



SLELO PRISM

St. Lawrence Eastern Lake Ontario Partnership for Invasive Species Management
"Teaming Up to Stop the Spread of Invasive Species"

2021 Winter Newsletter

\$358.4 Million

Of New York's annual apple and grape
crop value is threatened by
Spotted Lanternfly.



In This Issue:

- ♦ **About the Cover**
- ♦ **Volunteer Experience**
- ♦ **Terrestrial Initiatives**
- ♦ **Freshwater Initiatives**
- ♦ **Education & Outreach**
- ♦ **Manager's Memo**

SUBSCRIBE



About the Cover - SLF is in NY, Now What?

Thomas Allgaier-New York State Department of Agriculture and Markets

One of the many challenges that 2020 brought to New York was the arrival of Spotted Lanternfly, SLF, (*Lycorma delicatula*) in the state. New Yorkers who are concerned about invasive species have been preparing and searching for this invasive pest for several years. This past summer, viable populations of SLF were detected in multiple locations across New York. **The question is: how did we get here, and where do we go next?**

SLF is a plant hopper, similar to a large aphid. The species is native to China, Taiwan, and Vietnam. It has spread and become an invasive pest in Japan, South Korea, and since 2014, the United States, where it was first detected in Berks County, Pennsylvania. The United States Department of Agriculture (USDA) and the State of Pennsylvania have been combating this new invasive pest since then. The spread has been slowed but SLF has gradually dispersed to other counties and states, including New York.

SLF feeds on upwards of 70 species of host plants. Of more concern to us at the New York State Department of Agriculture and Markets (AGM) are grapes, apples, and hops, which are each economically significant crops for the agricultural industry in New York and across the nation. Being that **New York is the second largest apple producer and third largest grape producer in the US the state stands to lose \$358.4 million in annual crop yields** (DEC). SLF additionally feeds on forest species that are important to New York farmers such as maple and walnut trees.

Currently in New York, SLF populations have been **detected** in Orangeburg, Staten Island, Port Jervis, Sloatsburg, and Ithaca. Multiple life stages of the SLF have been found in these locations.

In most cases, these sightings have included viable egg masses, which can survive New York winters, and can be found during the winter months into spring. SLF eggs hatch from April through June. The early instar nymphs that emerge are black with white dots and are very small, about the size of a tick. The nymphs use piercing sucking mouth parts to draw sap from the tender young plants that they feed on. From April to July, they molt three times and begin gaining in size. The fourth instar develops red spots on its wing pads and is much easier to spot in the environment. These are found from July through September. The final molt is transformative, and a fully developed winged adult finally emerges. Adults are present from July until they are killed by the first heavy frosts of winter. The adults are approximately one inch long and appear grayish with black dots on the translucent fore wings that allow some of the red color from the hind wings to show through, giving them a pinkish hue.

During the feeding process, SLF excrete a substance called “honeydew,” very much like aphids. This sugar-rich excrement coats everything below it, like rain on a sunny day. Sooty mold blooms can then form in this nutrient-rich environment, which is a nuisance and inhibits photosynthesis on leaves and stems, stressing plants. An infestation can also make it unpleasant for people to be outside. **[Click Here](#)** for visual references.

Report SLF Sightings

*If you see **signs of SLF**, take photos, note the location and email information to:*

SpottedLanternfly@agriculture.ny.gov

SLELO is encouraging our partners, colleagues and volunteers to aid state-wide efforts to enhance early detection survey efforts for spotted lanternfly and invasive tree of heaven, a favored host species of SLF. Agencies and conservation partners across the state are working to protect New York's resources from SLF. The NY Department of Agriculture and Markets (AGM), the NYS Office of Parks, Recreation and Historic Preservation, in collaboration with NY iMapInvasives, have developed a state-wide survey grid system to enhance efforts to help find SLF infestations in attempt to stop it's spread. This grid system compliments the survey work that state agencies are already implementing in New York and beyond by providing a platform for volunteers and professionals to

“adopt” a grid square to monitor for signs of spotted lanternfly and tree of heaven. The grid squares span 1KM each, and may be close to known SLF and/or tree of heaven infestations, found along major pathways or near important commodities that could be harmed by SLF. The iMap platform will track grid squares that have been adopted and highlight sites that need to be surveyed.

A webinar series showcasing this early detection effort along with signs to look for will be co-hosted by iMap & AGM.

View page 11 for event details.

Adopt a SLF Survey Area

Join a state-wide early detection survey effort with iMapInvasives.org.

www.nyimainvasives.org/slf

Volunteer Experience

SLELO Volunteer-Laura Nachbauer

I participated in SLELO's [#VirtualHikeChallenge](#) as a way to help teach my son how to look for signs of hemlock woolly adelgid (HWA). My family enjoys hiking and we make it a point to keep a look out for HWA and other invasive species out on the trails. This is our way of protecting our favorite hiking spots. I'm happy to do my part to protect hemlock trees as they are so important for our ecosystem. Hemlocks help filter nutrients before running off into our waterways, plus they provide wonderful shade on hot summer days for all of us to enjoy!

[Volunteer with SLELO](#)
[Watch For Inspiration](#)



Lauren Nachbauer checking hemlock branches for HWA.

Emerald Ash Borer Biocontrol

Tom Colarusso- USDA-APHIS

The Emerald Ash Borer (EAB) is an invasive beetle destroying ash trees across the country, causing ecological and economic harm. The United State Department of Agriculture (USDA) is committed to helping manage this pest, with a focus on biological control (biocontrol). Classical biocontrol uses natural enemies from a pest's native range to control the pest in the area it's invading. Biological control has successfully controlled invasive plant and insect pests such as winter moth, ash whitefly, eucalyptus long-horned borer, purple loosestrife, and Klamath weed. All imported biological control agents must pass rigorous testing before they are released to ensure they will not affect our native species.

To date the U.S. has approved four natural enemies to help manage EAB, three of which have been **released in the SLELO region**. *Oobius agrili* kills EAB eggs, while *Tetrastichus planipennisi* and *Spathius galinae* kill EAB larvae. The SLELO region is part of an exciting pilot study that is investigating combining short-term systemic insecticides and long-term biological control to help preserve ash resources in black and green ash forests. The goal is to use insecticides to keep the large, high value ash trees alive while EAB densities decline and populations of biocontrol agents increase. We plan to then stop treating trees with insecticides because we anticipate that the biocontrol agents will take over protecting the larger trees.

We have started to test this concept in three **urban city forests**. As predicted, biocontrol agent populations built up and spread, EAB populations crashed, and trees treated with insecticides persisted.



Erin Caruso (USDA Pest Survey Specialist) enters GPS coordinates and ash health data for a tagged ash tree that will be a part of the USDA's combined biocontrol and insecticide pest management study.

Insecticide treatments have been suspended for some trees, and we will continue to follow treated and untreated trees to determine if established biocontrol agents can protect those trees from EAB.

The next step for USDA was to determine if this concept could be transferred to natural forests. Our nation's natural forests contain ash trees of high value, especially black ash forests because ash bark is used for making baskets and has economic and cultural significance. At our sites in New York we are partnering with **Tribal Nations** that are exploring ways to preserve their black ash resources. We are also extending our work to state forests to test preservation of public ash resources.

Monitoring and Managing Ash, MaMA

Jonathan Rosenthal and Dr. Radka Wildova -MaMA Coordinators

Thank you to everyone in SLELO who has been participating in the **Monitoring and Managing Ash (MaMA) program** by setting up monitoring plots, reporting EAB status through our survey project, or adopting ash management practices that facilitate long-term ash conservation.

Through your work, the **MaMA Monitoring Plots Network**, which reaches from New England to the Midwest, now includes a total of six locations in Oswego, Jefferson, Lewis and Oneida counties. These plots let us know when ash mortality has reached thresholds such that remaining mature, healthy trees are truly lingering ash, and thus hold promise for ongoing EAB-resistance-breeding efforts. Additionally, they document local variation in the rates at which ash succumb to EAB, allowing management responses to be tailored accordingly.

Data contributed to our **MaMA Ash/EAB Survey project**, in which citizen-scientists report signs of EAB and whether it's killed any trees, has also helped us track the progression of EAB invasion. In 2020, one of the project participants in SLELO contributed 12 separate reports – thank you!

Even in winter, whether or not you're already a MaMA participant, here are some ways that you can use the program to help advance ash conservation:

- Inspect ash for EAB damage and report it through the **MaMA Ash/EAB Surveys project**. Winter is a great time to do this because it's when woodpeckers do lots of foraging for EAB, **revealing signs** in places they weren't previously apparent.



Meredith Taylor flagging potential lingering white ash to prevent it from being cut in a forest where almost 100% of the ash are dead or nearly dead due to emerald the ash borer. © J. Rosenthal

- If you manage ash, learn how to use **MaMA's tools such as its decision tree and task chart** to integrate the search for lingering ash into your response to EAB. Learn why cutting ash may make sense for such purposes as hazard-tree elimination, but felling healthy ash accelerates EAB spread and invasive plant proliferation and lessens chances of finding lingering ash to conserve the species.
- Consider setting aside some trees to use to track mortality as part of the **MaMA Monitoring Plots Network**. Although you wouldn't set up the plot until the June-September field season, now is a great time to plan for it.

New to iMapInvasives! – Local Municipal Boundaries

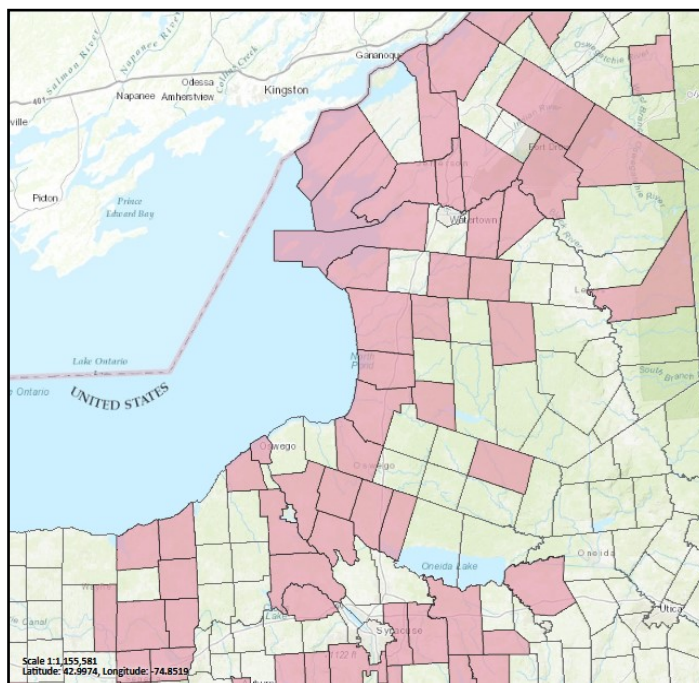
Mitch O'Neil– iMapInvasives & NYNHP

The NY iMapInvasives team is happy to announce new functionality within the iMapInvasives interface - Local Municipal Boundaries (towns & cities) are now available in our geographic layers. This new layer can be used in a number of ways – you can now view species distributions by municipality, as well as, set up email alerts and run reports for your municipality. Visit www.nyimainvasives.org today to get started!

There are three options to use the new municipal boundaries layer:

<<<OPTION 1>>>

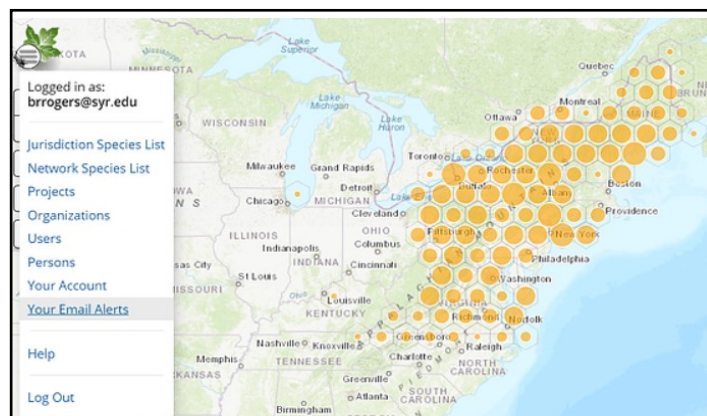
Create custom distribution maps by municipality and other geographies in iMap ([Instructions](#)).



iMap distribution of Pale swallow-wort by municipality (as of 2/4/2020).

<<<OPTION 2>>>

Set up a custom email alert to keep track of new observations in your town. Setting up email alerts is easy and customizable for frequency, geography, and species type ([Instructions](#)).



Email notifications are located in the menu dropdown after signing into your account.

<<<OPTION 3>>>

Generate customizable iMap reports on the invasive species data within your municipality ([Instructions](#)). ***The high number of confirmed Oriental bittersweet below may indicate a species encroaching the area or a species that has been under reported within the municipal boundary.*

| Report Results: | | |
|----------------------------------|---|-----------------|
| Presence Records: | | |
| Scientific Name | Common Name | Confirmed Count |
| Bithynia tentaculata | Mud Bithynia | 1 |
| Butomus umbellatus | Flowering-rush, Flowering rush | 1 |
| Capsella bursa-pastoris | Common Shepherd's Purse; Shepherd's Purse | 1 |
| Celastrus orbiculatus | Oriental Bittersweet | 122 |
| Centaurea spp (species unknown) | Knapweed (species unknown), Centaurea (species unknown) | 1 |
| Centaurea stoebe spp. micranthos | Spotted Starthistle, Spotted Knapweed | 2 |
| Chelidonium majus | Greater Celadine, Celandine | 1 |
| Cirsium arvense | Canada Thistle, Creeping Thistle | 3 |

Part of an Approaching Region Report for Watertown (species not reported within the Watertown municipality boundary, but confirmed nearby).

Urban Forest Sustainability Initiative

(UFSI): This program is designed to assist municipalities in our region to increase their urban forests' resilience to invasive pests, pathogens, and climate change. To do this, we offer an UFSI Guide, accompanied by a presentation about the program. This year, we will also offer two of our larger municipalities a reimbursement of up to **\$5,000** for the purchase of non-invasive tree species. In addition, the **UFSI Guide** has recently been updated with assistance from the New York Urban and Community Forestry Program. Topics include: conducting a tree inventory, completing an urban forest resiliency assessment, maintaining urban forest health, and pocket parks.

Biocontrol Use in SLELO PRISM: Biological control's are becoming more commonly used as an option for invasive species management. The main benefits of using biocontrol is that they conduct the management for you, keeping invasive species populations in check and reducing the need for human intervention. The following is biocontrol options are being used in the SLELO region. For both black and pale swallowwort, the approved biocontrol to use is *Hypena opulenta*, a moth from the Ukraine, which feeds exclusively on the leaves of these invasive species. We set up four *Hypena* cages last year with the greatest success in emergence and release occurring at Wehle State Park. We intend on setting up cages again this year, most likely at Robert Wehle State Park and Grenadier Island, and may set up an additional 1 or 2 cages. For purple loosestrife, there are several biocontrol's including: 2 leaf

feeding beetles, 1 root boring weevil, and 1 flower feeding weevil. They have been in use for many years, but we noticed an increase in purple loosestrife populations across the SLELO region last summer, so we are requesting *Galerucella* beetles from the DEC for release on PCAs with large quantities of purple loosestrife. Emerald Ash Borer is a recent problem in our area and is spreading throughout the SLELO region, killing all species of ash trees that it infests. EAB has several biocontrol's including: 1 Egg Parasitoid and 3 Larval Parasitoids. Plans are currently being made by the DEC and APHIS concerning releases of one or more of these biocontrol insects in the SLELO region.

Hemlock Woolly Adelgid Surveys: We are currently conducting HWA surveys throughout the SLELO region. This year, we are recording our field observations with the new iMap3 Forest Pest Data Collection Tool. The tool allows us to create presence and no presence area shapefiles along with data related to HWA presence. In addition, ecological attributes of the hemlock stands may be recorded and used to prioritize the stands for HWA management. The information from this tool can also be uploaded into the iMap Invasive website. So far, we have been fortunate to be the only PRISM not to detect HWA, but we are always on the lookout for it. We're interested in learning of hemlock stands that exist in our region and also want to know where our partners are conducting surveys. This information may be submitted on a **form** found on the SLELO website.

Black River Trail Feasibility Study: The Black River Trail extends from the Village of Black River, near Fort Drum to Watertown. It is a frequently visited trail with an estimate of 104,000 visits in 2019. The area of the trail that we are concerned with is a 3.5 mile segment adjacent to the river. There is an abundance of several invasive species along this part of the trail including Phragmites, swallowwort, oriental bittersweet, buckthorn, and honeysuckle. Over the summer, we conducted a survey to determine the feasibility of invasive species removal/control and restoration work. To do this, we divided the trail into 29 1/8 mile

long compartments and recorded such features as types of native, non-native, and invasive plant species, canopy cover, and understory plant abundance. We are currently working on data analysis that will result in priority scores, recommended management/removal methods, recommended native plant species for restoration work, and restoration difficulty scores for each of these compartments. This information will be included in the Black River Feasibility Report that should be completed by the end of winter. Removal/restoration efforts on this trail will be resource dependent and guided by the results of this study.

2020 Aquatic Restoration Initiative

Phase I Assessment Complete

SLELO-Brittney Rogers

The first phase of this initiative, “Aquatic and Riparian Invasive Species Inventory and Habitat Assessment,” focused on three select tributaries in Eastern Lake Ontario—Sandy Creek, South Sandy Creek and Deer Creek. The study helped to gain a better understanding of the presence of aquatic and terrestrial riparian invasive species.

The results of the assessment included recommendations on the most deserving areas in need of eradication, suppression, management of invasive species and the need for restoration, and serves as the foundation for Phase II in 2021. The **2020 SLELO PRISM Aquatic Restoration Initiative Phase I Final Report** and 2021 Request for Quotes will be posted on our website soon.



Matthew Biondolillo, Rootz, LLC conducting rake tosses during an aquatic survey.

Watercraft Inspection Results, Looking ahead to 2021

SLELO-Brittney Rogers

The 2020 steward program operated Memorial Day Weekend and continued to the weekend prior to U.S. Indigenous Peoples' Day and intercepted over 1,240 invasive species. In total, 27 launches were staffed for 697 shifts, totaling 6,001 hours. During this time, our 10 stewards conducted 10,598 surveys with 95.6% of boaters agreeing to the voluntary inspection. There were 27,375 people engaged by stewards, many receiving educational materials while the stewards inspected 12,455 watercraft.

The busiest launches staffed by stewards in 2020 were Butterfield Lake, Cape Vincent, Lake Bonaparte and North Sandy Pond. Lake Bonaparte averaged 34 surveys per day while the other three launches averaged 21-22 surveys per day. Read more about the program in the [2020 WISP Final Report](#).

2021 STEWARD POSITIONS NOW OPEN

Visit our [website](#) for more information about watercraft inspection, and to apply to become a steward for the 2021 field season.

We would like to acknowledge the support of the following municipalities and organizations for having stewards staffed at their launches. Your support is invaluable to the success of this program.

City of Fulton

City of Oswego

City of Rome

New York Power Authority

NYSDEC R6 Fisheries

NYSDEC R6 Forestry

NYSDEC R6 Wildlife

NYSDEC R7 Fisheries

NYSOPRHP

Town of Cape Vincent

Town of Henderson

Town of Massena

Village of Clayton

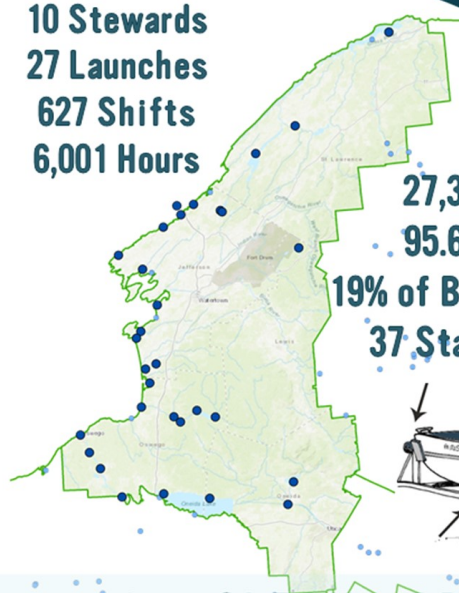
Village of Heuvelton

Village of Phoenix

Village of Sackets Harbor

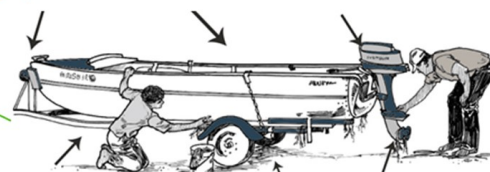
Wrights Landing Marina

10 Stewards
27 Launches
627 Shifts
6,001 Hours



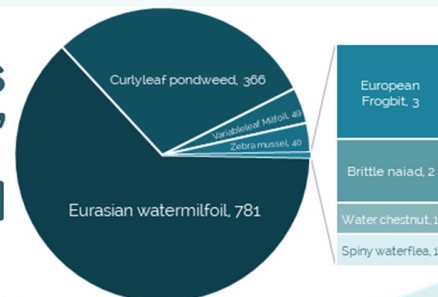
2020 SLELO PRISM - TILT Watercraft Inspection Steward Program

27,375 People Encountered
95.6% Boater Participation
19% of Boats registered outside NY
37 State and Province Visitors



CLEAN + DRAIN + DRY
PROTECTING OUR WATERS FROM AQUATIC INVASIVE SPECIES

10,598 Surveys
1,339 "Dirty boats"
1,243 AIS intercepted



INVASIVE SPECIES
MANAGEMENT
SAINT LAWRENCE
EASTERN LAKE ONTARIO

"Teaming Up To Stop The Spread of Invasive Species"

www.sleloinvasives.org

Partner Spotlight

David Miller-Algonquin to Adirondacks Collaborative

The Algonquin to Adirondacks (A2A) region is a unique diverse bioregion that connects Algonquin Park to Adirondack Park through the Frontenac Arch and surrounding lands. Home to a vast array of plants and animals, it is one of the last large-scale, intact forest and wetland linkages left in Eastern North America. It is however, under threat from an array of factors including habitat loss, the effects of climate change on species and landscapes, pollution, increased prevalence of invasive species, and human-wildlife conflicts particularly around road corridors and mortality.

One organization that has taken on a leading role in addressing these threats on both sides of the border is the **Algonquin to Adirondack Collaborative** (A2A). The A2A Collaborative is a U.S., Canadian, and First Nations partner organization that works with scientists, policy-makers, conservationists, communities, governments, and other local groups to protect and enhance the unique ecological features and functions of the corridor.

A2A work is focussed on projects which maintain and enhance the connectivity across the A2A Region. Reducing road mortality and improving connectivity across man-made barriers is one example with A2A research identifying “hot-spots” of mortality and working with partners on mitigation measures. Another core project is the **A2A Trail** – A Pilgrimage for Nature. The Trail is a 600 km multi-modal active recreation travel route connecting the two great parks using existing trails, rail trails, and backroads to raise conservation ethic and knowledge of the A2A corridor.



Emily Conger, John Allport, Rick Stronks and A2A volunteer. Photo taken by David Miller A2A Executive Director.

Working with local groups to integrate regional landscape ecology into local conservation efforts is also an A2A Collaborative priority. Recent work has focused on using Conservation Action Planning (**CAP**), an approach to conservation action focussed on working with local groups to identify threats, strategies, and actions. A CAP was just completed by A2A and partners in the Frontenac Arch area on the Canadian side and an action related to invasive species control as an outcome is next on the agenda. The plan is to work with the CAP partners, to provide early warning for invasive species concerns and a coordinated approach to mitigation, modelled partly on the work that SLELO has undertaken on the US side.

The A2A Collaborative looks forward to working with all partners – including SLELO – to **connect lands and people** across the A2A region to conserve and enhance this critical corridor for ecological integrity and resilience in Eastern North America.

Upcoming Invasive Species Events and Announcements

Help Survey for Spotted Lanternfly

 Adopt a Grid Square
2.23.21
1pm-2:30pm EST

www.nyimainvasives.org/slf

[REGISTER](#)



NEW YORK STATE HEMLOCK INITIATIVE
KEEPING THE LEGACY ALIVE

Webinar
03.10.21
1pm-2:30pm EST

INVASIVE SPECIES MANAGEMENT
SAINT LAWRENCE
EASTERN LAKE ONTARIO

CONSERVING
Hemlocks
Preparing for & Managing
Hemlock Woolly Adelgid

[REGISTER](#)

National Invasive Species awareness Week February 22-26th 2pm ET Participate in the largest invasive species awareness effort in North America!

Take action against Hemlock Woolly Adelgid (Part I), Impacts, ID & Citizen Science, February 25th 3pm ET Learn all about this damaging invasive insect, understand how to identify Hemlock Woolly Adelgid in the field, and gain the skills you need to take action to protect local forests.

Prevent the Spread of Invasive Species: Best Practices March, 24th 10am-11am ET Protect the waters you love to fish and prepare for early season angling by understanding best practices to prevent the spread of invasive plants and animals.

Non-Native Invasive Earthworms 101: From the Nightcrawler to the Jumping Worm: March 24th, 2pm ET Hosted by the North American Invasive Species Management Association.



NATURALLY SPEAKING

Get outdoors with Nature Up North

Invasive Species

Nature Up North

[Team SLELO was in a Podcast!](#)



The Hemlock Tribune

-Issue Highlights-

*Role of eDNA in HWA Management * HWA now in ADK
* Bio-control by Season * A View from Above *Field Notes

[The Latest News on Hemlock Woolly Adelgid Research](#)



Managers' Memo

Perseverance...



About a year ago, we were given the news of a global biological event that required us to re-think our approach to the upcoming field season. After months of planning the brakes were pressed, our work approach was revisited and ultimately redefined. By May, we were given the green light to proceed with caution. Face masks, six feet apart, only what is necessary, no sharing of equipment or vehicles, use of gloves and hand sanitizer required— you know, all those things designed to get the most important work done and done safely.

Our next step was to tame our robust work plan to focus only on what was genuinely achievable given our new parameters. As such our work plan targets were reduced by about 30%. This wasn't easy since we believe that all of our work is important and we had already prioritized the work to complement our Strategic Plan, but we did it and moved forward.

Today, nearly one year later we can now reflect on our **accomplishments** made during one of the most

unique years of recent times. We had 10 boat launch stewards at 27 locations preventing the spread of aquatic invasive species on 1,243 occasions, we planted 8,500 trees on Tug Hill, produced an Urban Forest Sustainability Guide, discovered three rare species, educated 30,000 individuals— woaaaah, wait a minute, we did this and more during a year of restricted parameters?

Defined as *doing something despite difficulty or delay in achieving success*, perseverance not only defines our work over the past year, it exemplifies a quality of the people we work with. Yes, the face masks, six feet apart, only what is necessary, no sharing of equipment or vehicles, gloves, hand sanitizer, and all those things designed to get the most important work done safely, combined with the desire, commitment and willingness to do so...**that's perseverance**. Thank you to Team SLELO and all of our partners, collaborators and volunteers!

~ Rob Williams

SLELO PRISM Partner List

- ◆ NYS Department of Environmental Conservation
- ◆ The Nature Conservancy in New York
- ◆ Cornell Cooperative Extension Offices
- ◆ NYS Office of Parks, Recreation & Historic Preservation
- ◆ NYS Department of Transportation
- ◆ Soil & Water Conservation Districts
- ◆ Fort Drum Military Installation
- ◆ CNY Regional Planning & Development Board
- ◆ NY Power Authority
- ◆ Tug Hill Commission
- ◆ Tug Hill Tomorrow Land Trust
- ◆ Thousand Islands Land Trust
- ◆ Indian River Lakes Conservancy
- ◆ Save The River
- ◆ NY Sea Grant
- ◆ Ducks Unlimited
- ◆ Onondaga Audubon
- ◆ US Coast Guard Auxiliary
- ◆ St. Regis Mohawk Tribe-Environmental Unit
- ◆ Algonquin to Adirondack Collaborative

Acknowledgements:

NYS Invasive Species Council
NYS Department of
Environmental Conservation
The NYS Environmental
Protection Fund

Edits completed by SLELO PRISM Staff
Articles contributed by SLELO partners



The Nature
Conservancy



SLELO PRISM
Host Organization



Department of
Environmental
Conservation

Eastern Lake Ontario

Swallow-wort collaborative

