WNY PRISM

Partnering to Protect Western New York from Invasive Species

Fall/Winter 2018 Newsletter **Vol. 4 Issue 2**

In This Issue

The WNY PRISM mission is to proactively identify, evaluate and address invasive species priorities in western New York using a coordinated partnership of local professionals, organizations and private citizens to improve, restore and protect local aquatic and terrestrial resources.

Advances in Invasive Species Detection

Invasive species detection is a very time and resource intensive pursuit, but new technologies are making it easier and more efficient to find these harmful species.

Currently, WNY PRISM's Crew performs on the ground surveys of public lands. Surveys conducted in this manner are very effective and offer some of the most detailed data. However, they are time-intensive, cover relatively small areas and may be limited to areas easily accessible on foot.

WNY PRISM is excited to start expanding its invasive species detection arsenal to include emerging technologies such as environmental DNA (eDNA), drones and possibly even dogs.

While traditional DNA is sampled directly from an organism, eDNA is collected from an environmental sample, typically water. As animals move through their environment, they leave behind DNA in the form of scales, mucus, waste, etc. In aquatic environments small samples of water contain a snapshot of aquatic communities. We can use this snapshot to test for the presence or absence of invasive species. This is especially important in finding early detection species and species that may be too small to survey for effectively. WNY PRISM is excited to help make aquatic early detection easier, more effective and less expensive in the coming years by working with our many partners.

Water samples contain trace amounts of DNA from many species. Photo by: Fish Bio- Traces Left Behind.

Meanwhile, imagery captured by drones is being used to detect new infestations of hard to reach species, like water chestnut, and monitor stands of *Phragmites.* This enables the user to collect inexpensive, high-resolution images of difficult to survey areas.

Drones can be used to survey for difficult to access species such as water chestnut. Photo by: WNY PRISM.

Organizations are even using a dog's sense of smell to detect invasive species such as zebra mussels, southern pine beetle, and scotch broom. For more information on this innovative technique, attend the Invasive Species In-Service conference at Cornell University on November 13.

While these new technologies will never fully replace old-fashioned on the ground surveys, the ability to survey more land and water is essential in combatting invasive species.

Regional and State Updates

Mile-a-Minute (*Persicaria perfoliata*), an Early Detection Priority for WNY PRISM, was positively identified in Genesee County, at the Oak Orchard Wildlife Management Area. This annual vine can grow up to six inches per day! The NYS Department of Environmental Conservation hired two interns this summer to survey for and manage this species. Report any sightings using our Early Detection Reporting Protocol.

Spotted lanternfly (*Lycorma delicatula*) was positively identified in Yates County near Keuka Lake and in Albany County on a vehicle. This agricultural pest damages apple, grape, and hops plants, as well as many others. While this population is not yet in the WNY PRISM region, Yates County is right on our doorstep. Please keep a lookout for this invasive species and report any sightings to WNY PRISM, using our Early Detection Reporting Protocol.

The Great Lakes Slender False Brome Working Group Annual Report is available for download online. Read about the many accomplishments achieved during their first year.

iMapInvasives is planning to roll out their next platform in spring 2019. This update will feature an enhanced mobile interface, change over time visualization tools, improvements to the user experience and more. Updates will be posted here as they are made available.

WNY PRISM's contract with New York State has been renewed for the next five years. This renewal includes funding for a watercraft inspection program with 20 boat stewards and launch sites.

Various life stages of the spotted lanternfly. Photos by: L. Barringer , PA Dept. of Agriculture, Bugwood.org.

Partner Spotlight: Roger Tory Peterson Institute

By Elyse Henshaw, Conservation Technician and Melanie Smith, Communications Coordinator

Roger Tory Peterson Institute: Chautauqua Lake Invasives

The Roger Tory Peterson Institute of Natural History (RTPI) honors and continues the work of Roger Tory Peterson to foster understanding, appreciation and protection of the natural world. RTPI provides a powerful synergy of art, education and conservation focused on natural history and the environment in the spirit of Roger Tory Peterson's lifelong accomplishments in each of these areas.

Many aquatic plants exist within Chautauqua Lake; its nutrient-rich sediments provide a fertile growing bed for vegetation. Some of these plants are native to our area and provide critical ecological and environmental benefits, while others were introduced from distant locales and have been wreaking havoc on the ecological function, recreational and economic value of Chautauqua Lake. Surprisingly, some of the most prevalent invasives have been with us for decades already, while a steady stream of nearby or newly arriving species pose additional challenges to the future health of the lake.

Throughout 2018, RTPI, in partnership with the Chautauqua Lake & Watershed Management Alliance, the County of Chautauqua and Evergreen Outfitters in Mayville, offered a series of programs called "What are These Weeds?! An Introduction to Chautauqua Lake's Aquatic Invasive Plants." Attendees learned how to differentiate between the beneficial, native aquatic plant species and invasive, problematic species, and learned how to report suspicious plants to iMapInvasives. These programs were offered at 9 different venues around the lake and 60 participants attended the inaugural training sessions. Printed educational materials are currently being produced for public distribution, and additional programs will likely be planned for next spring and summer. For updates and to find additional project information on other ongoing invasive species projects, please visit www.rtpi.org.

Steering Committee Members

Buffalo Niagara Waterkeeper
Chautauqua Watershed Conservancy
Cornell Cooperative Extension
Ecology & Environment, Inc.
Natural Resource Conservation Service
USDA - NRCS
New York Sea Grant
NYS Department of Environmental Conservation
NYS Department of Transportation
New York State Certified Nursery and Landscape Professionals
New York State Parks, Recreation, and Historic Preservation
The Nature Conservancy
SUNY Buffalo State
United States Army Corps of Engineers, Buffalo District
USFWS, Lower Great Lakes Office

Upcoming Events

Full Partner Meeting
OCT 11; 1-3pm;
Great Lakes Center Field Station

ReLeaf Workshop: Tree Safety
OCT 16; 8-2:30pm;
Emery Park Ski Lodge

Great Lakes Slender False Brome Working Group Meeting
OCT 23; 1pm

Invasive Species In-Service
NOV 13-15;
Cornell University

For more information on these or other events, or to include your events on our calendar, visit our website.

To subscribe to the WNY PRISM listserve email:
cce-westernprism-l-request@cornell.edu
Type "join" in the subject line.
Leave the body of message blank.
Don't include signature or text.

WNY PRISM's Crew removed water chestnut at the Audubon Community Nature Center (left - Photo by: WNY PRISM) and applied herbicide to slender false brome at Letchworth State Park (right - Photo by: WNY PRISM).

Highlights from our 2018 Field Season

Summer is the busiest time of year for WNY PRISM, so much so that our staff tripled this year to keep up. The extra hands are essential as WNY PRISM divides its time amongst 8 counties, managing and removing invasive species, mapping and performing inventories of new areas and engaging with the public at outreach events.

Our Crew has been travelling throughout the region managing invasive species in many preserves such as Letchworth State Park, Audubon Community Nature Center and Seneca Bluffs. As part of an ongoing project at Tifft Nature Preserve, the Crew spent several days planting native species in an area previously covered with invasive buckthorn. They also surveyed for and eliminated several water lettuce populations, an early detection priority species, while surveying Ellicott Creek.

Seasonal and full-time staff collectively attended 27 outreach events this summer, allowing us to connect with 2,100 residents of western New York. These events are vital to preventing the introduction of new invasive species and managing those already here.

WNY PRISM is also pleased to have the distinction of hosting more events during New York State's Invasive Species Awareness Week (ISAW) than any other PRISM. Throughout July 8-14, we collaborated with our partners to promote our theme, "What YOU can do to stop the spread!" During this week alone, we engaged with over 500 people across western New York.

The slender false brome staff spent the summer surveying over 80 sites within the WNY PRISM region and Syracuse area. Using these data, a GIS-based habitat suitability model was created to guide future survey efforts. The working group also established research plots in areas with slender false brome infestations. With the help of the Crew, they implemented manual removal, mechanical removal, and herbicide treatment to develop best management practices in western New York.

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Slender False Brome staff (left to right) Kathleen McCormick, Emily Doores, Brittany Hernon, Rachel Bonafilia and Melissa Boglioli. Photo by: WNY PRISM.

Great Lakes Restoration Grant

This winter we applied for, and received, grant funding from the Great Lakes Restoration Initiative. Over the next two years we will work with the Western New York Land Conservancy to implement the Priority Lands Invasive Species Removal and Volunteer Monitoring Program. This program focuses on priority conservation lands valued for their rare habitats and species, including Niagara Escarpment Preserve, The Owens Falls Sanctuary, Spring Brook Fens, Stella Niagara Preserve, and North Tonawanda Audubon Preserve.

Boot brush station at Kenneglenn Scenic and Nature Preserve. Photo by: WNY PRISM.

Beginning in October and continuing through fall 2019, the Crew will remove invasive species such as Japanese barberry, common buckthorn, bush honeysuckle and multi-flora rose from these properties. When complete, 137.5 acres of forested area and 25 acres of grassland area will have been treated.

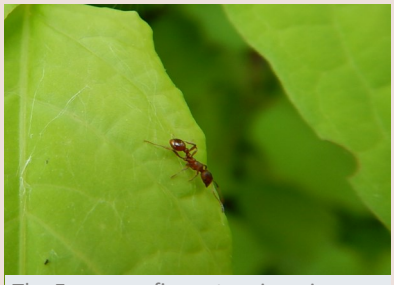
A volunteer program will then be formed to maintain this progress. Volunteers trained in invasive species identification, monitoring protocols, and manual removal practices, will visit these sites each spring to prevent reestablishment. Boot brush stations installed at trailheads will aid in this effort by reducing the spread and reintroduction of invasive species along trails. This program will ultimately allow for the natural regeneration of native plant and animal communities.

Species Profile: European Fire Ant

The European fire ant *(Myrmica rubra)* is a species of red ant native to Eurasia. Its first introduction to North America occurred in Maine in the 1960's. This species has spread as far south as Pennsylvania and west into Ontario, Canada. It has been found in NYS in Geneva and Buffalo.

The European fire ant is a serious pest to humans. The combination of their high densities, cryptic nest locations and aggressive behavior make their painful bite difficult to avoid.

The European fire ant also has significant effects on natural ecosystems. These ants form supercolonies, much larger than those of native ant species, that are able to reduce or completely suppress native arthropod populations.


The European fire ant on invasive Japanese knotweed in Tifft Nature Preserve. Photo by: WNY PRISM.

The best management technique is to prevent further spread, especially by ensuring that soil is free from this pest before transporting. Please report any sightings to WNY PRISM using our Early Detection Reporting Protocol.

Dr. Robert Warren will be presenting on his research of this species at our Full Partner Meeting on Thursday, October 11.

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Highlights, *Cont'd*

In a first for WNY PRISM, we welcomed 2 boat stewards to our seasonal staff. Throughout the summer they were posted at West Canal Park and Cuba Lake boat launches teaching boaters about invasive species and how they can clean, drain and dry their boat to stop the spread of invasive species.


2018 Boat Stewards (left to right) Morgan Beatey and Parker Everhart. Photo by: WNY PRISM.

By the end of the season, they had performed 1,800 inspections, informed 1,100 previously unaware boaters of NYS requirements to prevent invasive species spread and made contact with 900 people who had never interacted with a boat steward.

In the coming years, WNY PRISM plans on expanding its boat steward program to include more stewards and boat launches.