SLELO PRISM

St. Lawrence Eastern Lake Ontario Partnership for Regional Invasive Species Management

Teaming Up to Stop the Spread of Invasive Species

Spring 2015 Newsletter **Volume III Issue 1**

Porcelain-berry vine

The porcelain-berry vine (*Ampelopsis brevipedunculata*) is an attractive, yet highly aggressive invader that has established itself in the Mid-Atlantic States, the Northeast and Wisconsin. In New York State it has been found in Essex County and in Sullivan County, southward. Although it is not in the SLELO PRISM yet, it is on our watch list due to its invasiveness, high reproductive capacity and its ability to shade out native species.

photo credit: Jil Swearingen, U.S. National Park Service (Porcelain-berry).

Also known as Amur peppervine, the backstory on this plant is the same as all other species of invasive plants that we been dealing with over the past two decades. Porcelain-berry is native to northeast Asia and was introduced to the US in the mid-19th century as an ornamental. It is a woody, perennial vine up to 20 feet long that climbs via tendrils. It was valued for its dense growth habit, erosion control, and porcelain-marbled berries. It was also touted as a valuable wildlife species since the berries are attractive to birds.

"Last summer during a visit to Queens New York, I was astonished at the aggressive nature of this invasive plant and became determined to prevent its establishment in the SLELO region."

- Rob Williams SLELO PRISM Coordinator

What makes the porcelain-berry so insidious is that it is a member of the grape family. It is often mistaken for a native grape vine and goes unnoticed. It is fast growing, hardy and will climb and entangle fences, landscape borders and nearly anything in its path. The mature leaves are very similar to a grape leaf with 3 to 5 well-defined lobes and coarsely toothed margins. The immature leaves are highly incised with deep, rounded sinuses. To distinguish porcelain-berry from native grape vines, simply slice a length of the vine in half longitudinally. Focus on the pith in the center. A grape vine will have a brown pith; in porcelain -berry the pith is white. In a grape vine the pith is not continuous across the leaf nodes; in porcelain-berry the pith is continuous across the nodes.

The flowers of the porcelain-berry appear July through August and are inconspicuous greenish-white clusters. The fruits are visible in September and October. They start out light green in color and ripen to a shiny mottled blue. Porcelain-berry prefers moist soils and is often found growing on forest edges, pond and stream banks, and in thickets. It grows best in full sun, but it will also grow in areas with some shade; it will not tolerate heavy shade. Since it is a dense vine, porcelain-berry will climb over and engulf native plants. The vines can grow 15 feet in one season and invade open habitats quickly.

As with most invasive plants it is equally adept at reproducing both sexually and vegetatively. Each berry contains 2 to 4 fast germinating seeds that are readily dispersed by birds. Water dispersal is also common- plants are often found downstream from mature infestations. The seeds can remain viable in the soil for several years. Asexually, the stems will root when they come in contact with the ground. Cutting back the plants causes re-sprouting.

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Investing in knowledge of invasive species issues in New York's Great Lakes Watershed

By Emily Sheridan; Eastern Great Lakes Watershed Coordinator

"An investment in knowledge always pays the best interest."
-Benjamin Franklin

When early settlers of the Great Lakes region first navigated through and settled within these harbors, they did not fully understand the implications of introducing species that they brought with them. Non native invasive species in the multi-state Great Lakes basin result in economic losses estimated at $5 billion dollars annually, disrupt important ecosystem functions, reduce water quality, and can impact human health and safety. Had early settlers known the implications of introducing invasive species within the Great Lakes basin, these costs might not have been incurred.

New York's Great Lakes Program is a collaborative effort lead by the NYSDEC in partnership with State Agencies and partners. The program recognizes the value of investing in knowledge among citizens, stakeholders, and future generations about the issues and management of New York's Great Lakes watershed. It also seeks to promote an ecosystem based management approach to managing natural resources and water quality within the watershed. Ecosystem based management applies the following principles:

- Place based focus.
- Protection of ecosystem function, structure, and key processes.
- Interconnectedness within and among systems.
- Integration of ecological, social, economic, and institutional perspectives.
- Sustainable human use of the ecosystem.
- Stakeholder involvement.
- Collaboration.
- Scientific foundation for decision making.
- Adaptive management.

The Great Lakes program promotes the goal of "combating invasive species to sustain an ecosystem and to maintain diverse economic and recreational opportunities" through the Interim Great Lakes Action Agenda.

A number of programs and partners, including the St. Lawrence Eastern Lake Ontario Partnership for Regional Invasive Species Management (SLELO-PRISM), are involved with the Great Lakes management of invasive species. The greatest opportunity to reduce the impacts of invasive species is through prevention, which relies heavily on educating and engaging citizens to recognize and report invasive species, and to take action to reduce their spread.

Photo Credit: Emily Sheridan (Workshop attendees gather to observe the impacts of invasive species on the landscape at the SLELO PRISM sponsored Eastern Lake Ontario Invasive Species Symposium).

A 2015 study "New York Residents Awareness of Invasive Species" lead by Chuck O'Neill of Cornell Cooperative Extension conducted 3,000 telephone interviews and found 54% of New York residents knew very little about invasive species. The study asked residents about their knowledge of specific invasive species, including water chestnut, zebra mussels, wild parsnip, hydrilla, and emerald ash borer. Over 70% of respondents had never heard of hydrilla or emerald ash borer.

However those in the SLELO and APPIP PRISM areas had the highest awareness in the state. This reflects the proactive and robust outreach and education programs of our regional PRISMs. The awareness study by Cornell can further strengthen PRISM's education and outreach efforts and aid in expanding their audience. By ensuring that regional stakeholders are knowledgeable and engaged, and able to make decisions about how their actions can prevent the spread and impacts of invasive species, regional PRISM's are applying an ecosystem based management approach in managing invasive species.

The Great Lakes Program seeks to further educate and engage citizens about addressing other issues that impact our Great Lakes watershed, including climate change, pollution, runoff, biodiversity, water conservation, and sustainable use of New York's natural resources. By investing in educating, engaging, and promoting stewardship among stakeholders, citizens, and the next generation of decision makers, we can prevent costly future environmental issues.

Workgroups will be held this spring to help promote collaboration between agencies and partners as they work in development of their sub basin work plan within the Great Lakes Region. To learn more or to get involved with this and other Great Lakes Program iniatives, please email program staff at (glakes@dec.ny.gov).

SLELO PRISM

Teaming Up To Stop The Spread of Invasive Species

Save the Date for the 2nd Eastern Lake Ontario Invasive Species Symposium June 10th, 2015 Selkirk Shores State Park

The SLELO PRISM is happy to announce the return of its Invasive Species Symposium for 2015. This is a free, day long event to educate professionals and the public on the latest invasive species information. The theme for this year's Symposium are best management practices and restoration. Continued education credits for professionals are pending. Space for the event is limited.

Registration information forthcoming.

St. Lawrence - Eastern Lake Ontario SLELO PRISM Partnership For Regional Invasive Species Management

Controlling Invasive Exotics on Electric Transmission Rights of Way

Christopher J. Sherwood, Regional Staff Forester New York Power Authority

What invasives are being moved on electric rights of way (ROW) ? How are we moving them? What cleaning techniques can be used to control the transport of the invasive species and what is the cost effectiveness of these cleaning techniques? These are just some of the questions that we need to answer in the electric power industry. The New York Power Authority (NYPA) has been a partner with SUNY ESF and EPRI (Electric Power Research Institute) in an in depth study to answer some of these questions that could shape the future protocols of right-of-way management.

NYPA has 1,400 miles of high voltage transmission lines across the state encompassing 16,000 acres. These important transmission lines must be maintained to provide safe reliable power to New York. To accomplish this, a very active vegetation management plan is in place which includes various integrated vegetation management (IVM) practices. Consequently there are frequent operations going on in these ROW's, with many different personnel and equipment. So what are these operations doing to the invasives that are on the ROW?

Photo Credit: Juliana Quant, Senior Research Support Specialist at SUNY ESF
(Licensed pesticide applicator applies herbicide to a power line right of way).

SUNY ESF embarked on a research project to try and answer this difficult question in 2012. The objectives of this research were to determine the cost effectiveness of cleaning and to develop a practical support tool to guide ROW workers toward the most practical and effective way in various situations. To meet the objectives a three part plan was enacted. 1) A list of 40 invasive species was constructed from state listings and then information was gathered on the biology and ecology of those species to assist with field research. 2) Personnel and equipment were cleaned off and propagules gathered from two years of ROW operations. The propagules were then germinated and grown in a greenhouse setting for help in identifying. 3) Quantifying the invasive exotics moved by ROW workers and equipment is the final part of this study and is the current stage of the research.

Photo Credit: Juliana Quant, Senior Research Support Specialist at SUNY ESF
(Crew members remove plant fragments from vehicle tires).

What do we know so far? To date there have been 57 different ROW treatment operations observed and 195 cleaning samples taken with GPS tracking devices installed on personnel and equipment. After the operation and within a week of the sample taking, the ESF field crew returned to the site and recorded the invasives that were on the treatment area.

From those samples thousands of plants have germinated. Preliminary results show the most common invasives picked up are Morrow honeysuckle and purple loosestrife. Currently ESF is finishing the last leg of the germination/ identification process. A final technical report will be produced by November 1, 2015.

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COORDINATOR'S COLUMN

Strategizing Collaboratively Leads to Success

It's been said that invasive species are the second largest threat to biodiversity after habitat loss (Pimentel 2004). My sense is that they are referring to land clearing for development or other synthetic purposes. However, if we consider that an infestation of invasive species is a type of habitat loss, then does it not compete with first place. That said, restoring habitats after sites have been treated for invasives becomes not only important but completes the circle from infestation to native restoration.

Over the past few years our partners have engaged in significant control work in an effort to suppress, contain and in some cases eradicate invasive species. Most of our work occurs on priority conservation areas or areas that have some natural or ecological significance. From globally rare alvar sites that support rare species such as the Prairie Smoke (*Guem triflorum*) to the Great Lakes marshes that support Least Bittern (*Ixobrychus exilis*) it is important that we recognize that in some areas post-treatment restoration may be needed to return the site to its native character. Not all sites require intentional restoration. Some aquatic sites may benefit only from the removal of invasives (e.g. water chestnut).

Other aquatic sites may benefit from restoring natural flows (hydrology). Certain sites may benefit from natural succession after treatment occurs with no intervention. Many sites, however, especially terrestrial sites, do require intentional restoration since the removal of invasive plants creates a disturbed area ripe for invasives to re-establish. Literature suggests that basic measures such as cover-seeding and live-staking with native plant material can have a positive impact on restoring terrestrial and/or riparian treatment sites. As our partnership continues with control work, we should be mindful of when and where intentional restoration should occur and work towards balancing control with restoration.

In a recent review of our Strategic Plan it was suggested that we consider establishing a restoration committee. This would allow us to draw upon the expertise of our partners to develop suggestions for site restoration in our region's priority natural areas. I am confident that our partners will embrace this for the benefit of our local ecology.

Rob Williams
PRISM Coordinator

First Detector Trainings a Success!

On February 26th and 27th, after several months of planning, the SLELO PRISM successfully held two first detector trainings for forest pests. These trainings educated a wide variety of attendees from forest owners to land trusts, master gardeners, maple syrup farmers and beyond. The importance of educating local community members on forest pest identification, prevention and management is paramount to community preparedness and resilience.

Once again, collaboration was key to our success.

A sincere thank you should be extended to the Cornell Cooperative Extensions of St. Lawrence and Jefferson Counties who graciously hosted the events and helped achieve their success. Cornell University should also be recognized for spearheading the events and providing the funds and support for their PHD student Joanna Fisher to facilitate the trainings.

C/O The Nature Conservancy, CWNY

Acknowledgements:
NYS Invasive Species Council
NYS Environmental Protection Fund

Porcelain berry - continued from page 1.

Prevention is the key to control, and small populations should be eradicated before they get out of hand. Cultural controls include removing the flowers to prevent seed production and hand pulling. Herbicides such as glyphosate and triclopyr are effective when used as a foliar or basal bark treatment, or when applied to the freshly cut stems.

In the landscape porcelain-berry should be replaced with native plants such as trumpet honeysuckle (*Lonicera sempervirens*), common trumpet creeper (*Campsis radicans*), American wisteria (*Wisteria frutescens*), or Virginia creeper (*Parthenocissus quinquefolia*).

Controlling Invasive Exotics on Electric Transmission Rights of Way - continued from page 4.

The report will include a review of important invasive exotic species as well as the findings of the effectiveness of cleaning using various techniques and scientific inquiry.

This research report by the SUNY ESF team is to be credited to Christopher Nowak, PhD, Martin Dovciak, PhD, and Juliana Quant, Senior Research Support Specialist. They are eager to present their findings at upcoming SLELO meetings and other events.