2020
Annual Report

SLELO PRISM

Protecting our lands and waters from the impacts of invasive species

INVASIVE SPECIES MANAGEMENT
St. Lawrence - Eastern Lake Ontario
Copies of this report can be obtained from the SLELO-PRISM website:

www.sleloinvasives.org

Cover photo:

Fish Creek Wetland. St. Lawrence County
New York
©TNC/Brittney Rogers

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The Nature Conservancy as Host Organization

The New York State Department of Environmental Conservation,
Invasive Species Coordination Section

The New York State Invasive Species Council and
The New York State Department of Agriculture and Markets

The numerous partner organizations and their representatives who contribute their expertise, time and resources to the development and success of the SLELO PRISM.
Table of Contents

Strategic Accomplishments ................................................................. 6
Conservation Impact ........................................................................... 7
Where We Worked .............................................................................. 8
Special Initiatives .............................................................................. 9
   Kasoag Lake Fanwort Suppression ................................................. 9
   Urban Forest Sustainability Guide ............................................... 9
   Successful Release of Biological Controls .................................. 10
   Black River Trail Feasibility Study .............................................. 10
   Aquatic Macrophyte Nutrient Analysis ....................................... 11
   Eastern Lake Ontario Tributary Assessment .............................. 11
Goal Number 1 – Prevention ............................................................... 12
   Watercraft Inspection and Survey Program .............................. 12
   Advisory Boards ......................................................................... 13
Goal Number 2 – Early Detection ....................................................... 14
   Rare Species Finds .................................................................. 15
   Innovation and Environmental DNA ......................................... 16
Goal Number 3 – Rapid Response ....................................................... 17
Goal Number 4 – Education and Outreach ....................................... 18
Goal Number 5 – Cooperation ........................................................... 19
Goal Number 6 – Information Management ..................................... 20
   Simple Aquatic Survey for Professionals ................................. 20
   iMap Mobile Advance .............................................................. 20
Goal 7 – Ecological Restoration ......................................................... 21
   Treatment Sites General ............................................................ 21
   Tug Hill Forest ......................................................................... 21
   Carleton Island ........................................................................ 21
Goal Number 8 – Innovation ............................................................... 22
   Submersible Remote Operated Vehicle .................................... 22
   Environmental DNA .................................................................. 22
   iMapinvasives ......................................................................... 23
Research Priorities ............................................................................ 24
   Biological Control Rearing Facility .......................................... 24
   Carbon Loss Model ................................................................... 24
   Expanded Macrophyte Nutrient Analysis .................................. 24
   Pheromone Based Bait ............................................................... 24
References ......................................................................................... 25
Photo Credits ................................................................................... 26
Appendix A – Species Tiers List ......................................................... 27
Appendix B – SLELO PRISM Partners ............................................... 29
2020 Strategic Accomplishments

- Assisted with restoration efforts on Tug Hill by planting an additional 8,500 climate-adaptable, forest pest resistant trees.

- Intercepted aquatic invasive species on 1,243 occasions preventing their spread to and from other North American waterbodies.

- Utilized innovation such as (biological controls and eDNA) to protect our lands and waters.

- Engaged with 35 virtual education and outreach events across a five-county region directly engaging 39,578 individuals.

- Prepared an Urban Forest Sustainability Guidebook for cities.
Conservation Impact

Invasive species of plants, animals, insects and microorganisms are among the most serious threats to the health of our lands and waters. Invasive species are opportunistic and almost always out-compete, damage, or replace native species resulting in serious disruptions in ecosystem processes and balance. These processes include such things as the interdependency on food and habitat, hydrology, carbon release, nutrient cycling, natural succession, soil erosion and water quality.

A recent assessment by our PRISM and The Nature Conservancy regarding connectivity resulted in metrics that suggests that the 478 acres that our partnership directly manages results in a total landscape protection of some 5.7 million acres. In the context of prevention, what we do in the core forest of Tug Hill, such as preventing the establishment of a forest pest, along with forest restoration, helps to protect the entire 750,000-acre forest, does it not? What we do in the Oswego River and the Erie Canal with aquatic invasive species spread prevention serves to protect the Finger Lakes, the Hudson and Mohawk Rivers, Oneida Lake and nearly all connected waterways. In addition, our eDNA and watercraft inspection work in the St. Lawrence River, Thousand Islands and coastal waters serves to protect Lake Ontario and beyond. Now, multiply this by all eight PRISMs across New York State.

Our work has far greater impact than just within our own regional footprint. By protecting and promoting native species we are in fact creating more resilient landscapes. Resilient to changes in climate, stresses by non-native species and stresses by human encroachment.
Where We Worked
In 2020

SLELO PRISM
Where We Work
2019-2020

This map was created to depict the work being conducted by the SLELO PRISM in 2019-2020 and is a combined accumulation of work continuously happening by the program, volunteers and partners. This map was created by The Nature Conservancy SLELO PRISM, Aquatic Restoration and Resiliency Coordinator Brittnay Rogers, Brittnay.Rogers@TNC.org

Legend
- WISP 2020
- Water Chestnut Pulls
- Ecological Restoration
- Volunteer Survey Sites
- EAB Trap Sites
- Control Sites
- Community Forestry Initiative
- Education Outreach
- Virtual Events
- Priority Conservation Area
- Tug Hill ISPZ

Sources: Esri, HERE, Garmin, Intermap, iStock, Planet, TomTom, NRCan, IGN, Kartoza, NRCC, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community.
Special Initiatives I

Kasoag Lake Fanwort Suppression

In cooperation with the Kasoag Lake Conservation Association, DEC and subcontractors, 29.5 acres of remnant fanwort populations were successfully treated. This effort not only restores Kasoag Lake but helps to protect Oneida Lake from nomad fanwort.

A prior assessment by the SLELO Early Detection Team conducted on the 17-mile Fish Creek which connects Kasoag Lake to Oneida Lake, found no fanwort populations downstream of Kasoag Lake.

Urban Forest Sustainability Initiative

In recognition of the importance healthy trees play in our communities, our Terrestrial Restoration and Resiliency Coordinator Robert Smith along with DEC and several partners have developed an initiative to help our communities sustain urban forest health by maintaining diverse, climate adaptable and invasive species resistant trees. Over the coming years our partnership will be providing guidance resources to cities that will better enable these communities to develop Urban Forest Sustainability Plans that include an insight on climate adaptability, carbon storage, tree diversity and invasive species components. Copies of our Urban Forest Sustainability Guide can be retrieved here: Urban Forest Sustainability.
Successful Release of Biological Controls

In partnership with the Thousand Island Land Trust, the New York State Invasive Species Research Institute, SUNY Environmental Science & Forestry, USDA, the University of Rhode Island, ELOSC and volunteers, four release cages were established in the Thousand Islands Region of New York. Cages were populated with *Hypena opulenta*, a moth native to the Ukraine that defoliates pale swallow-wort plants. Adults emerged, egg and larval development occurred and nearly 100% defoliation occurred in two of the cages within 4 weeks.

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Black River Trail Feasibility Study

The Black River Trail is a 4.5-mile riparian trail that connects the Black River and upland agricultural fields. It is unique in nature and host to many native flora and fauna. SLELO Partners have established that a feasibility study would need to occur to inventory the current species populations and distributions including invasive species along the riparian corridor to determine if ecological restoration measures would be beneficial. This study is underway.
Aquatic Macrophyte Nutrient Analysis and Carbon

Annually, PRISM’s across New York hand-harvest thousands of pounds (tons) of water chestnut plants (*Trapa natans*). By knowing the nutrient content of the plant material, we can better understand the potential implications this species may have on internal nutrient loading and its effects on water quality and harmful algae blooms. Additionally, knowing the carbon content of the plants may help us to better inform managers as to proper disposal of unwanted *Trapa* plants so as not to release carbon into the atmosphere.

This year Aquatic Restoration and Resiliency Coordinator Brittney Rogers furthered our understanding of the nutrient relationships of *Trapa natans* by delivering several presentations. Nutrient content is evaluated at the Cornell Nutrient Analysis Lab (CNAL).

Eastern Lake Ontario AIS Tributary Assessment

In 2020, SLELO subcontracted with Rootz LLC® to complete a tributary assessment on three tributaries along Eastern Lake Ontario to include: Sandy Creek, South Sandy Creek and Deer Creek. This effort resulted in a more comprehensive understanding of the aquatic and riparian health of these tributaries. Aquatic invasive species (AIS), including some noteworthy native species, were assessed.

Recommendations for potential restoration measures were also made as part of this assessment.

The report can be found at: SLELO Resources/AIS
Healthy Freshwater
Watercraft Inspection Steward Program (WISP)

In 2020, SLELO PRISM partnered with the Thousand Islands Land Trust (TILT) to co-administer our Watercraft Inspection Steward Program and to expand our program to 27 high-use boat launches, from as far north as Massena and south to Rome by hiring 10 stewards.

2020 Metrics Include:

- 10,598 Surveys completed
- 1,243 AIS interceptions*
- 2,222 total organisms intercepted**
- 95.6% Participation rate
- 27,375 People reached
- 85% committed to clean, drain, and dry their equipment in the absence of a steward.
- 19% of boats registered outside of New York
- Largest group size 14 people

This program helps to prevent the spread of aquatic invasive species to and from waterbodies across North America.

*Species known to be invasive in New York State.
**Some of which may be non-native or invasive in other parts of North America.
New York ISAC

The New York State Invasive Species Advisory Committee (ISAC) was formed to provide information, advice and guidance on invasive species issues to the New York State Invasive Species Council. This includes discussions and recommendations regarding the prevention of invasive species introductions into New York State along with spread prevention across PRISM regions. In 2020, the SLELO PRISM Manager became The Nature Conservancy’s representative to ISAC and retired his role as Secretary and PRISM Representative.

North America ISAC

This year marks the first year of our participation on The Nature Conservancy’s North American Invasive Species Advisory Committee. The SLELO PRISM Manager engages with this ISAC for shared representation and to address shared concerns for invasive species issues.
Priority Conservation Areas

There are currently 25 Priority Conservation Areas or PCA’s within the SLELO region. These are areas that have ecological significance or that are host to rare native species. To maximize efficiency, each PCA is scouted on a two-year rotation by our terrestrial and aquatic coordinators. The detailed final report can be found on our website at: SLELO PRISM Field Reports.

In 2020 the following PCA’s were searched for Tier 1 and Tier 2 species along with notable native species. **131 Terrestrial and aquatic Highly Probable Areas (HPA’s) were searched.**

Chaumont Barrens  
Deer Creek Marsh WMA  
Black Pond WMA  
Oneida Lake/Three Mile Bay  
Black Lake  
Chaumont Bay  
Salmon River Estuary  
Lakeview WMA

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No Tier-1 Species Were Observed in 2020

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1 See Appendix (A) for SLELO Tiered Species List
Rare Species Finds

This year, while conducting field surveys and early detection searches on Priority Conservation Areas, our team observed several uncommon or rare native species. These observations are important in that they confirm that these species have survived in their natural state despite changes in the environment. Observing these species supports biological diversity and validates our work. Two rare terrestrial plants and one fish were encountered while conducting early detection searches.

**Twinleaf (*Jeffersonia diphylla*)**

This plant is considered imperiled in New York State because of rarity or highly vulnerable to extirpation from New York State due to biological or human factors.²

**Green Dragon (*Arisaema dracontium*)**

This plant is considered as an exploitable vulnerable species in New York. Common in many areas of the state but possibly rare in other areas.³

**Pirate Perch (*Aphredoderus sayanus*)**

In New York, Pirate Perch are only found in two areas: tributaries to the Great Lakes and on Long Island. Pirate perch are classified as a species of greatest conservation need (Ibid).⁴

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² New York Natural Heritage Rare Plant Status, Stephen Young 2019
³ New York Natural Heritage Rare Plant Status, Stephen Young 2019.
⁴ NYS DEC Fish Atlas
Innovation & Early Detection

Goal Number 2+

Environmental DNA

Partners of the SLELO PRISM along with The Nature Conservancy and the Department of Microbiology and Immunology at Cornell University have implemented early detection efforts using environmental DNA or eDNA which is a highly specialized process for determining the presence of genetic material released by both invasive and native aquatic animals. Using eDNA is an innovative early detection tool at the molecular level.

2020 sample sites included: Black River, Erie Canal, Oswego, Oneida and Seneca Rivers, Sandy Creek, South Sandy Creek, Deer Creek, Chaumont Bay and Chaumont River.

2020 species included:

- Rock Bass – native – control (pending).
- Cisco – native (pending).
- Tench – non-native (pending).
- Northern Snakehead – non-native (pending).
- Asian Carp Group – non-native (pending).
- Asian Swamp Eel – non-native (pending).
- Round Goby – non-native (pending).

Project reports are available on our website at: SLELO Reports eDNA
Rapid Response
Control & Management
Goal Number 3

Summary of 2020
Control Work

**Giant Hogweed:**
43 Sites - no germination
11 Sites root cut
10 Sites herbicide control
2 Sites - no permission
2 New sites reported by DEC

**Swallow-wort:**
72 sites being managed
13 PCAs
73.75 acres managed

**Japanese Knotweed:**
5 sites being managed
2 PCA’s
0.20 acres managed

**Phragmites:**
5 sites being managed
2 PCA’s
0.59 acres managed

**Oriental Bittersweet:**
1 site managed by NYS DEC

Above: Terrestrial Coordinator Robert Smith inspecting oriental bittersweet at Lakeview WMA. Photo: ©TNC-Brittney Rogers

52% of all hogweed plants are controlled manually to reduce the use of herbicides
Increasing public awareness and influencing behavior on invasive species issues is a goal of SLELO’s educational efforts. Due to this year’s global biological pandemic, our outreach efforts were shifted to virtual engagements through webinars and social media campaigns.

The SLELO Education/Outreach Committee is a group of committed partners who volunteer their time and contribute their expertise to provide support for invasive species outreach initiatives. Participating on this committee are:

- Megan Pistolese, Committee Lead
- Sue Gwise-Jefferson County CCE
- Irene Mazzocchi- DEC Region 6
- Emily Sheridan- DEC Region 6
- Carla Fowler- Tug Hill Commission
- Alaina Young- TILT
- Peter Zimmer- OPRHP
- Maria Cipullo- OPRHP
- Maria MoskaLee- DEC Region 7
- Lauren Eggleston - Save the River
- Heidi Sourwine- IRLC
- Haley Sylvan-Thompson Park Zoo
- Patricia Shulenburg-Cardno
- Gabby Padewska- OPRHP

A Closer Look at the Stats:

- 39,578 people directly engaged in invasive species awareness via social media, website views, events, and watercraft inspections.
- 298 Facebook posts were created.
- 35 events were held in 2020 (including virtual engagements).

National and International Exposure was Received at the Following Conferences:

- North American Invasive Species Management Association (NAISMA) Conference
- Upper Midwest Invasive Species Conference
- Cornell Cooperative Extension Agriculture, Food & Environmental Systems In-Service
Working together towards a common cause is perhaps one of the SLELO Partnership’s strongest attributes. Our partners\(^5\) are interested in the subject matter, there is a tremendous amount of expertise within the partnership, and we are engaged, motivated and work extremely well together. In 2020 we faced challenges whereby social distancing as the result of the current public health situation prevented many in-person activities. Cooperative highlights from 2020 include:

- We collaborated on biological control releases of *Hypena opulenta* with; the New York Invasive Species Research Institute, United States Department of Agriculture, SUNY Environmental Science and Forestry, the University of Rhode Island, the Thousand Islands Land Trust, the Eastern Lake Ontario Swallowwort Collaborative and local volunteers.

- In 2020 we began advising the **City of Syracuse** on proposed interventions for Japanese knotweed and buckthorn species in Syracuse Parks.

- Our Education and Outreach Committee collaborated to promote virtual education and awareness activities, including planning for the 2021 Eastern Lake Ontario Invasive Species Symposium.

- We implemented special projects through our partners to complement our invasive species work.

- Our Volunteer Surveillance Network (VSN) continued with searches for tench, hemlock woolly adelgid, emerald ash borer and spotted lanternfly.

- We engaged in virtual meetings of PRISM Leaders, NY ISAC, TNC ISAC and numerous virtual trainings.

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\(^5\) See Appendix B for SLELO’s List of Partners
Simple Aquatic Survey for Professionals

Simple Aquatic Survey for Professionals (SAS Pro), a Survey123 field collection tool, developed by New York Natural Heritage Program was created to facilitate standard data collection of aquatic invasive species surveys across New York State. The survey includes fields for rake toss sampling, water depth, site observations and other incidental detections with a species list containing both invasive and native plants. Data is collected in a manner which facilitates an automated cross-walk procedure into iMapInvasives, saving staff from both SLELO and iMapInvasives time of working through bulk uploads. This tool allows coordinate points to be recorded and images collected to be directly connected to the specific survey sample. This survey tool was primarily used for aquatic field surveys.

iMapInvasives Mobile Advanced

iMapInvasives Mobile Advanced (iMMA) allows digital data collection in the field that will seamlessly upload with iMapInvasives. The data collected in the field includes searched areas, presence or absence of species, treatment or management information and more. By utilizing the same tool for both field surveys and control efforts we are equipped to more rapidly share accurate information between SLELO field staff and subcontractors. Data collected is first uploaded into a TNC ArcGIS Online server where it can be reviewed. Once complete, the server will copy the data over to iMapInvasives. This reduces data collection redundancy while giving SLELO more in-depth options in the field. This survey tool is primarily used for terrestrial field surveys and our treatment and control records.
Restoring and protecting the biological diversity of unique habitats from the negative impacts posed by invasive species is a core purpose for our work. Areas that have been treated for invasive species may be considered as disturbed areas and can be restored more effectively with intentional planting of native species augmenting the resiliency of these sites.6

**Treatment Sites – General**

As a general practice and where appropriate, the SLELO team plants native grass seed to expedite the growth of ground cover to reduce the susceptibility of the site to the infestation of a non-native species. Annual ryegrass (*Lolium* spp.), perennial ryegrass (*Lolium perenne*) and little bluestem (*Schizachyrium scoparium*) is used as a standard, recovery seed mix. In some instances, native tree seedlings have been planted along with live staking using resident plant material.

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**Tug Hill Forest**

The SLELO PRISM assisted The Nature Conservancy with restoration efforts on Tug Hill following invasive species suppression. One goal is to enhance species diversity by planting tree seedlings from 26 different species over two years. Legacy trees include; sugar maple and red spruce. Northern edge species included oaks, native pine and hickory7. In 2020 8,500 seedlings were planted.

**Carleton Island**

After supressing populations of swallowwort, areas were over-seeded with 10 to 12 lbs/acre of annual ryegrass, perennial ryegrass and little bluestem.

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7 Sargis Gregg. 2018 Improving the health and resilience of our forests. Powerpoint.
Underwater (Submersible) Remote Operated Vehicle

Underwater or submersible remote operated vehicles (ROV’s) are used to support underwater tasks. They allow operators to capture photo and video footage to inspect and monitor for aquatic flora and fauna, both native and non-native in ports, harbors, habitats and other aquatic environments.

This season SLELO purchased a submersible ROV with the intent to access aquatic environments for the purpose of conducting observations and inventories of native and non-native aquatic plants, fish and other invasive species.

Environmental DNA

Partners of the SLELO PRISM along with The Nature Conservancy and the Department of Microbiology and Immunology at Cornell University have implemented early detection efforts using environmental DNA or eDNA which is a highly specialized process for determining the presence of genetic material released by both invasive and native aquatic animals. Using eDNA as an early detection tool continues to be incorporated into our work.

Above: eDNA Field Sampling Equipment. ©TNC/Brittney Rogers
### Records by Species Type*

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<th>Species Type</th>
<th>2020 Observations</th>
<th>Total 2012 to Present</th>
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<td>177</td>
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<tr>
<td>Animal Other Invertebrate - Aquatic</td>
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<td>190</td>
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<tr>
<td>Animal Other Invertebrate - Terrestrial</td>
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<td>3</td>
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<td>Animal Vertebrate - Aquatic</td>
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<td>2,527</td>
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<tr>
<td>Animal Vertebrate - Terrestrial</td>
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<td>10</td>
</tr>
<tr>
<td>Plant - Aquatic</td>
<td>123</td>
<td>2,089</td>
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<td>Plant - Terrestrial</td>
<td>517</td>
<td>9,704</td>
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<tr>
<td>TOTAL</td>
<td>779</td>
<td>14,700</td>
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*Confirmed and unconfirmed*

### Records by Data Entry Method

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<th>Data Entry Method</th>
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<th>Total 2010 to Present</th>
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<td>10,151</td>
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<td>Mobile App</td>
<td>324</td>
<td>997</td>
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<td>On-Line</td>
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<td>NatureServe Survey 123</td>
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<td>iMMA</td>
<td>117</td>
<td>148</td>
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<tr>
<td>SAS Pro</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Forest Pest</td>
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### TRAINING CLASSES & Class Name

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<th>Class Name</th>
<th># Trained</th>
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<td>25-Jan-20</td>
<td>Megan Pistolese</td>
<td>HWA Guided Walk</td>
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<tr>
<td>27-Jan-20</td>
<td>Jennifer Dean</td>
<td>Advanced iMap Topics for SLELO Partners</td>
<td>11</td>
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<tr>
<td>10-Feb-20</td>
<td>Megan Pistolese</td>
<td>Hemlock Woolly Adelgid Guided Walk</td>
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<tr>
<td>15-May-20</td>
<td>M. O’Neill &amp; M. Pistolese</td>
<td>Harnessing the Power of iMap Tools / Citizen Science</td>
<td>17</td>
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<tr>
<td>4-Aug-20</td>
<td>F. Williams &amp; M. Pistolese</td>
<td>Project WHIRL</td>
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<td>29-Dec-20</td>
<td>Megan Pistolese</td>
<td>Protect Your Hemlocks</td>
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<td>7-Mar-20</td>
<td>Linda Gibbs</td>
<td>Hemlock Woolly Adelgid Walk and Talk</td>
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<td>3-Mar-20</td>
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<td>15-May-20</td>
<td>Mitchell</td>
<td>VSN Story Map Webinar</td>
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<td>4-11-Aug-20</td>
<td>IRLC</td>
<td>WHIRL</td>
<td>14</td>
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<tr>
<td>29-Oct-20</td>
<td>C. Marschner, F. Williams, MP</td>
<td>Protect Your Hemlocks</td>
<td>10</td>
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</table>

### Top 10 Reported Species in 2020

<table>
<thead>
<tr>
<th>Species Name</th>
<th>Observations**</th>
<th>Species Name</th>
<th>County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gypsy Moth</td>
<td>131</td>
<td>Watercress</td>
<td>Jefferson</td>
</tr>
<tr>
<td>Water Chestnut</td>
<td>87</td>
<td>Brown Star Thistle</td>
<td>Jefferson</td>
</tr>
<tr>
<td>Buckthorn</td>
<td>74</td>
<td>Eastern Helleborine</td>
<td>All SLELO Counties/Region wide</td>
</tr>
<tr>
<td>Giant Hogweed</td>
<td>59</td>
<td>Stringy Stonecrop</td>
<td>Jefferson</td>
</tr>
<tr>
<td>Oriental Bittersweet</td>
<td>39</td>
<td>Bishops Goutweed</td>
<td>Jefferson</td>
</tr>
<tr>
<td>Purple Loosestrife</td>
<td>35</td>
<td>Butter and eggs</td>
<td>Jefferson, Lewis</td>
</tr>
<tr>
<td>Honeysuckle (spp. unknown)</td>
<td>30</td>
<td>Amur Honeysuckle</td>
<td>Lewis</td>
</tr>
<tr>
<td>Morrow’s Honeysuckle</td>
<td>29</td>
<td>Gold moss</td>
<td>Oneida</td>
</tr>
<tr>
<td>European Common Reed</td>
<td>28</td>
<td>Musk thistle</td>
<td>Oneida</td>
</tr>
<tr>
<td>Japanese knotweed</td>
<td>22</td>
<td>Tall hawkweed</td>
<td>Oswego</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tubenose goby</td>
<td>St. Lawrence</td>
</tr>
</tbody>
</table>

** Some observations are found outside of Priority Conservation Areas and may not be align with the SLELO Tiers

### New to County (Non-native) Species Reported in 2020

- **Gypsy Moth**: 131 observations in Jefferson County.
- **Water Chestnut**: 87 observations in Jefferson County.
- **Buckthorn**: 74 observations, primarily found in Jefferson County and Region-wide.
- **Giant Hogweed**: 59 observations in Jefferson County.
- **Oriental Bittersweet**: 39 observations in Jefferson County.
- **Purple Loosestrife**: 35 observations in Jefferson, Lewis, and Oswego counties.
- **Amur Honeysuckle**: 30 observations in Lewis County.
- **Gold moss**: 29 observations in Oneida County.
- **Musk thistle**: 28 observations in Oneida County.
- **Tall hawkweed**: 22 observations in Oswego County.
- **Tubenose goby**: 10 observations in St. Lawrence County.

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**pg. 23**
The New York Invasive Species Research Institute (NYISRI) periodically requests research related items that are evaluated and prioritized. Those deemed most feasible are considered for development. Recent research requests submitted by the SLELO PRISM include:

**Biological Control Rearing Facility**

To develop and sustain large-scale biological control rearing facilities as biological controls are approved.

**Carbon Loss Model:**

To develop a carbon loss model which estimates the amount of carbon released into the atmosphere as the result of deforestation by invasive forest pests and pathogens. This can be used to determine the potential impacts on climate change as a result of deforestation.

**Expanded Invasive Macrophyte Nutrient Analysis**

To gain a better understanding of the impact that aquatic invasive plants (AIP) have on internal nutrient loading of lakes and embayment's and the potential of AIP's to facilitate harmful algae blooms and carbon storage.

**Pheromone Based Bait**

A new research item submitted was for the development of a species-specific pheromone-based bait and netting protocol for confirmation, capture and removal of invasive fish.
References


New York Natural Heritage Rare Plant Status, 2020. Stephen Young.


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Appendix A: SLELO PRISM’s Current Species Tiers

**Tier 1 - Prevention/Early Detection Species** - Not in PRISM, but within 100-mile buffer or introduction pathway exists. Highest level of early detection survey efforts.

- Asian Longhorned Beetle - *(Anoplophora glabripennis)*
- Hemlock Woolly Adelgid - *(Adelges tsugae)*
- Hydrilla - *(Hydrilla verticillata)*
- Kudzu - *(Pueraria montana var. lobata)*
- Mile-A-Minute Vine - *(Persicaria perfoliata)*
- Silver, Big Head and Grass Carp
- Slender False Brome - *(Brachypodium sylvaticum)*
- Spotted Lanternfly - *(Lycorma delicatula)*
- Water Lettuce - *(Pistia stratiotes)*
- Water Hyacinth - *(Eichhornia crassipes)*
- Water Soldier - *(Stratiotes aloides)*

**Tier 2 – Eradication Species** - Present in Prism, but at low abundance with suitable treatment methods available to make eradication feasible within Priority Conservation Areas (PCA’s).

- Asian Clam – *(Corbicula fluminea)*
- Fanwort - *(Cabomba caroliniana)*
- Giant Hogweed - *(Heracleum mantegazzianum)*
- Hemimysis - *(Hemimysis anomala)*
- Porcelain Berry - *(Ampelopsis glandulosa)*
- Spiny Water Flea - *(Bythotrephes longimanus)*
- Tench - *(Tinca tinca)*

**Tier 3 - Suppression Species** - Too widespread for eradication from PRISM, but some areas remain unaffected. Targeted management to suppress the population within Priority Conservation Areas (PCA’s).

- Black & Pale Swallow-wort - *(Vincetoxicum* spp.)*
- Common Buckthorn - *(Rhamnus cathartica)*
- Glossy Buckthorn - *(Frangula alnus)*
- Japanese Knotweed - *(Reynoutria japonica)*
- Japanese Stiltgrass - *(Microstegium vimineum)*
- Oriental Bittersweet – *(Celastrus orbiculatus)*
Phragmites/Common Reed – *Phragmites australis*
Rusty Crayfish - *Orconectes rusticus*
Starry Stonewort - *Nitellopsis obtusa*
Tree-of-heaven - *Ailanthus altissima*
Water Chestnut - *Trapa natans*
Wild Chervil - *Anthriscus sylvestris*
Yellow Iris - *Iris pseudacorus*

**Tier 4 - Local Control Species** - Present and widespread throughout PRISM with no chance of eradication. Localized (landowner) management applied to protect high priority resources like rare plant or recreation assets.

Curly Leaf Pondweed - *Potamogeton crispus*
Emerald Ash Borer - *Agrilus planipennis*
Eurasian Water Milfoil - *Myriophyllum spicatum*
European Frogbit - *Hydrocharis morsus-ranae*
Feral Swine - *Sus scrofa*
Leafy Spurge - *Euphorbia virgata*
Purple Loosestrife - *Lythrum salicaria*
Round Goby - *Neogobius melanostomus*
Spotted Knapweed – *Centaurea stoebe ssp. micranthos*
Wild Parsnip - *Pastinaca sativa*
Zebra/Quagga Mussel - (Dreissena spp.)

**Tier 5 – Species** - Species that may or may not be in PRISM but are difficult to respond to or that require more knowledge of.
Appendix B: List of Current PRISM Partners

Principle Partners:

➢ New York State Department of Environmental Conservation
➢ The Nature Conservancy
➢ Cornell Cooperative Extension
➢ New York State Department of Transportation
➢ New York State Department of Parks Recreation and Historic Preservation
➢ Sea Grant of New York
➢ Thousand Islands Land Trust

At-Large Partners:

➢ St. Lawrence County Representative, Cooperative Extension
➢ Jefferson County Representative, vacant
➢ Lewis County Representative, Soil & Water Conservation District
➢ Oneida County Representative, vacant
➢ Oswego County Representative, Soil & Water Conservation District

Cooperating Affiliates:

➢ Ducks Unlimited
➢ Tug Hill Tomorrow Land Trust
➢ Tug Hill Commission
➢ Fort Drum Military Installation
➢ Save The River Organization
➢ Audubon Central New York
➢ Private Consultant
➢ New York Power Authority
➢ CNY Regional Planning and Development Board
➢ United States Coast Guard Auxiliary
➢ Indian River Lakes Conservancy
➢ St. Regis Mohawk Tribe at Akwesasne
➢ Algonquin to Adirondacks Collaborative | A2A