

SLELO PRISM

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

Teaming Up to Stop the Spread of Invasive Species



Invasive Insect on Hemlock

By Sue Gwise, Cornell Cooperative Extension of Jefferson County

The eastern hemlock is an integral part of our northern forests. These long-lived (300 to 600 years!) and shade tolerant trees provide many ecological benefits. They prevent erosion by stabilizing soil, help maintain cool stream water temperatures which are critical for aquatic insects and brook trout, provide habitat for neotropical migrant birds and are important for recreation.

Unfortunately these majestic trees are being threatened by a tiny insect called the hemlock woolly adelgid (HWA). Similar to an aphid, the adelgid feeds at the base of hemlock needles, depleting nutrient resources. Introduced to the US from Asia in 1924, the HWA has infested counties roughly along the Appalachians from Georgia to Maine. In NY it has moved into the southeast, Finger Lakes and western parts of the state. The closest infestation to the SLELO PRISM is in Cayuga County.

The HWA is a parthenogenic insect which means that most of the population is female, leading to greater reproductive output. Each female can lay 300 eggs and there are two generations per year. When the eggs hatch the crawler stage of the insect moves to the base of a needle, inserts a straw-like stylus and hunkers down. The crawler then covers itself with white cottony filaments which form a mass. At that point the crawler becomes resistant to insecticide applications. Under the cottony cover the HWA matures into an adult which emerges to reproduce.

An HWA infestation is most easily recognized by the white, woolly masses

along the twigs at the base of the needles. Feeding by the HWA leads to desiccation of the needles, stunting, bud mortality, and die back of twigs and limbs. This process makes the tree more susceptible to secondary insects, disease and drought. Mortality occurs within 10 years.

The HWA can be controlled with insecticides, but timing is critical. Sprays are only effective when the crawlers are active and this is difficult to determine. Trunk injections are more effective but are ex-



Hemlock Woolly Adelgid. Credit: Chris Evans, The University of Georgia, www.forestryimages.org/

pensive and must be done by an arborist or licensed pesticide applicator. Healthy, specimen trees can be protected, but we cannot protect all the hemlocks in a forest until effective bio-controls can be developed. (Research is underway and several HWA predators

show promise.) Here are several things the general public can do to help in the fight against HWA:

- ◆ Report any suspected infestations to your local Cornell Cooperative Extension, NYS-DEC or SLELO.
- ◆ Keep bird feeders away from hemlock trees- birds can vector the crawlers.
- ◆ If hiking, be aware that transport of the crawlers is possible in March through June.
- ◆ If purchasing hemlocks (eastern and Carolina), inspect the trees closely.
- ◆ Maintain hemlock health and avoid drought conditions.
- ◆ DO NOT fertilize hemlock trees with nitrogen! This will make the trees more attractive to the HWA and increase populations that may already exist in the tree.

Symposium Success

Katie Malinowski, NYS Tug Hill Commission

Over 70 people attended the Eastern Lake Ontario Invasive Species Symposium on June 11 at Wehle State Park in Henderson. Sponsored by SLELO PRISM and the Robert G. Wehle Charitable Trust, this first full day training session offered by SLELO provided Continuing Education Credits for NYS Licensed Pesticide Applicators in 10 categories at no charge. Presentations were offered on the following topics:

- ◆ Water Chestnut Status in Central NY and Control Efforts
- ◆ Hydrilla in the Cayuga Inlet
- ◆ Emerald Ash Borer Status and Control Techniques
- ◆ Japanese Knotweed Salmon River Project
- ◆ Aquatic Invasive Species Prevention and Outreach
- ◆ Giant Hogweed
- ◆ Pale Swallow-wort



The day ended with an optional tour of active swallow-wort control sites at Wehle State Park, which is at the epicenter of the Jefferson County swallow-wort infestation.

All of the symposium presentations are available on SLELO's website under the "Resources and Links" tab.



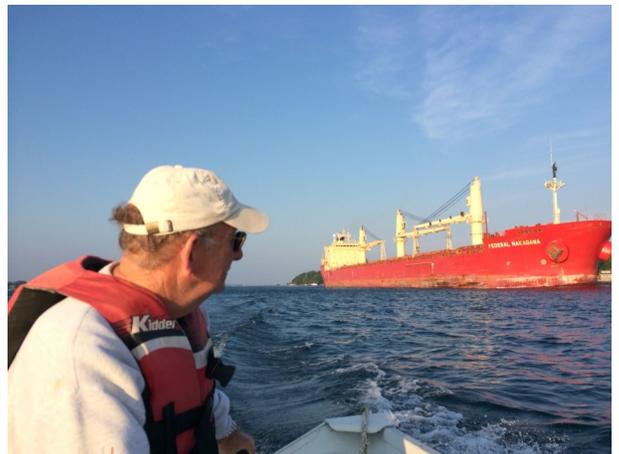
Partner Spotlight: Save The River

Since 1978 Save The River (STR) has been the leading grassroots advocacy organization working to protect the St. Lawrence River by campaigning to stop aquatic invasive species, fighting winter navigation, and promoting an environmentally friendly water levels plan. Save The River also organizes the water restoration and monitoring programs that track River health and identify pollution problems. In 2004, STR was designated the Upper St. Lawrence Riverkeeper and is a member of the international Waterkeeper Alliance.

To date more than 186 aquatic invasive species have been documented in the Great Lakes/St. Lawrence River system. Save The River's Clean-Up the Ballast Campaign is focused on stopping the introduction of aquatic invasive species by tackling the primary source - ship ballast tanks. STR advocates at the international, federal and state level for stringent ballast regulations for all ships transiting the Great Lakes & St. Lawrence River.

At the local level Save The River's Riverkeeper Volunteer Program trains volunteers to be its eyes and ears on the River, by teaching techniques for assessing River health and identifying potential pollution problems. Since the program's inception in 2009 over 750 Riverkeeper volunteers have been trained to keep an eye out for pollution, wildlife die-offs and subtle changes in the River ecosystem that can indicate changes in River health. Volunteers also learn how to assess pollution problems and how to effectively report these problems to the proper authorities.

For more information visit www.savetheriver.org or stop in and visit their office and interactive storefront located at 409 Riverside Drive, Clayton.



A Day in the Lives of the SLELO PRSIM Early Detection Field Crew

Sabrina Dreythaler & Elizabeth MacEwen, SLELO PRSIM Early Detection Field Crew

Early detection and rapid response is spotting and responding to the presence of a low-abundance invasive species before it becomes well-established. This is the first step in prevention and possible eradication. As the 2014 SLELO PRISM early detection field crew, we are responsible for the observation of invasive species within our priority conservation areas.

Not everyone can say they love their job all day every day, but then again not everyone is actively working towards saving the world from the threat of invasive species. Canoeing, hiking, and being in the sun are some of the things we do every day. First, we meet up at headquarters in Pulaski. There we gather all of our tools needed to investigate invasive species and to survive out in the wilderness for the day. After placing our canoe on top of our car, we travel out to one of our priority conservation areas and get to work.

Once in our canoe, we turn on our GPS, and start assessing the body of water. We use the rake-toss method to collect plant samples from the bottom, identifying every plant we collect and noting every time we see an invasive species. We collect specimens we are unsure of to use for identification later on.



We are constantly on the look-out for Prevention/Watchlist species such as hydrilla (*Hydrilla verticillata*) and kudzu (*Pueraria montana*), which have rapid spread/growth capabilities and must be managed for immediately if found. Occasionally we come across dangerous plants such as giant hogweed. This is when we call our rapid response team Mike Parks and Ed Miller to help us handle

the situation.

We get to enjoy the scenery while eating lunch, usually on a nice inland trail or on the open water. Once we've refueled, we finish our survey, and head back for the day.

After finishing a site, we assemble our report to show what we accomplished. At this point, we research the species we couldn't identify and anything we saw that seemed unusual. After

going home and getting some rest, we are ready to head back out the next day.

This is what the early detection crew must do when on patrol for invasive species. Our hope is that everyone else will keep watch for these species, so we can maintain the biodiversity of the ecosystem around us.

Not pictured are the SLELO Rapid Response team Mike Parks and Ed Miller who have been very busy controlling hogweed, swallow-wort and knotweed this season.

Technical ED/RR Field Reports Available

Technical field reports developed by the SLELO early detection and rapid response teams are available from the SLELO PRISM website at www.sleloinvasives.org. Searchable under the menu item titled "Field Reports". These reports reflect the work being completed on priority conservation areas as determined by our partners. The reports include invasive species observations at HPA's (Highly Probable Areas) for both aquatic and terrestrial surveillance. Reports for the 2014 season include:

Giant Hogweed	Tug Hill I.S.P.Z.	Whetstone Reservoir	Salmon River Estuary
Oneida Lake	Mud Bay	Dune Willow Herbivory	Citizen Science
Chaumont Bay	Black Lake	Swallow-wort Control	Salmon River Knotweed

COORDINATOR'S COLUMN



Congratulations SLELO PRISM partners!

Last fall I recall having a dialogue with our PRISM partners about our five year contract coming to an end on December 31st. I also remember

the subtle ambiance of the room not knowing what the future will bring and after all, the mutual concern was that *“we were just getting started as a PRISM.”*

Knowing that a new contract would take time and certainly would not be in place by January 1st, we turned to our host organization, the Central and Western New York Chapter of The Nature Conservancy who believing in the accomplishments of the PRISM, graciously offered to support the PRISM monetarily until such time as we could secure a new contract with NYS. Six months, sixteen days and fourteen hours later (yes I counted), the email came in. The SLELO PRISM was awarded a new five year contract.

Highlights of this contract include: a full time education and outreach coordinator; funds to continue our “special projects” that compliment our existing control

efforts; and four seasonal employees that make up our early detection and rapid response teams.

I have noted many times the commitment of our partners whom I can't speak highly enough about. We are interested in the subject matter, there is a tremendous amount of expertise within the partnership, we are engaged, motivated and work extremely well together. I am impressed by what our partners have accomplished under our first contract and look forward to furthering these accomplishments over the next five years.

The support that we receive from the New York State Invasive Species Council, the New York State Department of Environmental Conservation Invasive Species Coordination Unit, the NYS Environmental Protection Fund, our grants and legal specialist from The Nature Conservancy — combined with the enthusiasm of our partners — brings me confidence that our prevention and management efforts will ultimately prevail.

Rob Williams

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SLELO PRISM Partners

- ◆ Cornell Cooperative Extension County Offices
- ◆ The Nature Conservancy
- ◆ NYS Department of Environmental Conservation
- ◆ NYS Office of Parks, Recreation & Historic Preservation
- ◆ NYS Department of Transportation
- ◆ NY Sea Grant
- ◆ Ducks Unlimited
- ◆ County Soil & Water Conservation Districts
- ◆ Fort Drum Military Installation
- ◆ Tug Hill Tomorrow Land Trust
- ◆ Tug Hill Commission
- ◆ Save The River
- ◆ Audubon - Central NY Chapter
- ◆ Thousand Islands Land Trust

SLELO PRISM Prevention Species (Watchlist)

Asian Clam
Asian Longhorned Beetle
Didymo
Feral Swine
Hemimysis
Hemlock Woolly Adelgid
Hydrilla
Kudzu
Mile-a-Minute Vine
New Zealand Mud Snail
Porcelain Berry
Rusty Crayfish
Silver, Big Head and Grass Carp
Water Soldier