WNY PRISM Spring Partner Meeting

April 16, 2020; 1:00 – 3:00 pm







Andrea Locke, Coordinator
Brittany Hernon, Early Detection and Response
Lucy Nuessle, Terrestrial Invasive Species
Emily Thiel, Education and Outreach

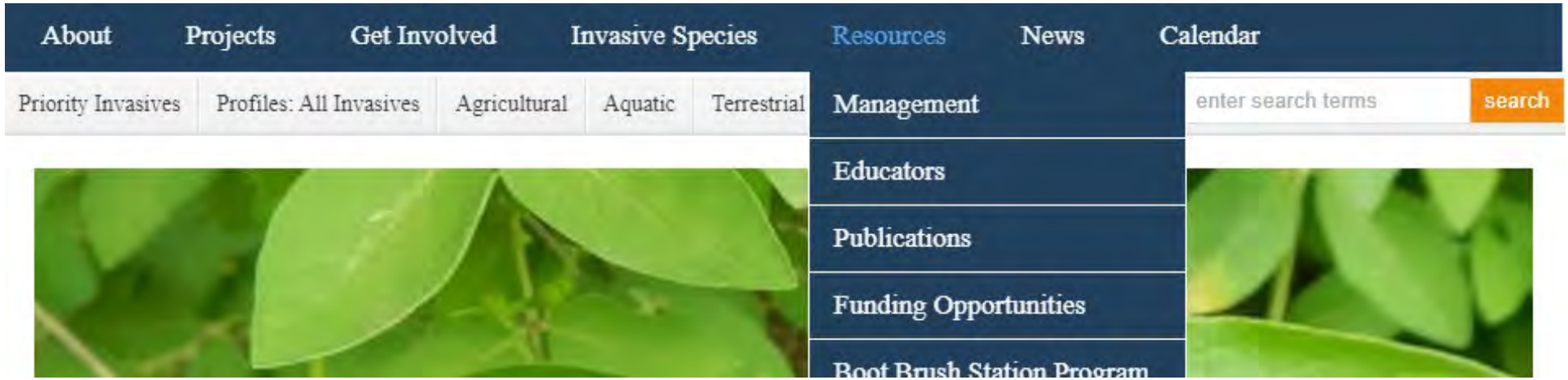
www.wnyprism.org

Agenda

1:00 pm	WNY PRISM News, Updates and Resources
1:10 pm	Species Prioritization and Tier Rankings
1:20 pm	Approaching Region/Watchlist Species
1:30 pm	Early Detection Species Update
2:00 pm	Survey and Assessment Protocols
2:40 pm	Partner Updates

Stay Connected

- Join the WNY PRISM Listserv
- Events Calendar – submit your event (webinar…)
- Online Resources – www.wnyprism.org



- Follow us on Facebook and Instagram

WNY PRISM wnyprism8

Resources

- Events Calendar
- Species Profiles
- Best Management Practices
- Private Landowner Resources /IS Contractors/Native Plant Suppliers
- Funding Opportunities
- Programs (CAP, BBS, Early Detection)
- Prioritization
- Reporting, Survey & Assessment Protocols

Best Management Practices: Knotweed (*Reynoutria spp.*)

Best Management Practices: Japanese Stiltgrass (*Microstegium vimineum*)

Best Management Practices: Mile-a-Minute (*Persicaria perfoliata*)

Best Management Practices: Mile-a-Minute (*Persicaria perfoliata*)

Best Management Practices: Invasive Shrubs

Featured Invasives

Hemlock Woolly Adelgid

HWA is a tiny, aphid-like insect that was first reported in the eastern United States in the 1950's. Its name derives from a white

Read More →

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Questions and Partner Updates

Please submit questions to Lucy, through the chat.

We will pause to read/answer questions between agenda items.

If you would like to provide an update or news, please send your name and organization to Lucy through the chat.

We will call on you during "Partner Updates"

SPECIES PRIORITIZATION

NYS Tier Ranking System & Working Groups

Invasive Species Tier Ranking

Tier One
Early Detection/ Prevention

None in PRISM

Highest level of prevention and survey effort.

Tier Two
Early Detection/ Eradication

Low Abundance

Highest level of early detection response effort. Eradication feasible.

Tier Three
Containment

Locally Common

Use of strategic management to limit impact and spread.

Tier Four
Local Control

Widespread

Focus on local control over time, protection of conservation targets.

Tier Five
Monitor

Unknown

Species needs more research, mapping and monitoring.

- Based on the Invasion Curve
- Addresses regional distribution and abundance, difficulty of eradication, cost of control and impact
- Tier One and Tier Two represent WNY PRISM's highest priority species.

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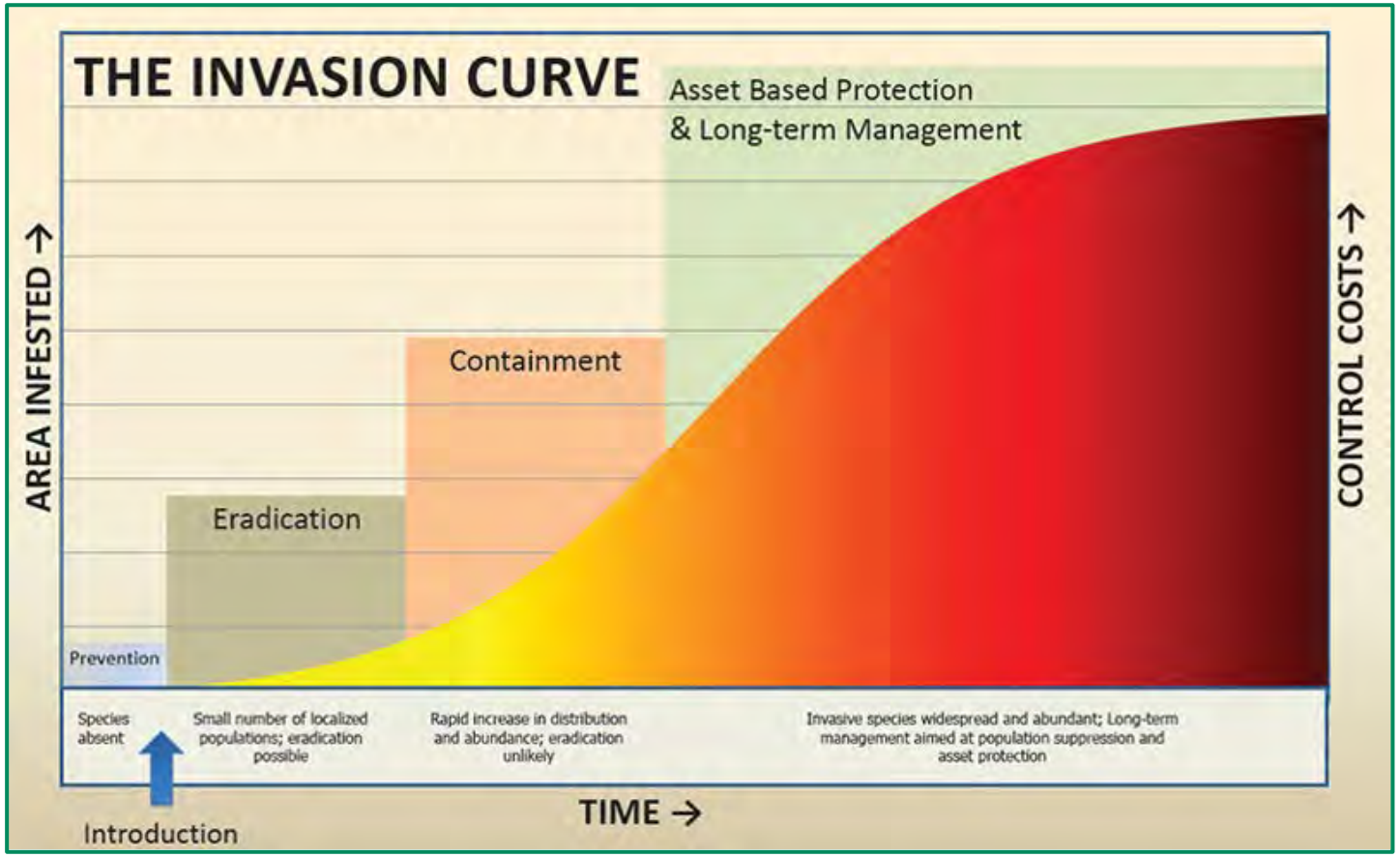
Invasive Species Tier Ranking



- WNY PRISM has currently ranked 78 species - https://www.wnyprism.org/priority-invasives/
- Review current rankings.
- Expand list of ranked species
  - Approximately 120 species have been identified.

Invasive Species Tier Ranking

- Working Groups
  - Terrestrial
  - Aquatic
  - Agriculture
  - Forest Pests
  - Other Species

- WNY PRISM Terrestrial and Aquatic Working Groups were initially formed in 2015 and were active through 2018.
- Working Groups are ad hoc, once the initial projects were completed, need was reduced.

If you would like to help, please send your **name, email and species/group** for which you're interested **to Lucy**, via the chat.

WNY PRISM Priority Species Lists

Approaching Region (Watchlist) and Early Detection Priority Species Lists

- Priority Species Lists provide guidance beyond the Tier Rankings
- Lists were developed by Working Groups and reviewed and approved by the WNY PRISM Steering Committee.
- List changes and updates:
  - Lists are meant to be short.
  - If an **Approaching Region** priority species is confirmed in WNY, the species will be moved to the Early Detection priority species list.
  - The addition or removal of a species from either list will be reviewed by the appropriate Working Group, who will provide a recommendation to the Steering Committee.
  - Requests to include a species may be made by any partner – documentation in support of the 'nomination' must be provided.

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QUESTIONS???

Submit question through chat

Send to Lucy Nuessle

APPROACHING REGION SPECIES – TIER 1

Be on the Lookout!

WNY Approaching Region Watchlist

WNY PRISM Approaching Region Priorities

1) *Aldrovanda vesiculosa* — Waterwheel
2) *Ampelopsis brevipendunculata* — Porcelain Berry
3) *Anoplophora glabripennis* — Asian Longhorned Beetle
4) *Channa argus* — Northern Snakehead
5) *Hypophthalmichthys molitrix* — Silver Carp
6) *Hypophthalmichthys nobilis* — Bighead Carp
7) *Impatiens glandulifera* — Himalayan Balsam
8) *Lycorma delicatula* — Spotted Lanternfly
9) *Oplismenus undulatifolius* — Wavyleaf Basket Grass

Tier One
Early Detection/ Prevention

None in PRISM

Highest level of prevention and survey effort.

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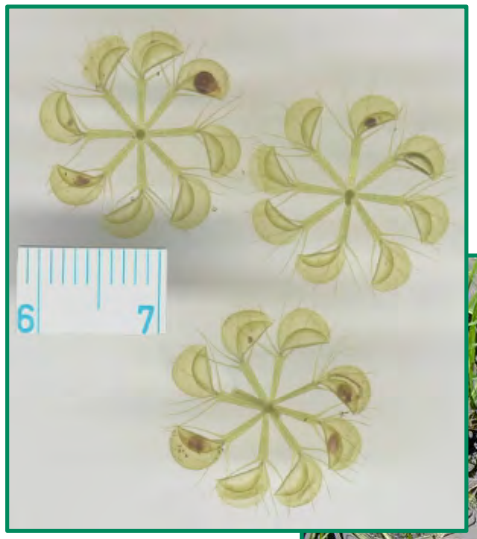
Waterwheel
(*Aldrovanda vesiculosa*)



STATUS

- Confirmed in Orange County, NY (CRISP).

IDENTIFICATION

- Free-floating, carnivorous, submerged aquatic vascular plant.
- Shoots are 1-2 cm in diameter and consist of 6-8 leaves in a whorl arrangement.
- Usually less than 20 cm in length and each plant may have up to 20 whorls arranged along the stem.

THREAT

- Ability to thrive and spread in dystrophic habitats (brown acidic water with low oxygen).
- Negatively impacts aquatic invertebrate communities.

Porcelain Berry
(*Ampelopsis brevipedunculata*)

STATUS

- Common within the Hudson Valley, Long Island
- Locally common in the Ithaca area (Buttermilk Falls) and discovered at Watkins Glen in 2018.

IDENTIFICATION

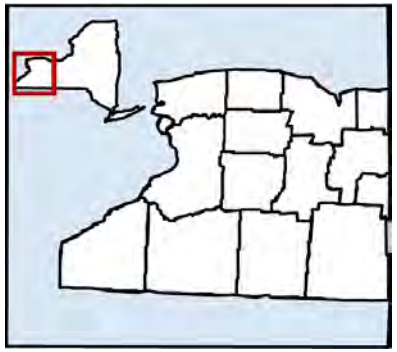
- Flower greenish yellow – fading to white.
- Fruit is hard, ¼" in diameter and brilliantly colored.
- Leaves 3-5 lobed with toothed edges (may be variegated).
- Pith white, bark with lenticels and doesn't peel.

THREAT

- Similar to other berry producing invasive shrubs, can quickly overwhelm natural areas, displacing native plants.

Asian Longhorned Beetle

(*Anoplophora glabripennis*)



STATUS

- First discovered in Brooklyn, in 1996
- Currently 137 square miles are regulated in NYS – Brooklyn, Queens, and parts of Long Island.
- Eradication was declared for Manhattan, Staten Island and Islip.

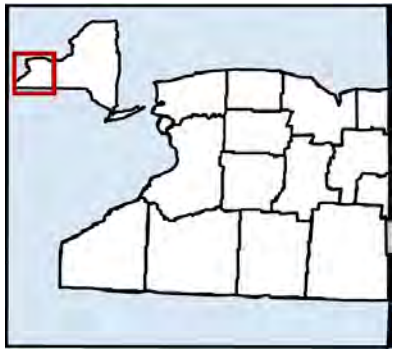
IDENTIFICATION

- Large beetle; .75-1.5 inches long.
- Perfectly round (like a drill hole) exit holes 3/8" to 1/2" diameter.

THREAT

- Feeds on a wide-range of trees including maple, horsechestnut, elm, willow, birch and poplar.
- Signs of ALB start to show about 3 to 4 years after infestation, with tree death occurring in 10 to 15 years depending on the tree's overall health and site conditions

Himalayan Balsam
(*Impatiens glandulifera*)

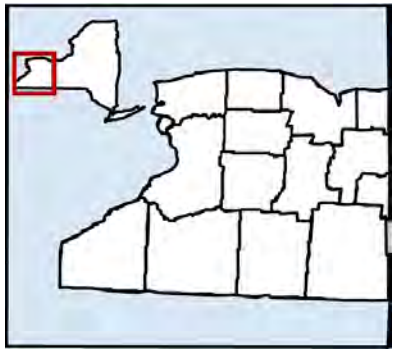


STATUS
- Confirmed infestations in APIPP, SLELO, Capital Region, CRISP, & FL-PRISM.
- Single occurrence in FL-PRISM – private landowner, landscape/garden, between Watkins Glen and Ithaca.

IDENTIFICATION
- 3-6 feet tall.
- Purple/red stems, smooth and hollow.
- 5-10 flowers on each stem, flowers 5 petaled (purple, pink or white).
- Fruit capsules explode if mature when touched.

THREAT
- Outcompetes native species, alters behavior and composition of pollinating insects.
- Increased risk of erosion and flooding.
- High spread potential.

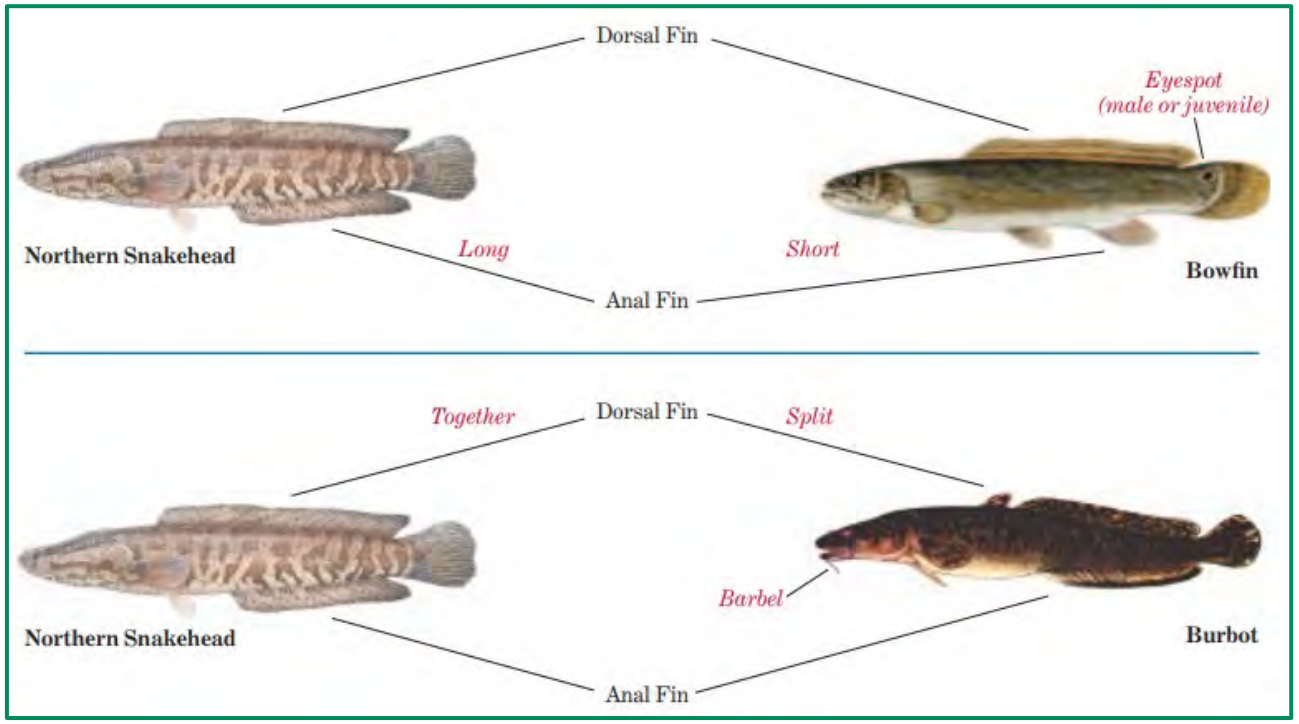
Northern Snakehead
(*Channa argus*)



STATUS
- Confirmed in NYS.

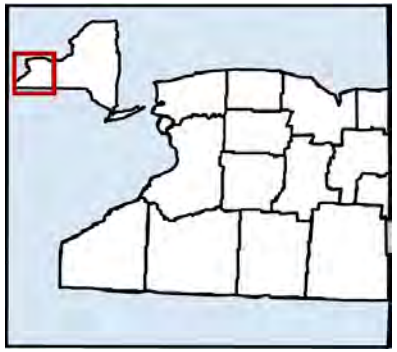
IDENTIFICATION
- Long dorsal and anal fins, pelvic fins located beneath pectorals.
- Truncate tail.
- Irregular blotches along their sides.
- Similar to two native species – bowfin and burbot.

THREAT
- Predatory – consume zooplankton, crustaceans, fish, and insects.
- Disrupt ecosystem, alter feeding habits, food availability and behaviors of other species, such as sport fish.



Silver and Bighead Carp

(*Hypophthalmichthys nobilis, H. molitrix*)



Silver Carp

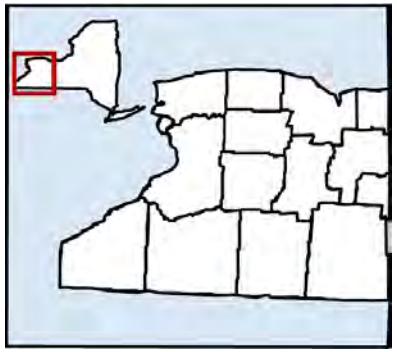
STATUS

- Based on USGS data, Bighead Carp has been found in Lake Erie, western basin.
- Silver carp has not been physically detected in the Great Lakes.
- Monitored through use of eDNA.

THREAT

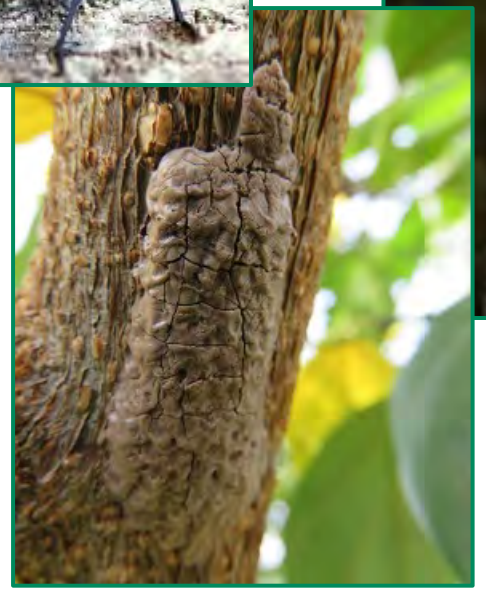
- Potential to cause significant, potentially irreparable damage to food webs and native species due to resource use and impacts on fish communities.

Spotted Lanternfly
(*Lycorma delicatula*)



IDENTIFICATION

- Nymphs are black with white spots.
- Adults appear in July and are ~1 inch long and ½ inch wide.
- In the fall, adults lay 1-inch long egg masses, they are smooth and brownish-gray.

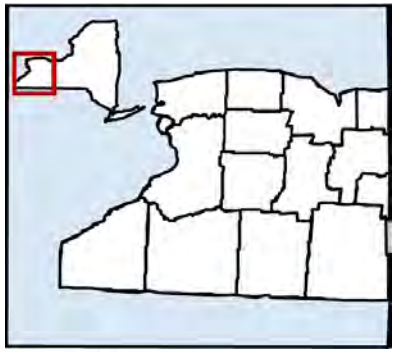


THREAT

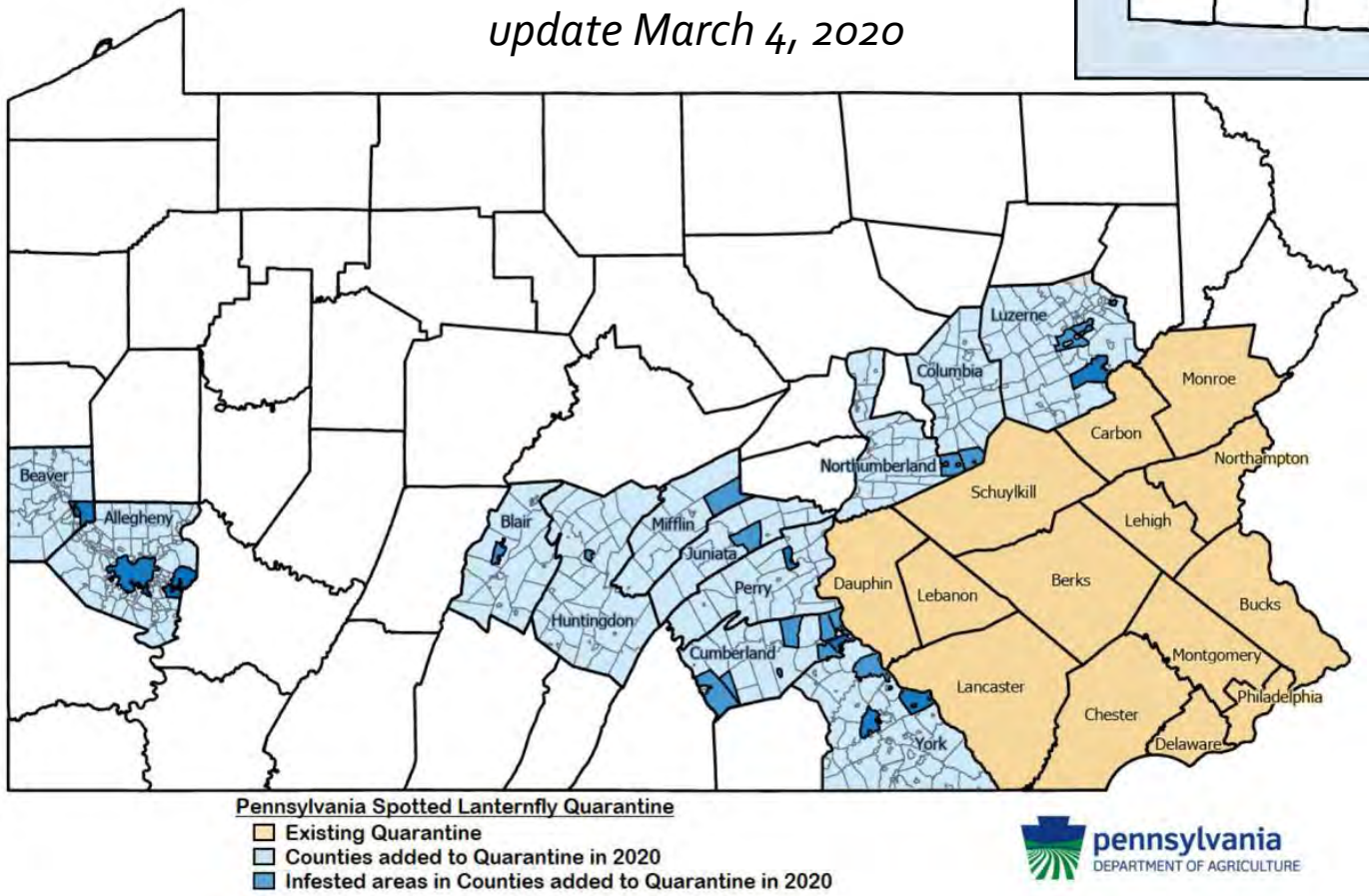
- Pose a significant threat to agriculture and forest health.
- Feeding stresses plants and makes them vulnerable to disease – they feed on more than 70 species.
- Excrete large amounts of "honeydew" that attracts molds that interfere with photosynthesis, negatively impacting growth and fruit yield of plants – particularly apples and grapes.

Spotted Lanternfly
(*Lycorma delicatula*)

- In New York, a dead insect was found in Delaware County in the fall of 2017.
- To date, no SLF infestations have been confirmed in NYS.
  - But, several individual adult SLF have since been found in counties across the state including: Delaware, Albany, **Yates**, Westchester, Suffolk, New York, Kings, **Monroe**, Chemung, **Erie, Ontario**, Ulster, Nassau, Sullivan, and Orange.
- NYS efforts involve DAM-led surveys, roadside check points, outreach,and regulations.

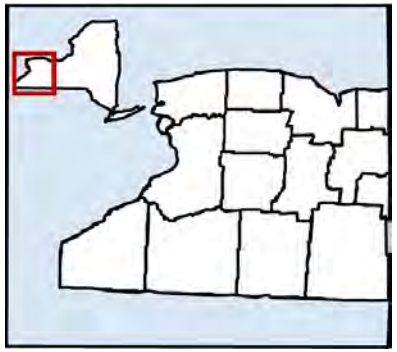


PA Quarantine Map
update March 4, 2020



Report Spotted Lanternfly – spottedlanternfly@agriculture.ny.gov

Wavyleaf Basketgrass
(*Oplismenus undulatifolius*)



STATUS
- Present Pennsylvania, isolated populations

IDENTIFICATION
- Distinctive wavy leaves – leaf blades ½" wide and 1.5-4" long.
- Leaf sheaths and stems are hairy.
- Spikelets form long, sticky awns that adhere to passing animals, people and vehicles.

THREAT
- Forms dense stands in deciduous forests.
- Spreads quickly.

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QUESTIONS???

Submit question through chat

Send to Lucy Nuessle

EARLY DETECTION SPECIES – TIER 2

Survey and Management Updates

WNY Early Detection Species

WNY PRISM Early Detection Priorities

1) *Aralia elata* — Japanese Angelica Tree
2) *Brachypodium sylvaticum* — Slender False Brome
3) *Cytisus scoparius* — Scotch Broom
4) *Eichhornia crassipes* — Water Hyacinth
5) *Microstegium vimineum* — Japanese Stiltgrass
6) *Nympoides peltata* — Yellow Floating Heart
7) *Persicaria perfoliata* — Mile-a-Minute Vine
8) *Pistia stratiotes* — Water Lettuce

Tier Two
Early Detection/
Eradication

Low Abundance
Highest level of
early detection
response effort.
Eradication feasible.

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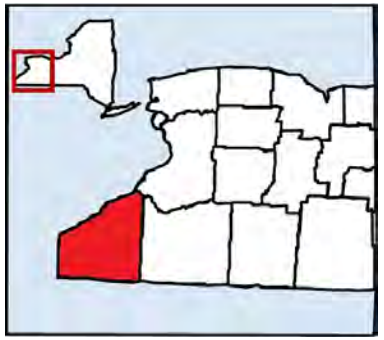
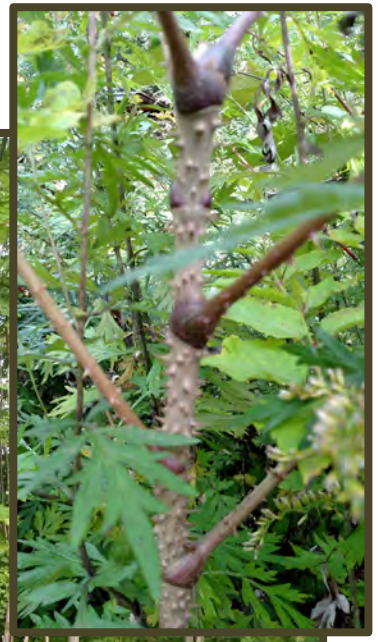
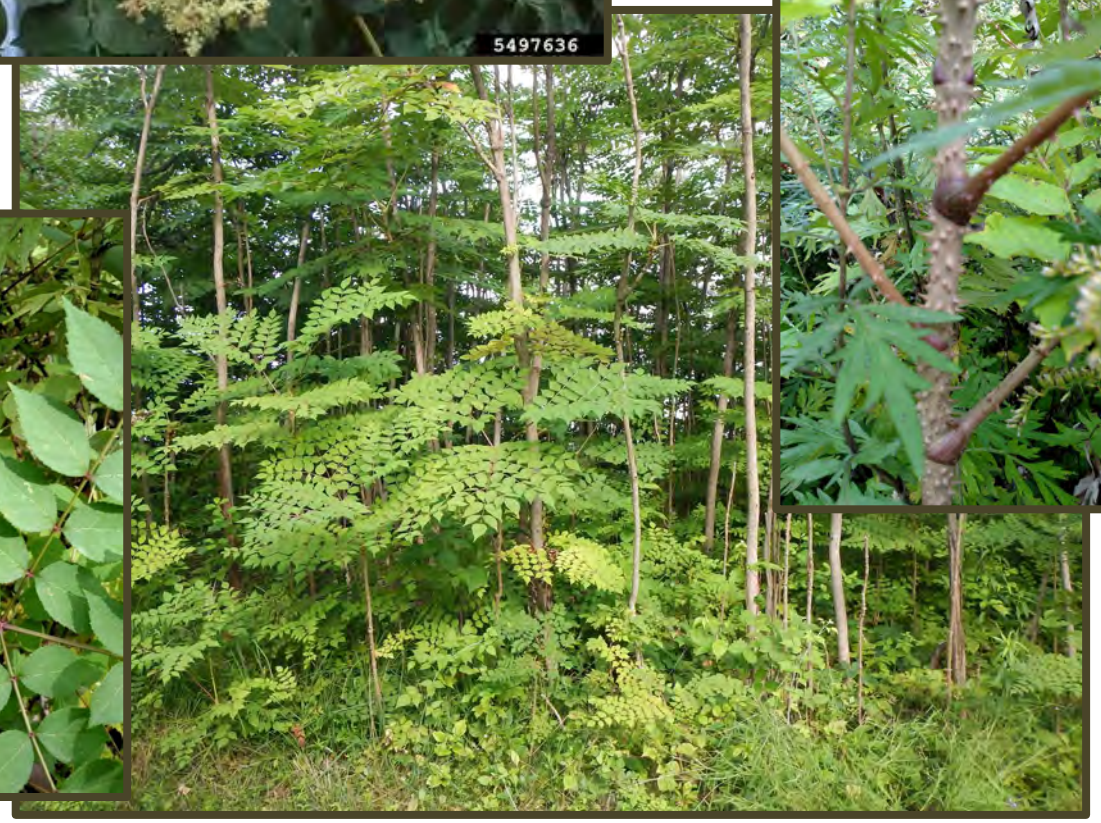
Japanese Angelica Tree
(*Aralia elata*)







IDENTIFICATION

- Thicket forming tree or shrub, multiple or single stemmed.
- Grows up to 40 ft. tall.
- Stems covered in sharp thorns.
- Leaves pinnately compound with variable margins – entire leaf 2-4 ft. long (leaflets 2-5 inches long).
- Flowers cream colored, fruit purple to black.
- Inflorescence without distinct central axis, usually mixed in with foliage.
- Flowers July/August, Fruit ripen September/October.

SIMILAR SPECIES

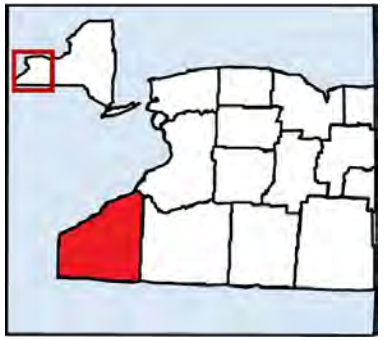
- Devil's Walking Stick (*Aralia spinosa*)
  - Inflorescence with a distinct central axis
  - Inflorescence usually atop foliage

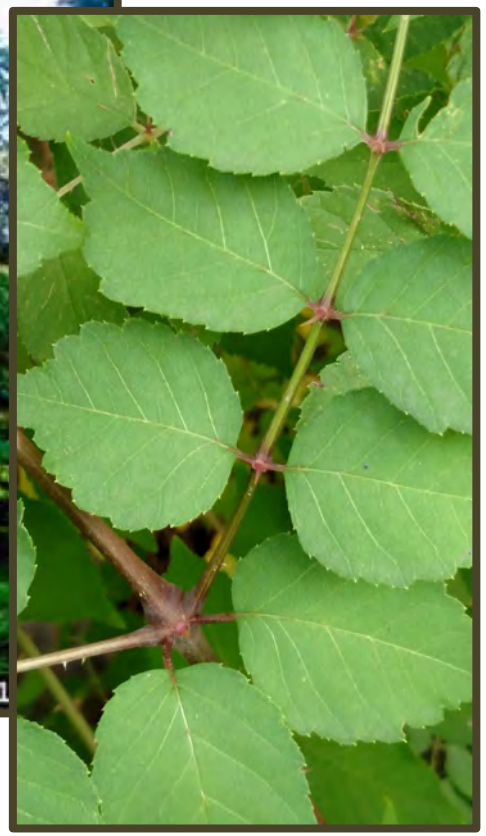
Japanese Angelica Tree
(*Aralia elata*)

THREAT
- Able to thrive in a wide-range of habitat and hydric conditions.
- Outcompetes native vegetation.

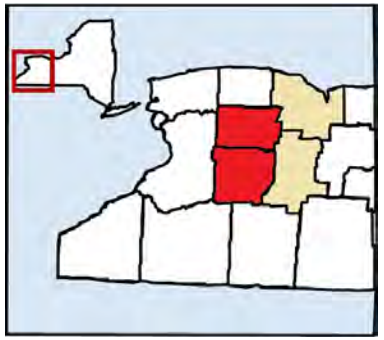
MANAGEMENT
- Herbicide - basal bark treatment with foliar follow-up.
- Physical injury results in a growth response.

STATUS
- First Observed in 2018.
- Lake Erie State Park.
- Single Infestation – under management.
- Initial Treatment conducted in 2019, follow-up planned for 2020.

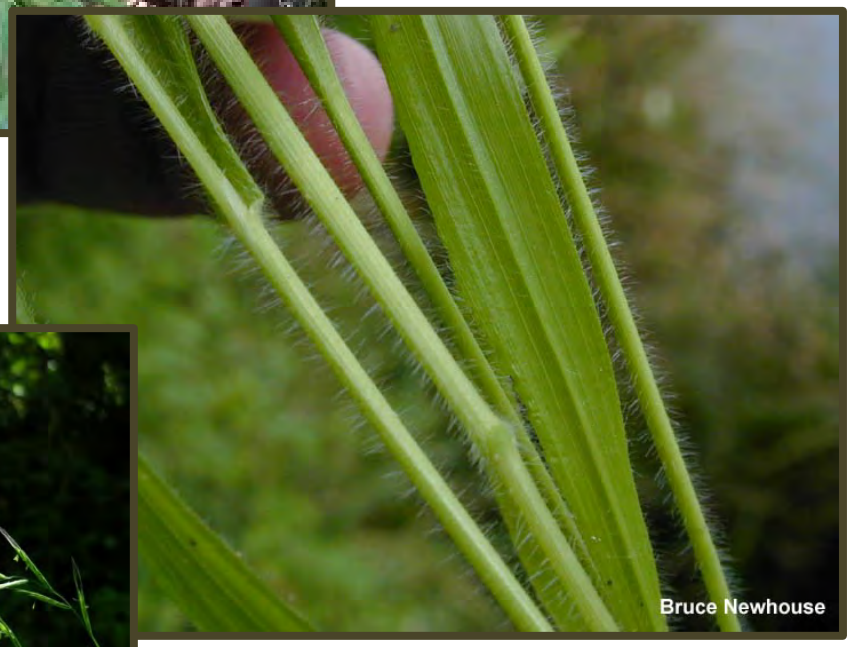




Slender False Brome
(*Brachypodium sylvaticum*)



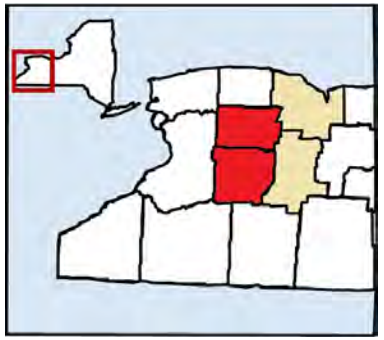
IDENTIFICATION
- Perennial clump grass.
- Grows up to 2 ½ feet tall.
- Leaf blades arching, flat, bright green, 0.25 – 0.3 inches wide.
- Leaves hairy, with hairs along margins.
- Stems hairy and hollow.
- Flowers July/August, 5 – 10 spikelets on short pedicels.



SIMILAR SPECIES
- False Melic Grass (*Schizachne purpurascens*)
  - hairless
- Canada Brome (*Bromus pubescens*)
  - Stems solitary or few together

Slender False Brome

(*Brachypodium sylvaticum*)



THREAT

- Dominates areas to the near complete exclusion of all other species.
- Spreads quickly – produces a lot of seed.

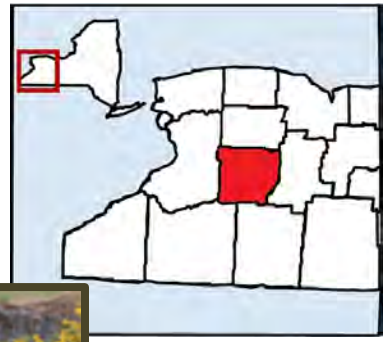
MANAGEMENT

- Manual removal for small, isolated populations.
- Herbicide for large infestations.
- Mechanical (mowing) may facilitate herbicide treatment and may reduce spread with proper timing.

STATUS

- First Discovered in early 2000's.
- Working Group established in 2017 (Great Lakes Slender False Brome Working Group).
- Identified Best Management Practices
- Surveys, management, outreach – all ongoing.

Scotch Broom
(*Cytisus scoparius*)



IDENTIFICATION

- Perennial, many branched shrub.
- Grows 3 – 10 feet tall.
- Flowers showy – pea-like, bright yellow.
- Few leaves, upper leaves simple, lower leaves are 3-part (clover). Leaves fall early in the year.
- Stems are dark green, young branches have 5 ridges with hairs – mature stems lose ridges and hair.

SIMILAR SPECIES

- Other non-native/ornamental species.

Scotch Broom

(*Cytisus scoparius*)

THREAT

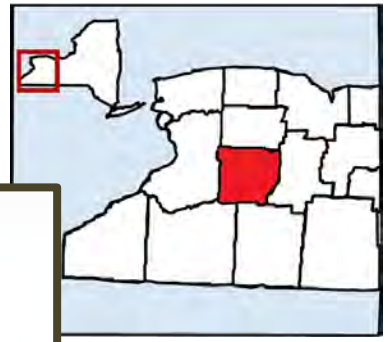
- Displaces native species, loss of habitat.
- Seeds are toxic to livestock and horses.
- Thrives in open areas and areas of disturbance
- Spread by seed.

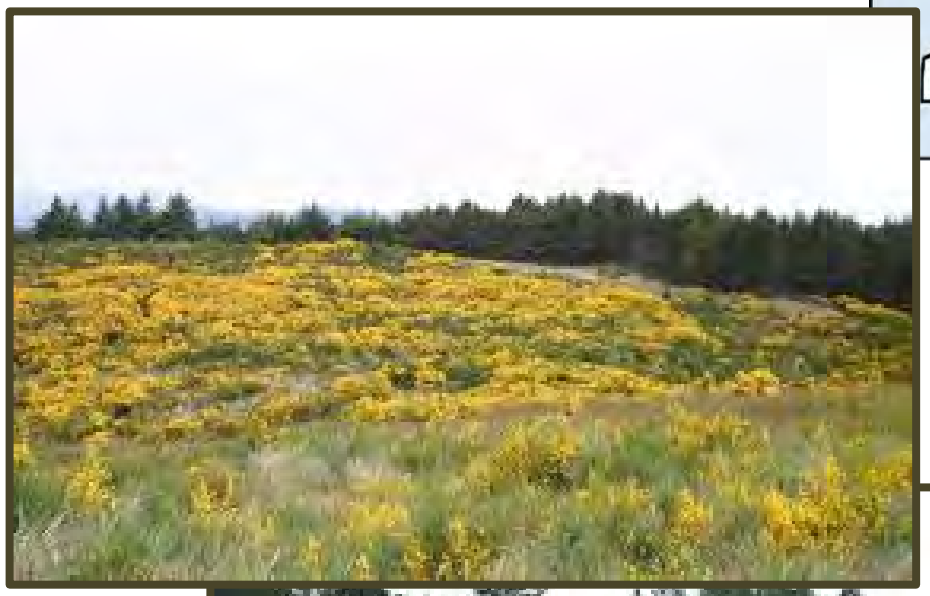
MANAGEMENT

- Individuals may be removed by hand.
- Cut-stump herbicide treatment.

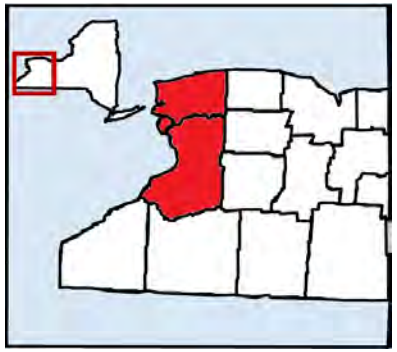
STATUS

- First Observed in 2019.
- Letchworth State Park.
- Discovered late in the season, making additional surveys difficult.
- Plants were manually removed.
- Surveys and follow-up expected in 2020





Water Hyacinth
(*Eichhornia crassipes*)

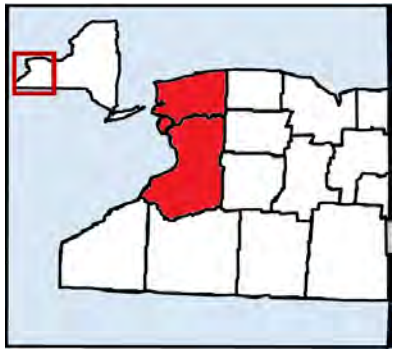


IDENTIFICATION
- Floating aquatic plant.
- Bulbous, spongy leaf stalk.
- Thick leaves up to 6 inches wide – oval to round.
- Flowers are on large spikes; 15 – 18, pink to blue flowers.
- Flowers have 6 petals with the uppermost petal having a yellow spot bordered in blue.

THREAT
- Quickly establishes dense monocultures.
  - Eliminates native plant communities.
  - Populations can double in size in 2 weeks – one the highest growth rates for a vascular plant.
- Recreation impacts.

SIMILAR SPECIES
- Nope

Water Hyacinth
(*Eichhornia crassipes*)

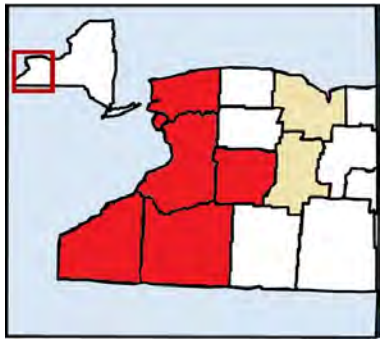


PREVENTION
- Do not buy, trade, or plant this species.
- Do not allow species to enter into natural waterways.
- Dispose of all plant material in landfill-bound trash.

MANAGEMENT
- Hand/Manual.
- Mechanical – Harvester.
  - Will need manual follow-up.
- Herbicide.
  - Limitations apply.

STATUS
- Isolated populations reported at Unity Island, Erie Canal, Ellicott Creek and Oppenheim Park.
- Populations have been small and removed upon discovery.
- Part of WNY PRISM annual site monitoring.

Japanese Stiltgrass
(*Microstegium vimineum*)



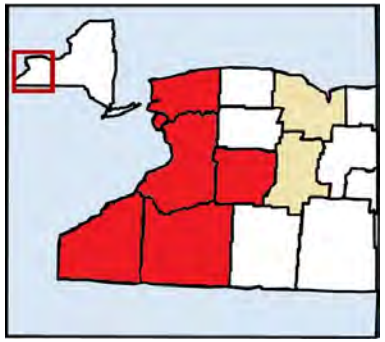
MANAGEMENT

- Hand/Manual Removal
  - Must be repeated annually to deplete seed bank.
- Mechanical
  - May (hypothetically) provide effective control, **only if** seed production is completely eliminated for 5+ years
  - Cut multiple times per year.
- Herbicide
  - Glyphosate or grass specific.

STATUS

- First Reported in 2017.
- WNY PRISM started systematic surveys – discovered additional infestations.
- Surveys, management, outreach – all ongoing.
- As surveys continue, additional infestations are likely to be discovered.

Japanese Stiltgrass
(*Microstegium vimineum*)



Distinctive silver mid-rib

IDENTIFICATION

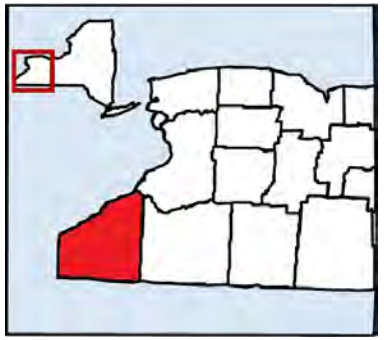
- Annual grass, grows up to 3 feet, but often shorter and bent over.
- Leaves alternate, lance-shaped, 1-4 inches long, ½ inch wide.
- Leaves have distinctive silver mid-rib, slightly off-center.
- Stems are smooth.
- Flowers similar to crabgrass, 1 – 3 stalks.

SIMILAR SPECIES

- Whitegrass (*Leersia virginica*)
- Nimblewill (*Muhlenbergia schreberi*)
- Basketgrass (*Oplismenus hirtellus*)

Yellow Floating Heart

(*Nympoides peltata*)



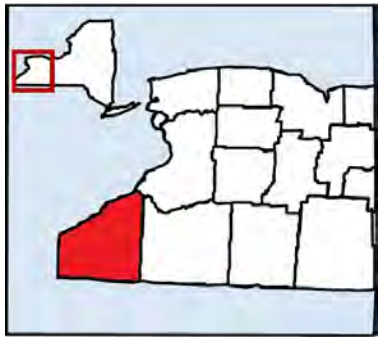
IDENTIFICATION

- Aquatic, rooted perennial with long, branched stolons.
- Heart-shaped, nearly circular leaves, 1-4 in long.
- Leaves often purplish underneath with slightly wavy margins.
- Flower 1-1.5 in long, bright yellow, 5 petals – edges are fringed.

SIMILAR SPECIES

- Spatterdock
  - Large yellow cup-shaped flower, large leaves
- Watershield
  - Small purple flower

Yellow Floating Heart
(*Nymphoides peltata*)



THREAT

- Forms dense mats.
  - Outcompetes native vegetation.
  - Creates low-oxygen conditions.
  - Reduces access/recreational opportunities.

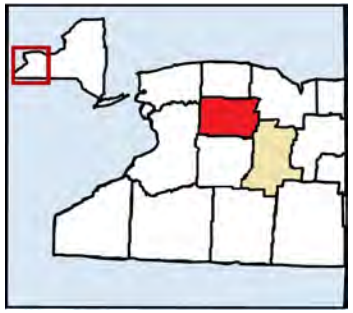
MANAGEMENT

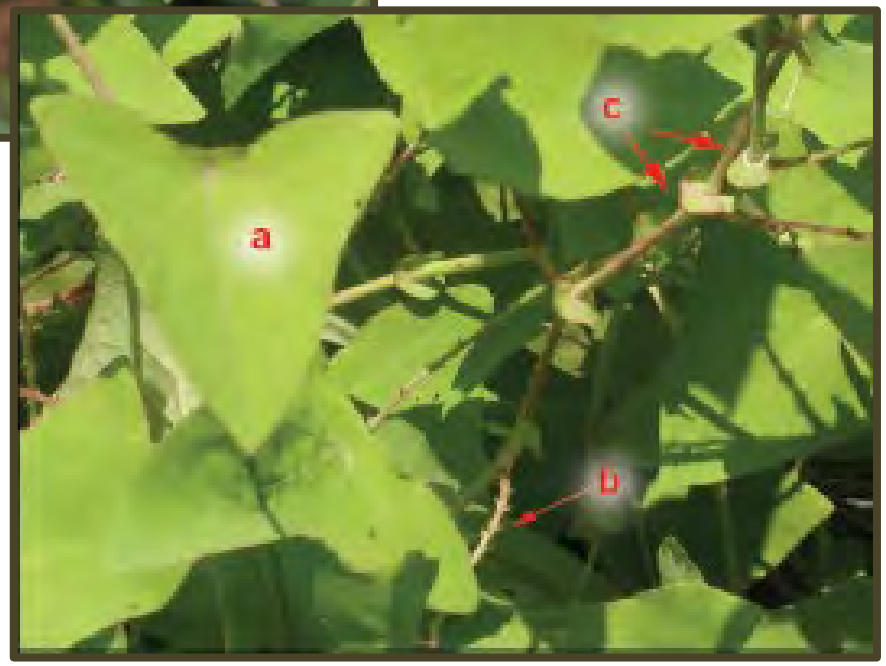
- Herbicide (ProcellaCor).

STATUS

- First Reported in 2019.
- Private Property – Chautauqua County.
- Long-existing infestation.
- Pond was treated by a contractor in 2019.
- Monitoring expected in 2020.

Mile-a-Minute
(*Persicaria perfoliata*)





Triangular leaves (a), recurved barbs (b), flared ochreae (c)

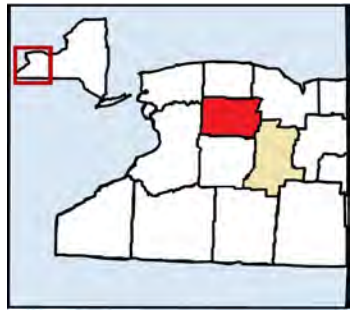
IDENTIFICATION

- Annual vine.
- Slender (sometimes reddish) stems with barbs.
- Cuplike leaf structures called ochrea are spaced along the stem.
- Leaves alternate, triangle shaped w/ barbs on the underside.
- Flowers small, white.
- Berries fleshy blue – pea-sized.

SIMILAR SPECIES

- Halberd-Leaved Tearthumb (*Polygonum arifolium*)
- Arrowleaf Tearthumb (*Polygonum sagittatum*)
- Neither have ochreas

Mile-a-Minute
(*Persicaria perfoliata*)



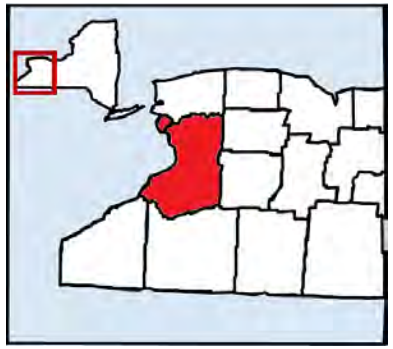
MANAGEMENT
- Small Infestations.
  - Herbicide.
  - Hand/Manual Removal.
- Large Infestations.
  - Herbicide.
  - Biocontrol – variable effectiveness.
  - Mechanical.
    - Suppression Only – limits seed production but will not eliminate it.

STATUS
- First Reported in 2017.
- Oak Orchard WMA and adjacent properties.
- WNY Mile-a-Minute Working Group.
- Management began in 2018, continued in 2019.
- Appears isolated – surveys have not resulted in additional populations discoveries, yet.

THREAT
- Loss of native plant communities.
- Prevents tree seedling germination, can kill mature trees.
- Suppresses agricultural crops.

Water Lettuce

(*Pistia stratoites*)



IDENTIFICATION

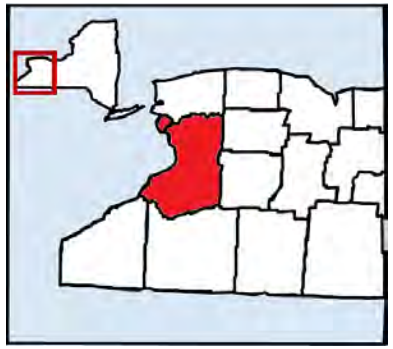
- Floating aquatic plant.
- Looks like an open head of lettuce floating in the water.
- Leaves are light green, thick, and hairy with distinct parallel ridges and scalloped edges.
- Rosettes are connected by underwater stems, feathery roots (similar to water hyacinth) hang below.
- Flowers are small, white
- Fruit resembles a small green berry.

SIMILAR SPECIES

- Not here either.

Water Lettuce

(*Pistia stratoites*)



PREVENTION

- Do not buy, trade, or plant this species.
- Do not allow species to enter into natural waterways.
- Dispose of all plant material in landfill-bound trash.

MANAGEMENT

- Similar to Water Hyacinth
  - Manual removal
  - Mechanical – harvesters
  - Herbicide

STATUS

- 2 known infestations – one in Ellicott Creek and second on private property in Erie County.
- Ellicott Creek infestation removed in 2018.
- Part of WNY PRISM annual site monitoring.

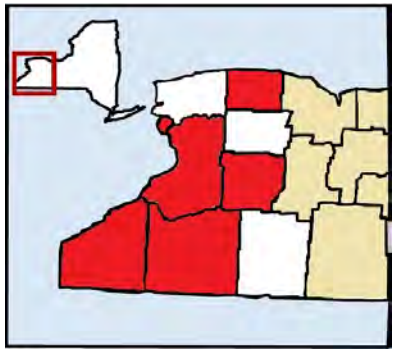
Species of Concern

WNY PRISM Region Data Gaps – we need more surveys!

- Starry Stonewort (*Nitellopsis obtusa*) – Chautauqua Lake, Wilson Tuscarora SP (Lake Ontario)
- Oriental Bittersweet (*Celastrus orbiculata*) – widespread but uncomon, found in well-surveyed areas
- European Frog-bit (*Hydrocharis morsus-ranae*) – under surveyed throughout region
- Flowering Rush (*Butomus umbellatus*) – under surveyed
- Goatsrue (*Galega officinalis*) - McKean, Potter and Cameron Counties in PA
- Hemlock Woolly Adelgid (*Adelges tsugae*)

Hemlock Woolly Adelgid

(Adelges tsugae)

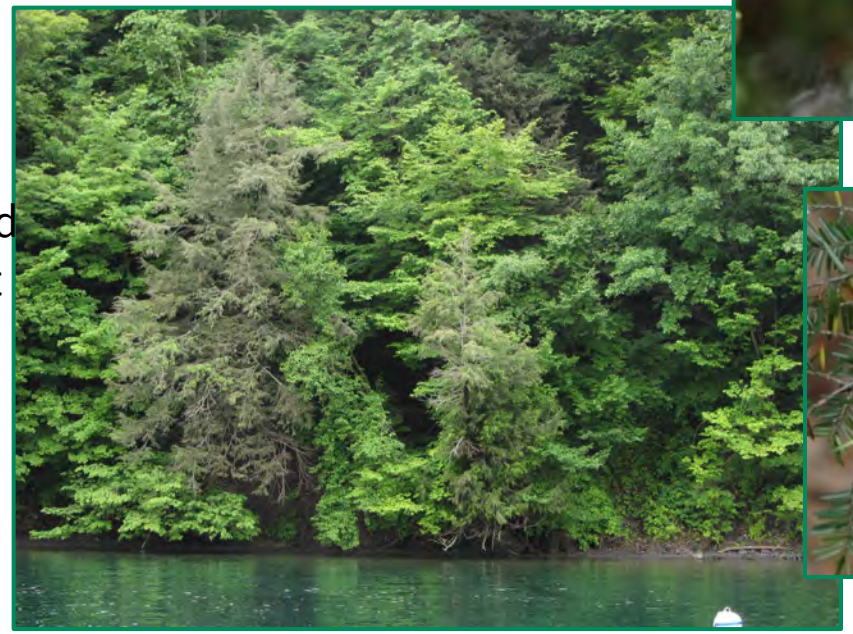


IDENTIFICATION

- Produce white 'woolly' masses at the base of hemlock needles – most visible in the winter months.
- Crawlers emerge in spring.
- Established infestations may cause a gray tint to the bark.

THREAT

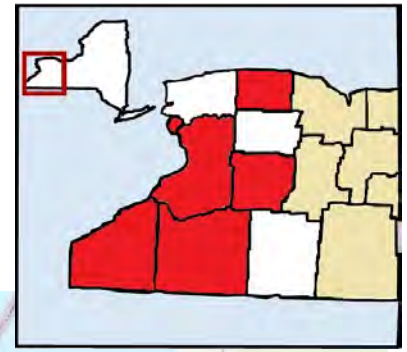
- Impacts Eastern hemlock and Carolina Hemlock, leading to death.
- Hemlocks provide important habitat for wildlife and regulate temperature – providing cooler water that supports declining fish populations.



New York State Hemlock Initiative:
www.nyshemlockinitiative.info

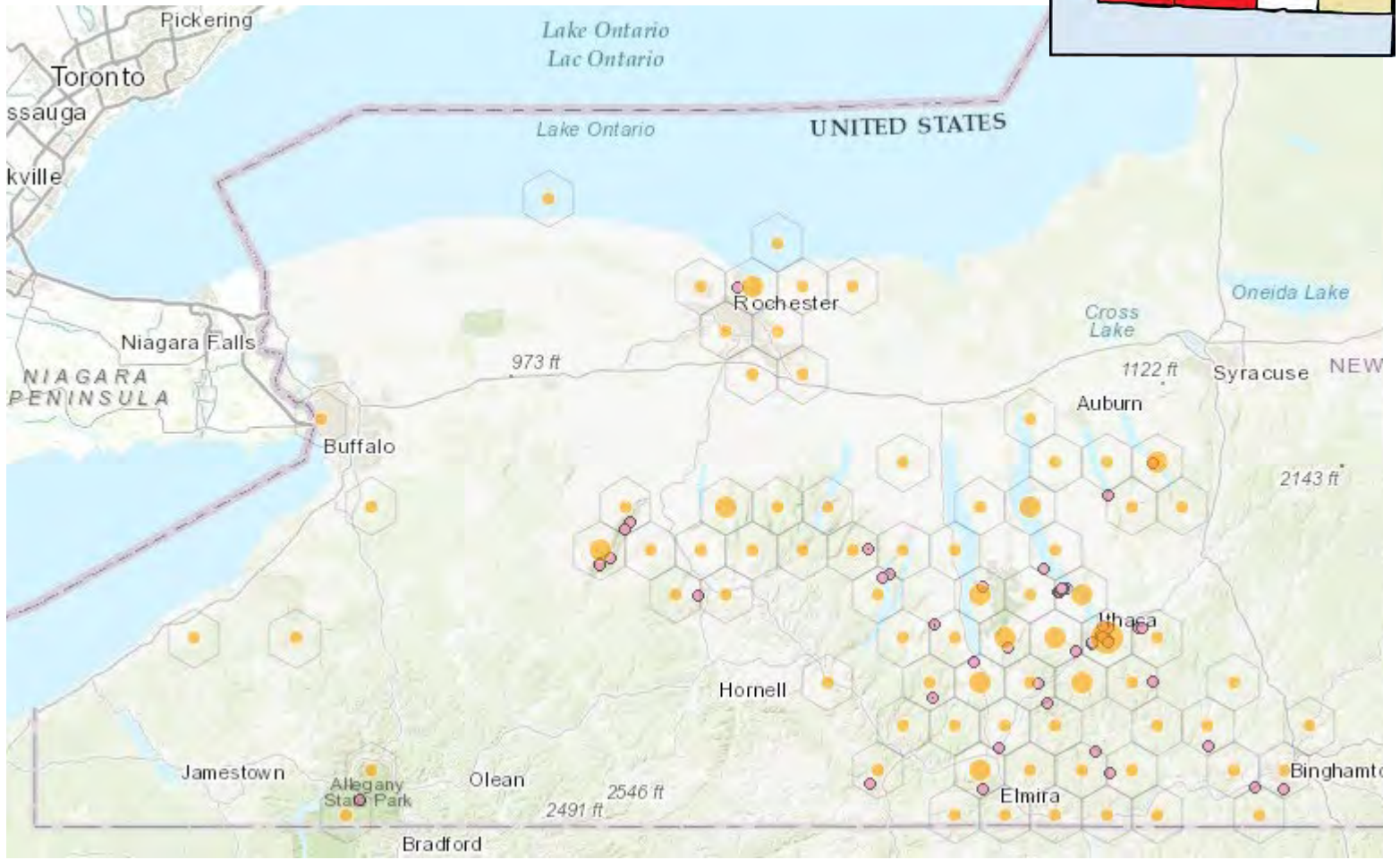
Hemlock Woolly Adelgid

(Adelges tsugae)



MANAGEMENT

- Surveys
- Biocontrol
  - *Laricobius* beetles
    - Feed on eggs and early instar nymphs
  - *Leucopis* silver flies
    - Feed on eggs
  - Limited capacity
- Mechanical Removal
  - Cut and burn, in place
- Pesticide
  - Imidacloprid and Dinotefuran are both used in NYS.
  - Imidacloprid is available to landowners as a soil drench. Other methods & pesticides require a certified pesticide applicator.



WNY PRISM

Partnership for Regional Invasive Species Management

QUESTIONS???

Submit question through chat

Send to Lucy Nuessle