloped frontage along the Seneca River near Syracuse. Located in the Town of Lysander, Onondaga County, the 225-acre property features extensive floodplain and upland forests at a point where the freshwater communities along the river are most intact.

The Seneca River meanders east across Central New York, draining the seven eastern Finger Lakes and Onondaga Lake as it winds its way to the Oswego River and eventually Lake Ontario. The river once supported a thriving fishery, with over 100 fish species. These included Atlantic salmon and American eel, both of which migrated up the river to spend important parts of their life cycles in the upper watershed prior to returning to the lake, and ocean in the case of the eel.

"This section of the river represents one of the healthiest remaining stretches of floodplains and wetlands along the entire river," says Darran Crabtree, The Nature Conservancy's director of conservation for Central & Western New York.

The ecological values of this tract are perhaps best illustrated by its bird diversity. In June, The Nature Conservancy teamed up with the Cornell Lab of Ornithology to survey the tract. Experts found high numbers of birds that are on the decline elsewhere in the state, including 16 pairs of blue-gray gnatcatcher, 15 pairs of wood thrush and two pairs of northern waterthrush.

"Finding two territories of northern waterthrush is quite surprising and adds considerable value from a bird community perspective," says John Fitzpatrick, director of the Cornell Lab of Ornithology and a member of The Nature Conservancy's Central & Western New York Board of Trustees.

The property is being donated by Pooler Enterprises, which has already constructed a hiking trail along the west boundary of the property. The Nature Conservancy is exploring ways to provide additional access to the tract, including spur trails to the river, providing people in Syracuse a great way to reconnect to the Seneca River.



Eighteenmile Creek  
© TOM BONNER PHOTOGRAPHY.

## Saving Erie County's Drinking Water

### *Partnership protects 225-acre headwater forest*

About 90 percent of Erie County's population gets their drinking water from Lake Erie and the Niagara River. This year, you gave us the chance to protect this essential fresh water resource by purchasing a forest at the headwaters of Eighteenmile Creek, one of Lake Erie's major tributaries. Currently privately owned, the property was passed down through generations of a family that was ready to sell but wanted to see it preserved.

Recognizing the land's value for people and nature, The Nature Conservancy and Buffalo Niagara Riverkeeper teamed up to raise the funds needed to purchase the 225-acre swath of undisturbed headwater forest. Thanks to you, this property will be open to snowshoeing, hiking and bird watching while protecting water quality at its source.

**CELEBRATE WITH US!:** Join our thank you reception at Emery Park on Saturday Nov. 21. Contact Jan Miller for details: [jan\\_miller@tnc.org](mailto:jan_miller@tnc.org) or (585) 546-8030 x7928.

# Natural Resource Navigator Launches

## *Charting a Smart Future for a Changing Climate*

Imagine if city planners, natural resource managers and government agencies all had the tools they need to implement climate-smart decisions in their communities. Climate change is the greatest challenge of our time. Warming temperatures, droughts and floods, and rising sea levels are already having dramatic impacts on our lives today—and will lead to global crises of food security, water security and human health tomorrow.

People and nature can thrive together in this climate-changing world—but only if we act now. Our Natural Resource Navigator, launching this winter, provides communities and decision makers concrete recommendations for where and under what circumstances to use particular climate adaptation strategies. Explore the navigator in January 2016 at [naturalresourcenavigator.org](http://naturalresourcenavigator.org)



## How You Helped

While the first phase of the Natural Resource Navigator was funded primarily through a grant from the New York State Energy Research & Development Authority (NYSERDA), private funding was essential to begin the outreach phase of this project. Thanks to your support, we are launching the tool in an online platform and making it available free of charge to agencies, municipalities, private landowners and other institutions helping to create a low-carbon, lower-risk and more resilient future for all.



Larissa Lopez. © TNC.

## Meet Larissa Lopez

Every year, The Nature Conservancy hires recent college graduates to participate in the GLOBE (Growing Leaders on Behalf of the Environment) Internship Program at offices around the country and abroad. This summer, I had the pleasure of interning as the GLOBE Conservation Assistant Intern for the Central and Western New York Chapter. Under the direction of the stewardship and conservation staff, my internship encompassed trail construction and maintenance, habitat restoration, conservation communication and so much more! The focus projects of my internship were Rob's Trail West and Thousand Acre Swamp preserve.

For six weeks, I worked with an enthusiastic group of volunteers from North American Breweries to construct the upper and lower portions of Rob's Trail West along Hemlock Lake. We carried loppers, fire rakes, saws and hoes to clear trail, create bench-cuts and put in a small boardwalk bridge. Every workday was rewarded at lunchtime by the breathtaking view of the undeveloped lake from one of its many rocky shores. The trail will ultimately connect to the existing trail along Canadice Lake and the boat launches to create a network of trail approximately 10 miles long.

At Thousand Acre Swamp, I helped organize and implement a series of renovations at the entrance of the preserve. These renovations include replacing an old shed, designing content for interpretative trail signage, updating welcome kiosk panels and planting to restore meadow habitat. The meadow restoration project will promote pollinator habitat and restore the diversity of plant and animal species on this land. The meadow incorporated a Butterfly Beltway Project Garden, a program hosted by the Seneca Park Zoo to educate the public about the importance of butterfly conservation. With the help of volunteers and staff from The Nature Conservancy, Seneca Park Zoo and Ganondagan State Historic Site, we planted approximately 1,000 native pollinator host plants. The project garnered a great deal of public interest in pollinator conservation. To continue this public engagement and extend meadow restoration efforts, I am working with the land stewards at Ganondagan State Historic Site to design a series of related volunteer programs for next summer.

This internship provided me with invaluable experience in a range of conservation activities. I am grateful to have had the opportunity to learn from and contribute to the wonderful mission and efforts of The Nature Conservancy in this beautiful part of New York.



**PHOTOS:** The Nature Conservancy and Seneca Park Zoo staff and volunteers planted 1,000 perennial pollinator plants at Thousand Acre Swamp. © MAT LEVINE/TNC.

# A Recipe for Clean Water

## Keeping Honeoye Lake Clean with Green Infrastructure

2015 was a record year for outbreaks of toxic blue-green algae in New York's water bodies. To date, experts have placed a record 139 water bodies—including four Finger Lakes—on the state's blue-green algae alert page.

Blue-green algae are a symptom of too many nutrients, especially phosphorous, in our waters. Those nutrients are a result of run-off from farm fertilizers, manure and lawn chemicals. Effluent from septic systems and wastewater is also an issue.

In this nutrient-rich environment, toxic blue-green algae out-compete beneficial types of algae. Compounding the problem, zebra and quagga mussels—invasive species with few natural enemies here—consume algae, but spit out blue-green algae and return them to the water column. Rising water temperatures also enhance algal growth.

Of all the Finger Lakes, Honeoye is particularly at risk. In 2013, a toxic bloom in Honeoye closed beaches for most of the summer.

Now, The Nature Conservancy is a partner in an effort to harness wetlands and floodplains—green infrastructure—to filter out nutrients before they reach Honeoye Lake.

Honeoye Inlet, the stream at the south end of the lake, is the greatest single contributor of nutrients to the lake. To address this threat The Nature Conservancy is working with partners to restore the portion of the Inlet that runs through the

state's Honeoye Inlet Wildlife Management Area at the south end of the lake.

This portion of the Inlet was channelized to improve farming conditions. Unfortunately, that channel separated the stream from the wetlands that keep it healthy. "By restoring a natural stream channel, we can reconnect the stream to its floodplain," says Stevie Adams, The Nature Conservancy's freshwater specialist in Central and Western New York. "The floodplain can then do what it does best: filter out nutrients and sediments from the water and keep them from entering Honeoye Lake."

Restoring a stream requires significant capital expenditures, and The Nature Conservancy and our partners—the Ontario County Soil & Water Conservation District, Honeoye Lake Watershed Task Force, the U.S. Fish and Wildlife Service, Finger Lakes Community College and Honeoye Valley Association—are looking to raise at least \$400,000 from a variety of public and private sources, including funds from New York State's Water Quality Improvement Projects Grant Program.

In a recent column in the *Buffalo News*, Howard Zensky, CEO of Empire State Development Corporation, noted that fresh water is a key component of our quality of life and a major driver of Western New York's economy.

What could be more important than ensuring that the water in our rivers and lakes is clean and safe?

**HOW YOU CAN HELP:** Generous private foundation support and contributions from the Honeoye Lake Watershed Task Force and the U.S. Fish and Wildlife Service helped fund this project's design and permitting phase. To achieve a healthier future for Honeoye Lake, The Nature Conservancy must now raise \$100,000 for the implementation phase. **To get involved, please contact Jan Miller at [jan\\_miller@tnc.org](mailto:jan_miller@tnc.org) or (585) 546-8030 x7928.**







With your support, we broke ground this summer on Rob's Trail West, a new trail linking Hemlock and Canadice Lakes—the only undeveloped Finger Lakes and the drinking water source for the City of Rochester. © MAT LEVINE/TNC.



This summer, a team of LEAF interns from New York City worked hard for our lands and waters, installing rain barrels, improving trails, removing invasive species and repairing washed-out trails at Treman and Buttermilk Falls State Parks near Ithaca. © MAT LEVINE/TNC.



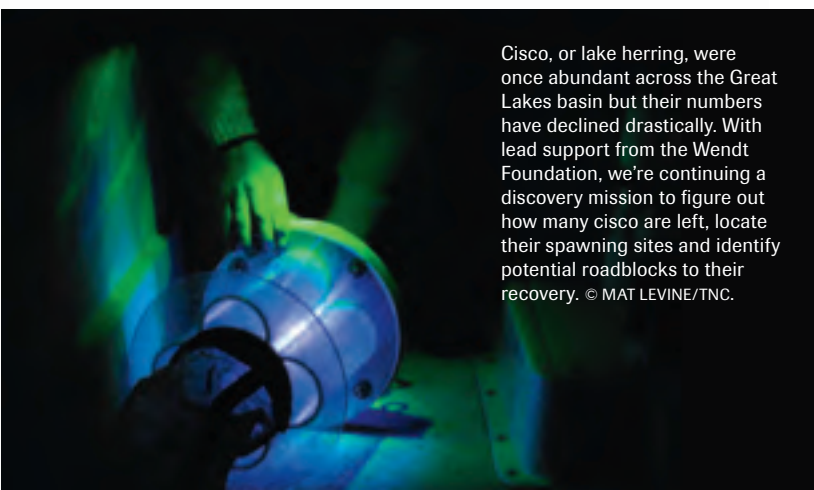
At the Xerox Rochester International Jazz Festival this June, staff and volunteers from Xerox and The Nature Conservancy distributed about 245 gallons of water fresh from Hemlock & Canadice Lakes—saving an estimated 1,856 plastic bottles and helping 2,000 people learn about where their water comes from. © TNC.



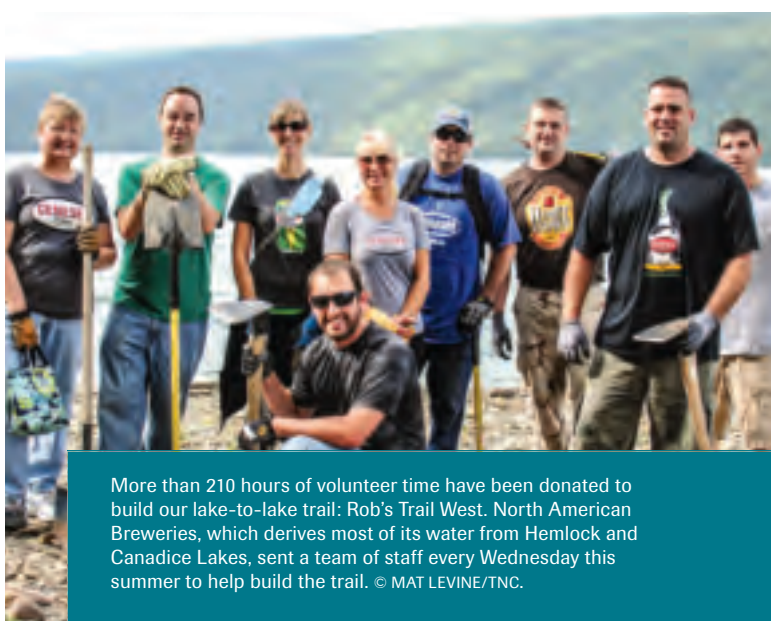
Thanks to you, our Flood Smart Communities project is helping towns identify their vulnerability to flooding and develop solutions that protect people's lives and livelihoods. This project is currently underway with three Rochester-area communities and was recently expanded to the Southern Tier. © STEVIE ADAMS/TNC.



Getting out to enjoy our lands and waters is a strong motivator for protecting them. Our members joined us for dozens of unique hikes and work days this year, including a stunning hike to Salmon River Falls. © ROB WILLIAMS/TNC.



Cisco, or lake herring, were once abundant across the Great Lakes basin but their numbers have declined drastically. With lead support from the Wendt Foundation, we're continuing a discovery mission to figure out how many cisco are left, locate their spawning sites and identify potential roadblocks to their recovery. © MAT LEVINE/TNC.



More than 210 hours of volunteer time have been donated to build our lake-to-lake trail: Rob's Trail West. North American Breweries, which derives most of its water from Hemlock and Canadice Lakes, sent a team of staff every Wednesday this summer to help build the trail. © MAT LEVINE/TNC.

# Collaborative Science in Action

We have a wealth of knowledge and innovation in Central and Western New York thanks in part to the many world-class universities and institutions here. With your support, The Nature Conservancy works collaboratively with academic partners to transform the latest research into conservation actions that help nature thrive.



We're working with researchers at **Cornell University** to bring back native prey fish called "cisco," or lake herring, once one of the most abundant native prey fish in **Lake Ontario**.



We'll be collaborating with **Cornell University's** Department of Microbiology and Immunology on our eDNA project over the next two years. eDNA allows invasive species investigators to search for fragments of DNA left behind as invaders travel through the water, allowing for early detection before they spread.



In partnership with the **Genesee-Finger Lakes Regional Planning Council** and the **University of Buffalo**, we are helping three **Monroe County** communities deal with flooding.



We're working with **Cornell University** to develop a biological control for water chestnut that preys exclusively upon the invader.



In partnership with **Cornell's Atkinson Center for a Sustainable Future** and five other leading universities, The Nature Conservancy established the NatureNet Science Fellows Program. Two NatureNet fellows—Aaron Iverson and Joleah Lamb—are currently based at Cornell working on sustainable agriculture and coral reef disease.



For years, **SUNY College of Environmental Science and Forestry** (SUNY ESF) undergraduate volunteers have helped clean up trash at **El Dorado Beach Preserve**.



A model **SUNY ESF** developed has been incorporated into our Natural Resource Navigator tool.



A **University of Connecticut** graduate student is working at **O.D. von Engel Preserve** to evaluate how zooplankton evolve adaptations to climate change.



A scientist from the **Biodiversity Research Institute** collected data at our **Thousand Acre Swamp and Bergen Swamp Preserves** on the effects of mercury contamination on songbirds and environmental health.



A graduate student at **Cornell University** conducted research at **Chaumont Barrens and Limerick Cedars Preserves** examining the role of plant-associated microbes in alvar adaptation.



At our **Chaumont Barrens Preserve**, a **NYS DEC** researcher conducted a baseline survey of moth and butterfly species of greatest conservation concern.



A **New York State Museum** researcher has been studying the glacial stratigraphic record of our **Great Gully Preserve** on Cayuga Lake.



Professor Emeritus Ernest Williams of **Hamilton College** has taken dozens of classes to our **Rome Sand Plains Preserve** to restore blue lupine and support the rare frosted elfin butterfly.



A researcher from the **Upper Susquehanna Coalition** collected soil core sediments at **Bonaparte Swamp** to use as a source for propagating entrapped seeds.



**Ithaca College and Cornell University** students have volunteered their time to help build and maintain trails at **Eldridge Wilderness Preserve**.



Eastern hemlock and close-up of hemlock woolly adelgid © BRIDGET SHARRY/TANGLEWOOD NATURE CENTER.

## Citizen Scientists Fight Hemlock Woolly Adelgid

In his home state of North Carolina, Mat Levine, now a conservation land manager for The Nature Conservancy in Central and Western New York, saw hillsides once covered with majestic hemlocks turned desolate and grey by a tiny invasive insect. He's now helping communities stave off a similar fate for the Chemung River Valley.

This summer, Levine led a group of 40 people including Cornell University scientists, two Elmira College classes and other volunteers on a search for hemlock woolly adelgid, a little insect capable of causing a great deal of harm.

Hemlock woolly adelgid was first spotted in New York in 1987, in the Finger Lakes National Forest in 2009, and last year at our Frenchman's Bluff Preserve in Elmira. "It's been spreading quite a bit in the last five years," Levine says. "Parts of the Finger Lakes National Forest have been particularly hard hit. In other areas, like Frenchman's Bluff, it has arrived more recently."

Luckily, many dedicated people are committed to saving these trees. After a short training session to identify both eastern hemlocks and signs of the invader, the team combed lands owned by Tanglewood Nature Center and The Nature Conservancy to search for clues of the insects, which feed on new growth and suck the life from hemlocks. Fuzzy white clumps on the underside of needles—the insect's egg sacs—are the tell-tale sign of infestation.

"When it comes to invasive species management there is truly power in numbers," says Levine. "Finding invaders before they become well-established and spread is essential. For that, we need as many eyes on our forests as possible."

The results of the survey were alarming: Volunteers found that three out of every four hemlocks surveyed had hemlock woolly adelgid. "Because infestation is so extensive, the best hope for hemlocks at Frenchman's Bluff may be to introduce biocontrols—for instance, using a predatory beetle that eats the adelgid," Levine says.

"It won't be an easy battle, but it's a worthwhile one," says Jim Howe, executive director for The Nature Conservancy in Central and Western New York. "Hemlocks provide shade to cool streams used by native brook trout, and are a keystone species in the Appalachian forest. Everything that lives near hemlocks depends on them."

"Hemlocks matter to people, too," Howe adds. "You know immediately when you enter a hemlock forest. The air is cooler, and there's a cathedral-like feeling to the forest. You are surrounded by rich green color, even in winter. We simply have to win this battle."

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**Celebrating**  
Your Impact for Nature and People

