



## Even a Worm Will Turn

By Paul Hetzler, CCE of St. Lawrence County

We have been bombarded with news about invasive species, and by now you may be tired of hearing about it. I'm right there with you. We don't need a new invasive species every year, but try convincing them, right? I half-expect to get a bulletin one of these days on some tropical soil-shark that stowed away in a shipload of potting mix. Probably it'll feed on moles and woodchucks, but will also burst up out of lawns to swallow small pets, and gardeners might lose a finger while weeding. That would sure put lily-leaf beetles in perspective.

I'd be a lot more hesitant to tell you about a new and significant threat to forests and other landscapes if it wasn't for the fact that you can make a real difference in preventing it.

The invasive species is *Amyntas agrestis*, a super-size (eight-inch long) earthworm with many names: Asian jumping worm, Alabama (or Georgia) jumper, snake worm or crazy worm. It's sold as bait, and unfortunately is also hawked as a substitute for the harmless red wiggler used in worm compost bins. Its name comes from the fact that it moves rapidly on top of the soil, resembling a snake more than a worm—an alluring acrobatic characteristic for hungry fish and therefore anglers. Lively and strong, it can flip out of your hand. Assuming you want to touch it.

Other than its impressive squirm factor (in every sense), what's the problem with *Amyntas agrestis*—worms are good for the soil, aren't they? Not so, my friend; crazy worms are an exception. These are not your grandparents' worms. OK, that didn't come out quite right. Let me rephrase it.

In the north eastern United States glaciers scrubbed our bedrock bare a few years back

leaving us with no native earthworms. Despite the ongoing debate regarding the pros and cons

of our European earthworm immigrants, crazy worms are an exception for the cons list for sure.

A native of Japan and Korea, *Amyntas* is a very different animal. For example, unlike other earthworms which are hermaphroditic meaning, they possess both male and female organs, but they still need to go out on a date to reproduce; Crazy worms are parthenogenic, meaning they're all females who spew out cocoons

teeming with baby female worms by the hundreds without needing to mate. Ever! All it takes is one crazy worm to start an infestation.

Not only do crazy worms have the capability to reproduce without a mate, they also have remarkable rates of maturity—as they mature twice as fast as

European earthworms, completing two generations per season instead of just one. And their population density gets higher than other worms.

In the woods, crazy worms destroy native wildflowers, wiping out trillium, bloodroot, Jack-in-the-pulpit, ladyslipper and other rare understory plants. Ground-nesting songbirds like the oven bird and hermit thrush disappear as plant cover vanishes.

When *Amyntas* worms vacuum organics from soil, it becomes clumpy and granular and prone to compaction and erosion. Forest soils actually subside, exposing tree roots. Wisconsin Department of Natural Resources invasive species specialist, Bernie Williams stated bluntly "Their introduction into our state poses a huge threat to the future of our forests."

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Asian Jumping Worm: Photo by Paul Hetzler



# A New Member on Our Team!

Please welcome our new Education and Outreach Coordinator Megan Pistolese to our team. Megan holds a Bachelor of Science Degree in Ecology and Environmental Sustainability and Education. She has work and internship experience with environmental education and invasive species identification, prevention and control methods. She has acted as a Boat Launch Steward and Environmental Educator with the New York Sea Grant where she gained expertise in aquatic invasive species, but she is also well rehearsed with terrestrial species. Megan is from Watertown New York; she enjoys hiking, gardening and making jewelry in her spare time and is already making a positive contribution to our partnership. Welcome Megan!



Megan Pistolese at the Eastern Lake Ontario Dunes Workshop

## 2015 Eastern Lake Ontario Symposium Recap

On June 10<sup>th</sup> partners of the SLELO PRISM sponsored a one-day event that reflected expert knowledge on several of the region's most threatening invasive species focusing on site restoration and best management practices. Presenters from around New York and from Canada satisfied the intellectual curiosity of 90 participants. Twenty-one individuals also received continuing education credits in one of four professional categories offered. Many thanks to our planning & set up committee, our partners and to our co-sponsors including: the Douglaston Salmon Run, Selkirk Shores State Park and The Nature Conservancy, Central and Western New York Chapter.



2015 Symposium set-up volunteers, from left: Elizabeth MacEwen, Caitlin Muller, Megan Pistolese, Sue Gwise, Katie Malinowski, Irene Mazzocchi and Chris Sherwood.



Over 90 participants registered for the 2015 Eastern Lake Ontario Invasive Species Symposium.

Since Crazy worms are found underground they are easily spread in plant transplants. Accidental introduction can also be caused by shipments of infested mulch and topsoil. To avoid falling victim to a crazy worm infestation, there are ways to tell if your potted plant harbors dangerous hitchhikers.

One way is to turn the potted plant upside-down and gently remove the root ball. If crazy worms are present, a chunk of the roots, as well as some potting soil, may be missing. However, damage may not be evident as there may only be a few young worms present. The second more successful way is to apply a mustard solution. Mix a gallon of water with one-third cup of ground yellow mustard seed, and pour this slowly into the soil. It won't hurt the plant, but worms (even "good" ones) will come to the surface and you can check for miscreants.

To be safe, anglers should securely cover bait containers, and destroy all unused live bait. If you have a household worm bin, only use European red wigglers which won't survive outdoors over the winter.

## Our Prism Prevention Species

Hydrilla  
Mile a Minute Vine  
Didymo  
Asian Long Horned Beetle  
Hemlock Woolly Adelgid  
Silver, Big head and Grass Carp  
New Zealand Mud Snail  
Hemimysis  
Asian Clam  
Kudzu  
Porcelain Berry  
Water Soldier  
Rusty Crayfish

## **"SAVING THE ALVARS"** Rare Species Found

Partners of the St. Lawrence Eastern Lake Ontario PRISM have teamed up with the Central and Western New York Chapter of The Nature Conservancy to protect and restore globally rare habitats known as alvars from the threat of invasive species. Working together we are taking action to reduce and exclude invasive species from these important habitats in an effort to protect the rare and endangered plants found only on alvar communities.

Using early detection teams to survey these alvars for the presence of invasive species and rapidly responding, helps to exclude invasive species allowing for conditions that favor native species.

Our efforts appear to be paying off. About a dozen orchids (*Spiranthes magnicamporum*) known locally as Great Plains Ladies' Tresses were found last summer by an ecologist from Ontario Canada that was studying the alvar communities along eastern Lake Ontario. The species was confirmed by Natural Heritage.

~Rob Williams



(*Spiranthes magnicamporum*)

Photo by: Jerry A. Payne,

USDA Agricultural Research Service, Bugwood.org



# Species Profile: Glossy Buckthorn

(*Frangula alnus*)

**G**lossy buckthorn (*Frangula alnus*) is an invasive shrub from Europe and Asia, first planted in the U.S. in hedges to benefit wildlife. It can be found from the western United States to the northeast in a variety of habitats including forests, hedgerows, disturbed areas and even wetlands. Out-competing native vegetation in any setting, it is a particular problem in forested areas as it is a prolific seeder, spreads rapidly by birds and prohibits natural regeneration of tree seedlings. As a result buckthorn is a threat to sustainable forestry and can create an inhospitable environment for wildlife.

Easily identified by distinct lenticels on gray/brown bark, glossy leaves and purple-black berries, this species can grow as a single stem, but commonly develops multiple leaders forming dense thickets. Heights up to 20' can be attained and stem counts range from hundreds per acre under a dense forest canopy up to 1,000 per acre in disturbed areas of forestland or open areas.

As with any invasive, it is best to catch this aggressive shrub when it first appears and if that is the case, on small acreages, hand-pulling or digging would be acceptable methods of control.

However, with larger acreages and mature populations, chemical treatments are the most feasible. Foliar, basal bark and cut-stem treatments applied with back pack sprayers are all effective means of control and are best implemented in late-summer/early fall to minimize impact on non-target vegetation.

The size of the shrubs present dictates which chemical and application method will be most effective. For stems less than .5" diameter and up to 6-8 feet in height, foliar application with glyphosate or a mix of glyphosate and triclopyr will provide successful control. Stems larger than the aforementioned size criteria are best controlled with either basal bark application using triclopyr or cut-stem with a tank mix of triclopyr and glyphosate. In addition to matching the application to the size of the present stems, clearly identifying the boundaries of the project area, utilizing flagging or string lines to keep track of treated areas and incorporating dye into the chemical mix, will ensure effective coverage in forested areas.



Established glossy buckthorn population before (above) and after (below) basal bark treatment in a forest setting. Photo credit: Joe Chairvolotti



~Joe Chairvolotti, Oswego SWCD

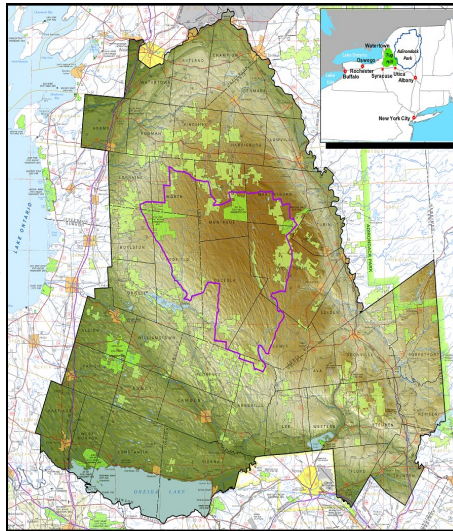
# Partner Spotlight

## Tug Hill Commission

The Tug Hill region lies between Lake Ontario and the Adirondacks and incorporates portions of Jefferson, Lewis, Oneida and Oswego counties. It's 2,100 square miles comprise one of the most rural and remote sections of New York State and the Northeast. A scattering of public lands covers approximately a tenth of the region, with most of that land used extensively for timber production, hunting, and recreation. The rest is privately owned forest, farms, and homes—all of it working land that supports the region's way of life. Tug Hill's total population is just over 100,000, with two-thirds of those people concentrated in villages around its edge. Its densely forested core of about 800 square miles is among New York's most remote areas, with a population of just a few thousand with few public roads.

The Tug Hill Commission's mission is to "help local governments and citizens shape the future of the Tug Hill region." Using a grassroots approach, Commission staff work with local towns, villages, and partner organizations to maintain and improve the region's natural resources while providing opportu-

nities for community and economic development. This assistance often takes the form of watershed planning and projects, recreational efforts, natural resource restoration projects, and support on regional natural resource issues.



Graphic provided by Tug Hill Commission

By participating with the SLELO PRISM and serving on its education committee, Commission staff serves as an information sharing resource between the PRISM and the region's local governments.

Every five years the Commission, as required by its enabling legislation, surveys its local governments to gauge their priorities and perceptions on how well the Commission is doing its job and

what it should be focusing on in future years. In 2013, 98% of respondents felt it was essential or important that the Commission help local communities protect the environment. The work that the SLELO PRISM does in preventing and controlling invasive species is an important component of protecting the unique Tug Hill region. In fact, the first Invasive Species Protection Zone formally recognized by the SLELO PRISM roughly follows the boundaries of the Tug Hill core forest. Comprised of nearly 150,000 acres of nearly contiguous forested lands, it provides a variety of recreational opportunities, as well as managed forestry operations on both public and privately held lands that provide employment and help support the area's rural economy. The core forest also provides valuable habitat for a variety of game species, as well as 29 rare animals and 70 rare plant species. The Tug Hill core forest remains an area dominated by native species with relatively little impacts from many invasive species.

~ Katie Malinowski,  
Tug Hill Commission



# Coordinators Column

## *Early Detection & Rapid Response*

**D**uring our original strategic planning sessions our partners discussed several options for moving our efforts to mitigate the impacts of invasive species forward.

After consolidating 11 of our original goals into 7, more strategic goals, our second highest priority has become Early Detection and Rapid Response. Many of us may recall our *Ranger Teams* that focused on these two key elements.

Our Rangers first recommendation was to move beyond strictly volunteer surveillance and develop seasonal teams to conduct deliberate early detection surveillance and another team to deliberately conduct rapid response measures.

In addition to this, it became important that we needed to focus on Priority Conservation Areas (PCA's) since the alternative would be an attempt at surveying some 7,400 square

miles or  $1.916591E+10$  square meters, not likely!

Our partners furthered the cause by identifying 24 PCA's and recommending 2 individuals as our seasonal early detection team and 2 individuals as our rapid response team.

So four+ years later how's it working? Our current work load allows our early detection team to survey our PCA's on a two year rotation, that being  $\frac{1}{2}$  or (12) sites per season.

In addition, we have developed a protocol that allows us to focus on the areas within each PCA where there is a higher probability of invasives being introduced, known as our HPA protocol (Highly Probable Areas).

The results: by the end of this season all 24 PCA's will have been surveyed twice with several new HPA's discovered each season increasing our chances of early detections.

Hundreds of HPA waypoints have

been recorded. Nine early detections have been made with an equal amount of rapid responses to each of the nine sites.

Job well done to our partners and seasonal teams; however, it should be noted that all of the aforementioned early detections and responses were for target management species, e.g., species that are currently found within the SLELO region. Of the utmost importance is to remain vigilant in surveying for our prevention list species, a.k.a. "watch list" species.

It is my hope that this approach will, as planned, be a successful second line of defense after "prevention" and if used will allow us to meet the desired effect of eradicating a watch list species before they can become established in any of our Priority Conservation Areas. So far – so good!

~Rob Williams

PRISM Coordinator

### 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 \* NY Power Authority

## Invasive Species Awareness Week

The mission of the New York Invasive Species Awareness Week (ISAW) is to promote knowledge and understanding of invasive species to help stop their spread by engaging citizens in a wide range of activities across the state and encouraging them to take action. This year ISAW will be held from **July 12th through July 18th**.

To kick off this years Invasive Species Awareness week, SLELO PRISM Partners will be co-sponsoring a hands on citizen science event at Port Ontario. Contact Megan Pistolese at [megan.pistolese@tnc.org](mailto:megan.pistolese@tnc.org) to get involved.

#### Acknowledgements:

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NYS Environmental Protection Fund



C/O The Nature  
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