



Department of
Agriculture and Markets

SPOTTED LANTERNFLY, BOX TREE MOTH, & REGULATED INVASIVE SPECIES (PART 575)



BLACK RIVER WATERSHED CONFERENCE

JUNE 6, 2025

Box Tree Moth (*Cydalima perspectalis*)



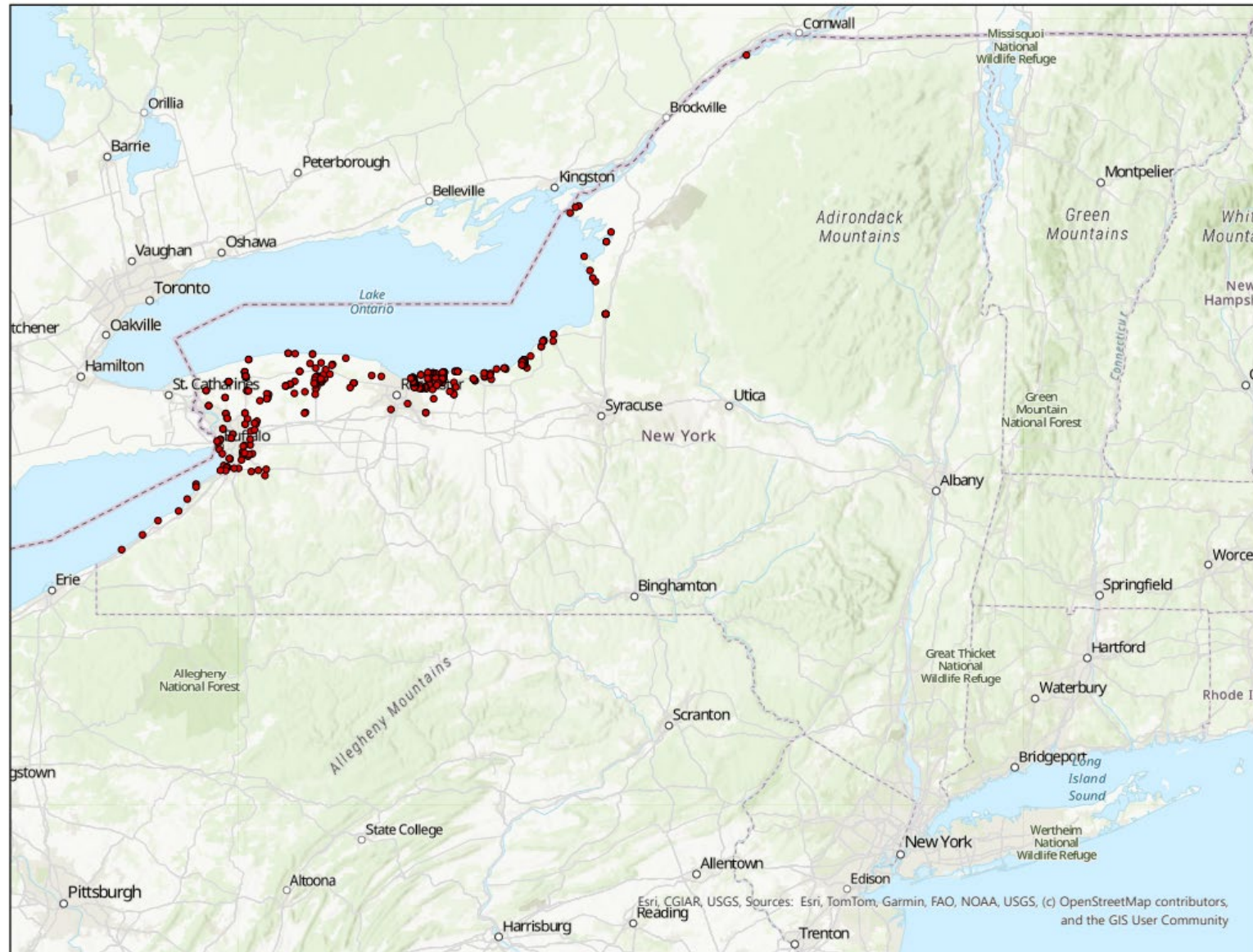


- **2018 BTM was documented in Toronto, Ontario Canada**
- **2019 CAPS target**
- **2020 Targeted trapping**
- **2021 Found in Niagara County, NY**

Box Tree Moth – Initial Steps

- **December 10, 2021** - AGM enacted a quarantine regulation to control and stop the spread of Box Tree Moth - Specifically this regulation is to control the movement of *Buxus* within the quarantine area and to prohibit movement of BTM outside of the quarantine boundary
- **March 23, 2022** - USDA-APHIS-PPQ issued a federal quarantine order including three counties prohibiting the interstate movement of regulated material
- **May 26, 2022** - USDA-APHIS-PPQ issued a federal order prohibiting the import of *Ilex*, *Buxus*, and *Euonymus* from Canada
- **September 20, 2023** – AGM updates Quarantine updated to add additional counties

Known Box Tree Moth Detections



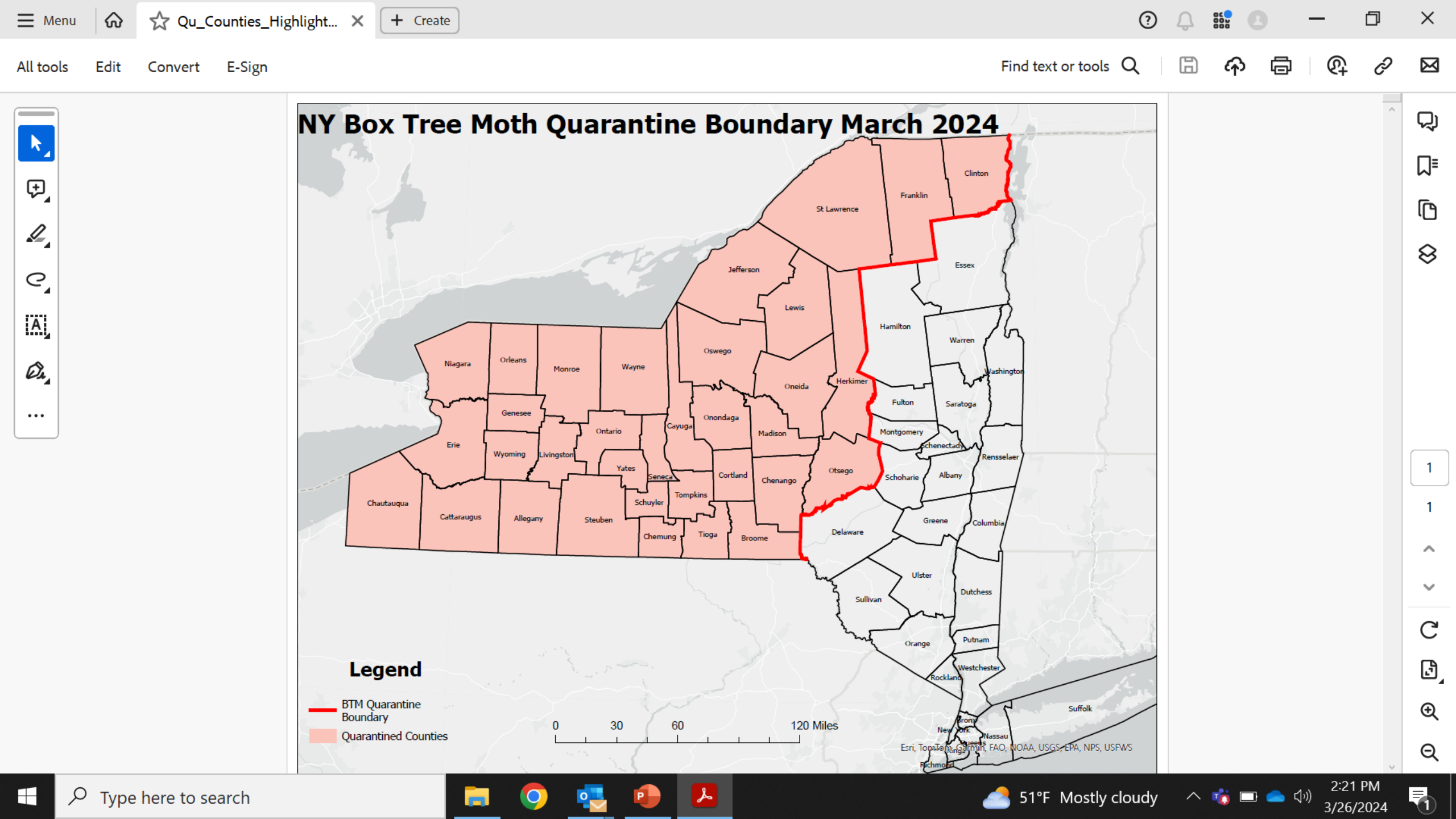
Map: Cody LaDuke

Box Tree Moth – Nation wide

United States of America



- **New York**
- **Massachusetts**
- **Michigan**
- **Ohio**
- **Pennsylvania**
- **Delaware**



2024 Box Tree Moth Quarantine

- Increased quarantine area significantly- now 34 counties
- Movement of UNINFESTED host material within the expanded quarantine zone is allowed and does not require a compliance agreement
- Material must still be free of BTM- inspectors will still quarantine infested nursery material and write a treatment
- Movement out of the quarantine zone is allowed pursuant to a compliance agreement:
 - Pest management plan, trapping, inspection, treatments and pre-notification to destination state.

Box Tree Moth Pupa



- **Very difficult to find**
- **Approximately $\frac{3}{4}$ inch long**
- **Rolled paper appearance**

Box Tree Moth – **Egg Mass**

- Up to three generations of BTM per year in New York
- Difficult to detect due to placement and leaf size



PHOTO: Walter Schon

Box Tree Moth Larval Stage



Photo: Jen Liewellyn

- Overwinters as a caterpillar

Box Tree Moth Adult

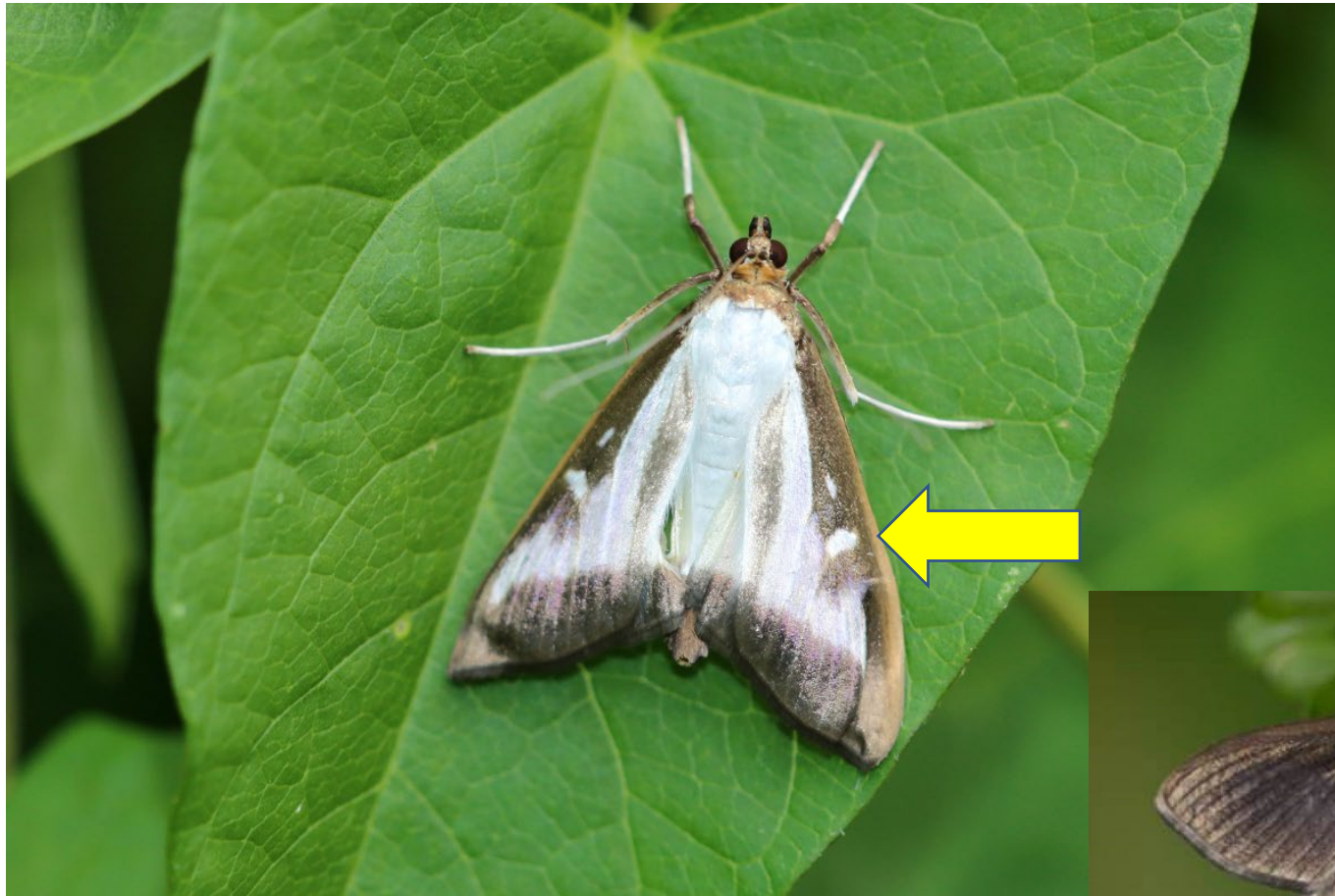


PHOTO: Canada Dept. of Agriculture

- Adults found primarily at night
- Distinct apostrophe marks found on wings
- Both light and dark color morphs exhibit these markings



PHOTO: NYS Dept. of Agriculture & Markets

- **AGM works with nursery grower and plant dealer establishments to limit the human assisted spread of BTM through the sale of host material**
- **State quarantine requires inspection (by AGM) of host material grown in or moved into the quarantine area and being offered for sale or by compliance agreement**



Photo: Franz Van Duns

Box Tree Moth Trapping

- Trapping for BTM around registered establishments within the quarantine
- Additional trapping in conducted outside the quarantine



- **Old Boxwood plantings can succumb to very quickly**
- **By the second generation BTM will girdle stems and cause death**



Photo: Getty Images

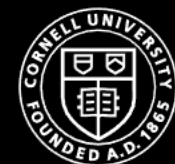


Insecticides Labeled for Box Tree Moth Registered in New York State

- ▲ Products for Home Use (xlsx).
- ▲ Products for Commercial
Landscape and Nursery
Use (xlsx).

New York State Integrated Pest Management

- RISK ASSESSMENT - RESEARCH & INITIATIVES - OUTREACH & EDUCATION - ECO RESILIENCE - ABOUT NYSIPM



Box Tree Moth

(Cydalima perspectalis)

Exotic Insect

The Box Tree Moth (BTM) poses a threat to boxwood plantings.

Box Tree Moth

- **Reporting BTM**
- <https://arcg.is/1Df8Se>
- **BTM Quarantine Regulations**
- <https://agriculture.ny.gov/plant-industry/express-terms-box-tree-moth>



Boxwood Blight

Cylindrocladium pseudonaviculatum

- Similar damage – from a distance
- Positive diagnosis only by laboratory test
- Spreads rapidly in warm humid conditions



Boxwood blight symptoms in the landscape



Defoliation is the ultimate effect of Cylindrocladium infection on Buxus species.



Leaf spots on boxwood with boxwood blight

Boxwood Blight



Dark brown spots with black rims are a symptom of boxwood blight. (Photo Margery Daughtrey)



Boxwood hedge affected by Boxwood Blight in the landscape. (Photo Margery Daughtrey)

- Spread by moving infected plants and diseased plant parts, including leaves for up to 5 years
- Leaves and twigs needed for lab diagnosis
- Spring and Fall are the likely period of infection and spread

Boxwood Blight

- Fungicides mostly ineffective
- Destroy infected material
- Plant alternative non-host material
- Plant resistant cultivars



Photo: Nature.com

Spotted lanternfly (SLF)

Lycorma delicatula

- Plant hopper native to China and Southeastern Asia
- Discovered in Pennsylvania in 2014
- Use mouthparts to feed on the sap of more than 100 plant species
 - Prefer tree-of-heaven (*Ailanthus altissima*)
 - Grapes, apples, hops, maples, walnuts, and others



Photo: Leo Zappala

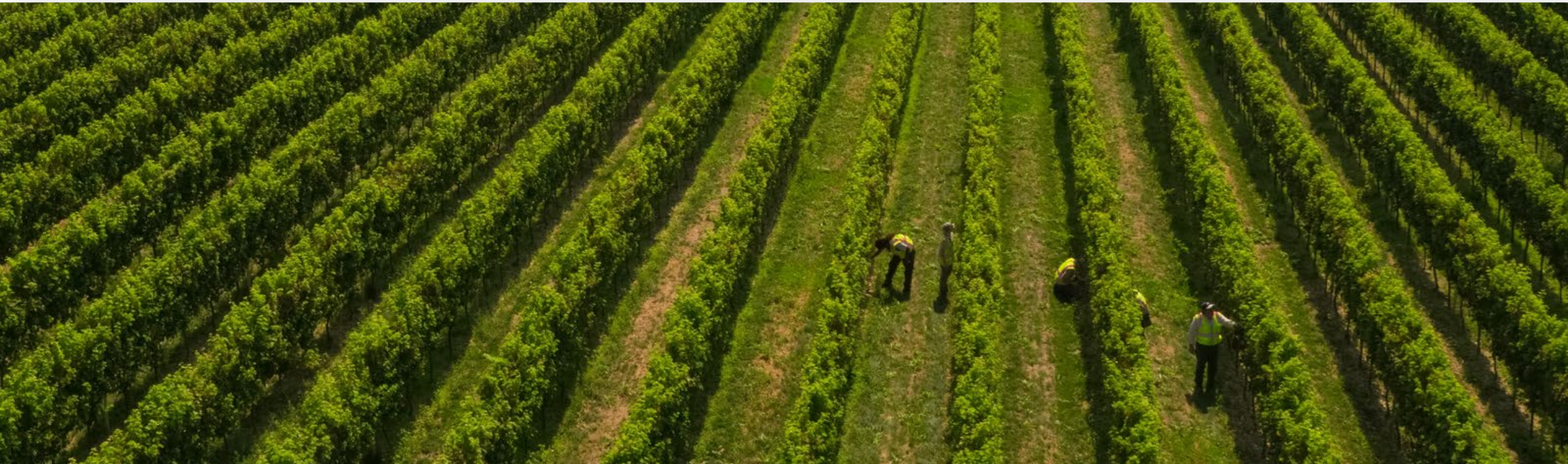
SLF impacts

- Feeding stresses plants, making them vulnerable to disease and attacks from other insects
- Excrete sticky sugar rich honeydew
- Impacts quality of life; hinders outdoor activities





- Vineyard losses are highest concern, followed by orchard losses
- Environmental impacts on forests and forest products are still very much unknown and more research is needed



SLF impacts

- Vineyard Losses
 - Nationally NY ranks third in grape production
- Orchard Impacts
 - Nationally NY ranks second apple production
- Hops Impacts
 - Expanding NY hops are likely to be impacted
- Environmental Impacts
 - Forests and forest products

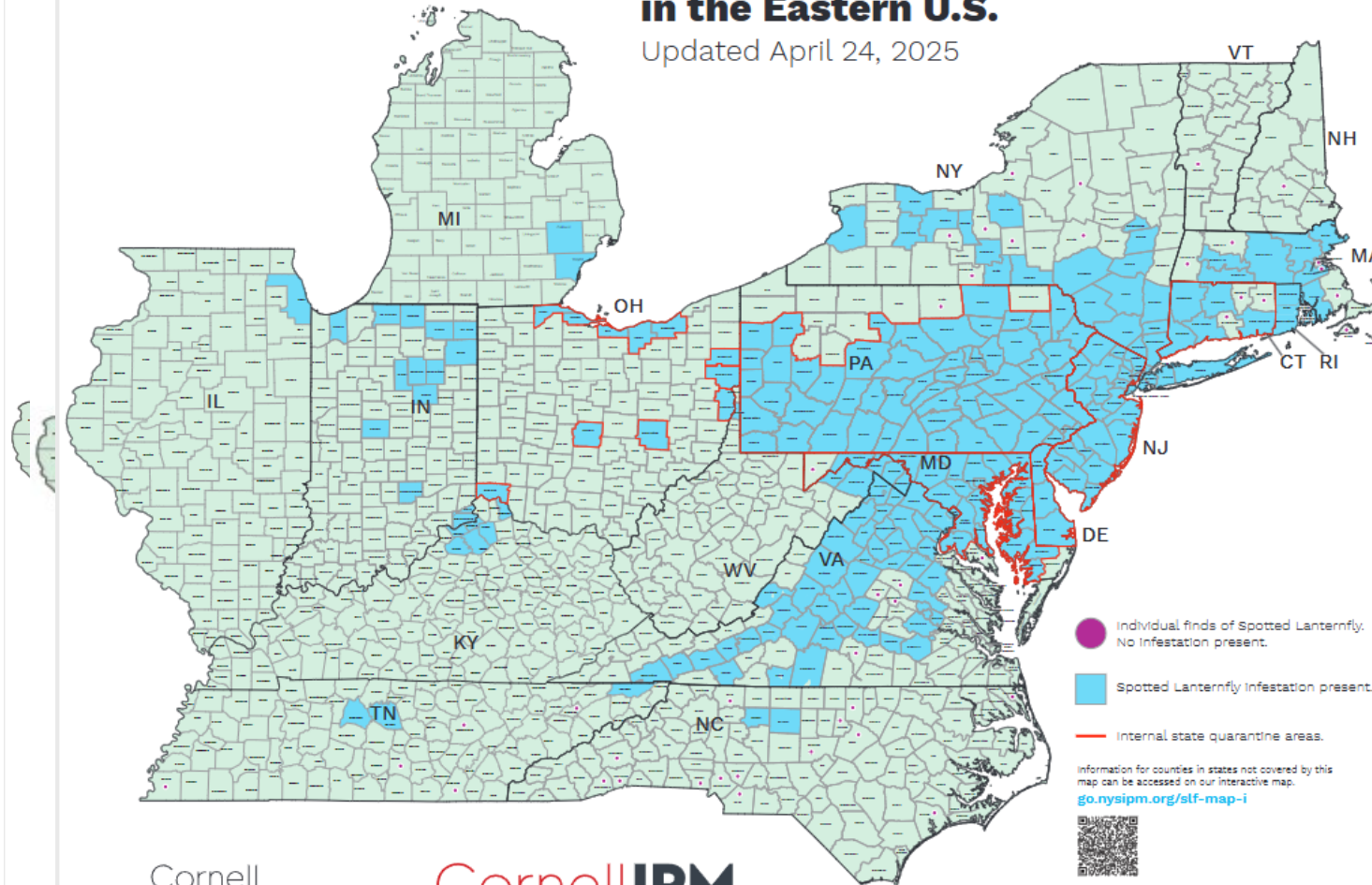


Photos: NYSDEC & PA Dept of Agriculture

Where Is Spotted Lanternfly Now ?

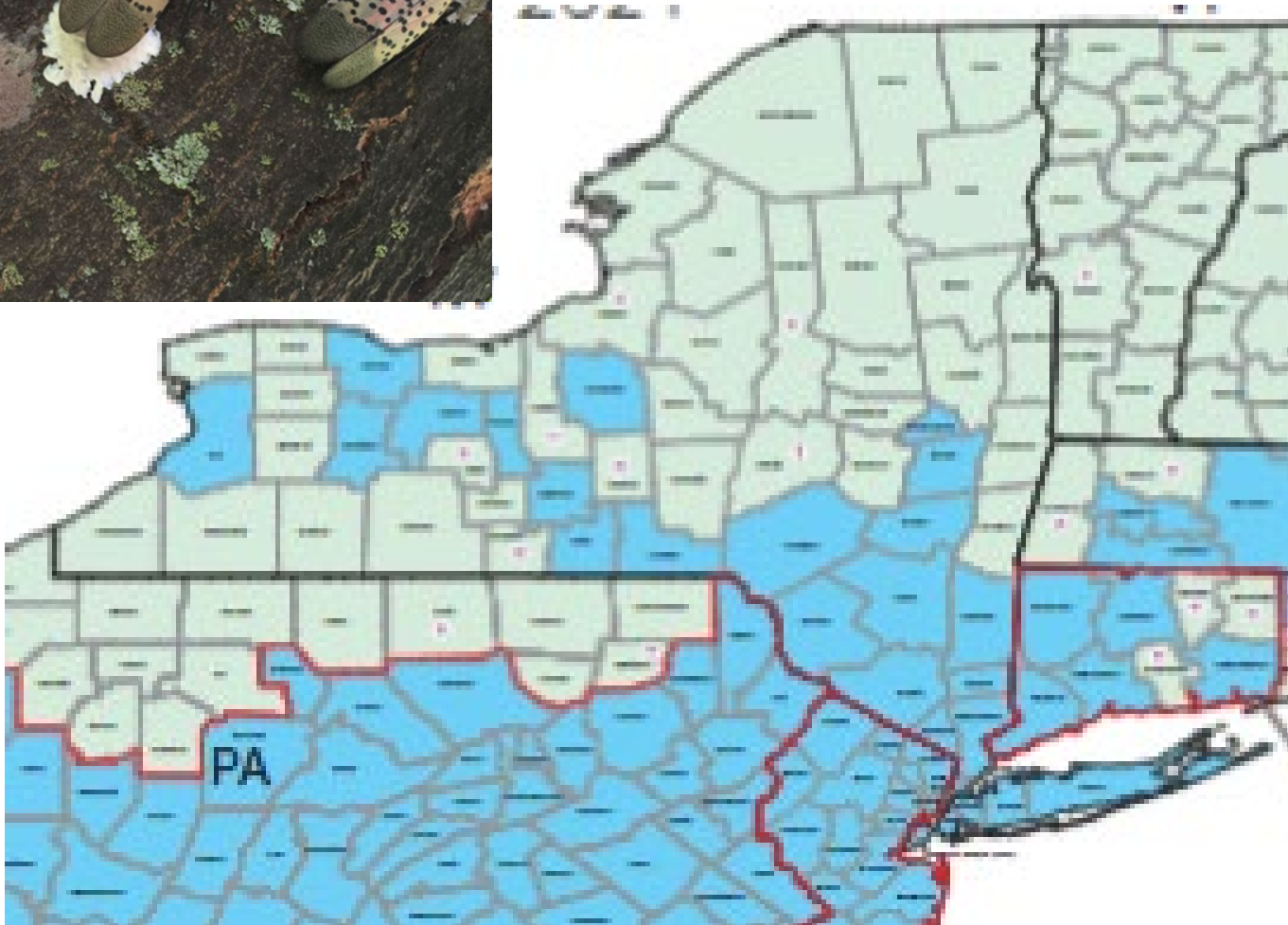
Spotted Lanternfly Reported Distribution in the Eastern U.S.

Updated April 24, 2025



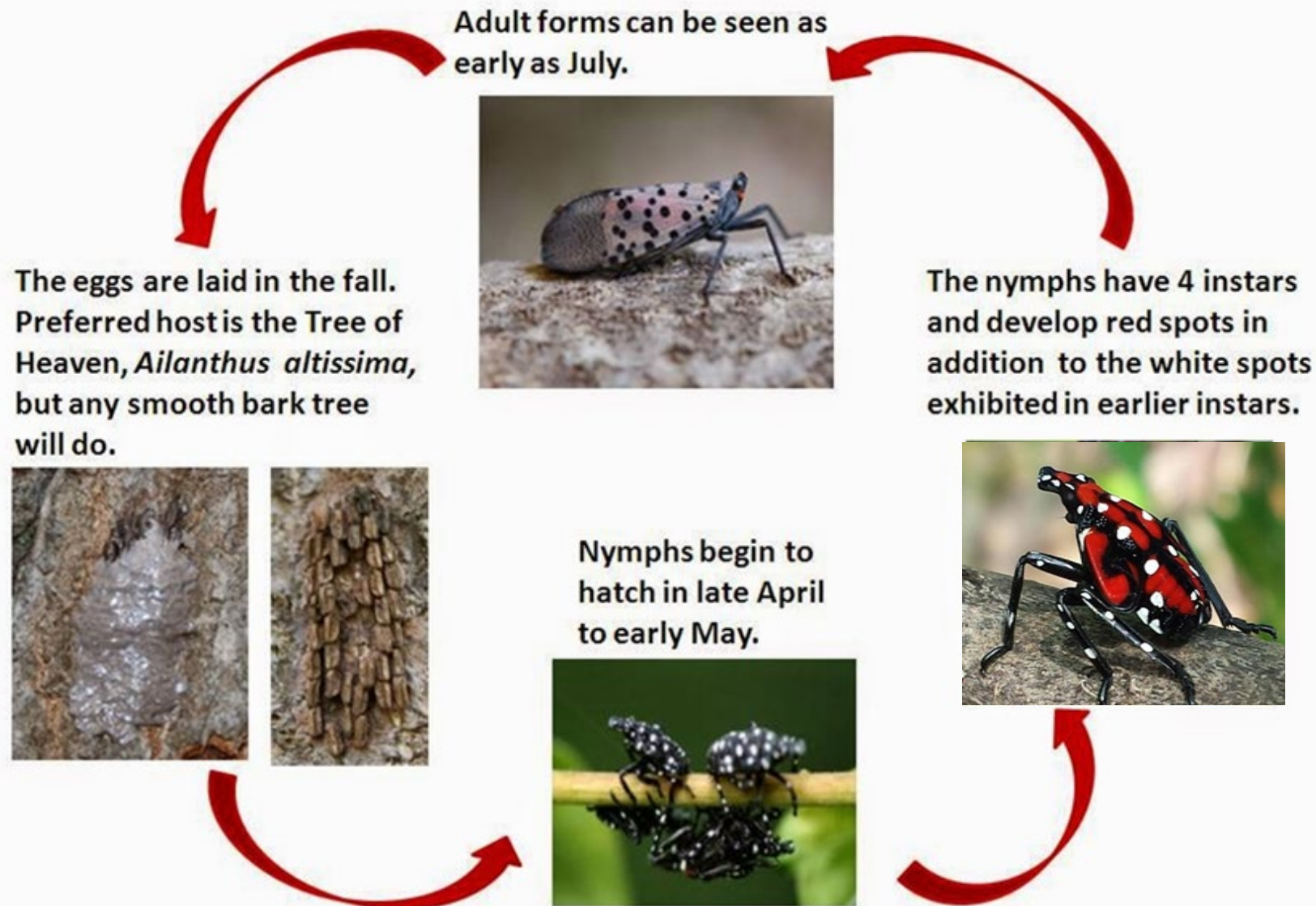
17 States

Where Is Spotted Lanternfly In New York?

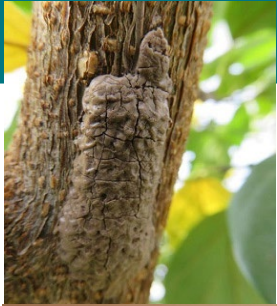


- **First NY Detection 2020**
- **27 NY Counties 2024**
 - Rensselaer
 - Livingston
 - Seneca

Life Cycle



Spotted Lanternfly

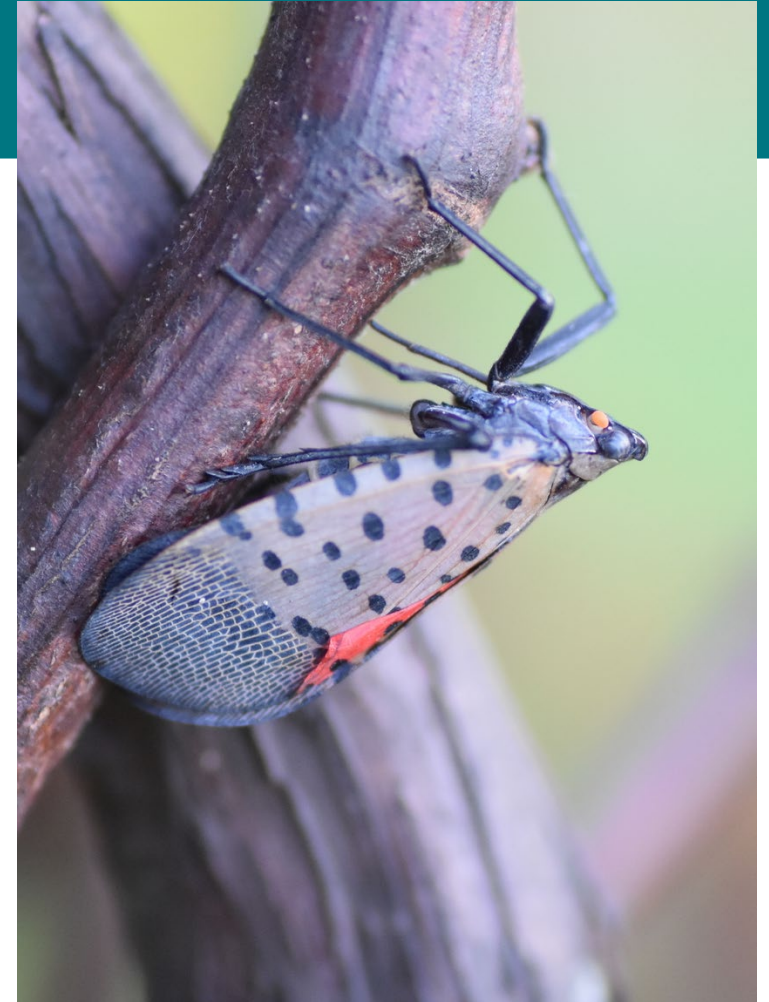


	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Eggs												
Nymphs												
Adults												

Adult Stage



Photo: Nancy Ondra



Adult Stage



Photo: Ryan Zucker

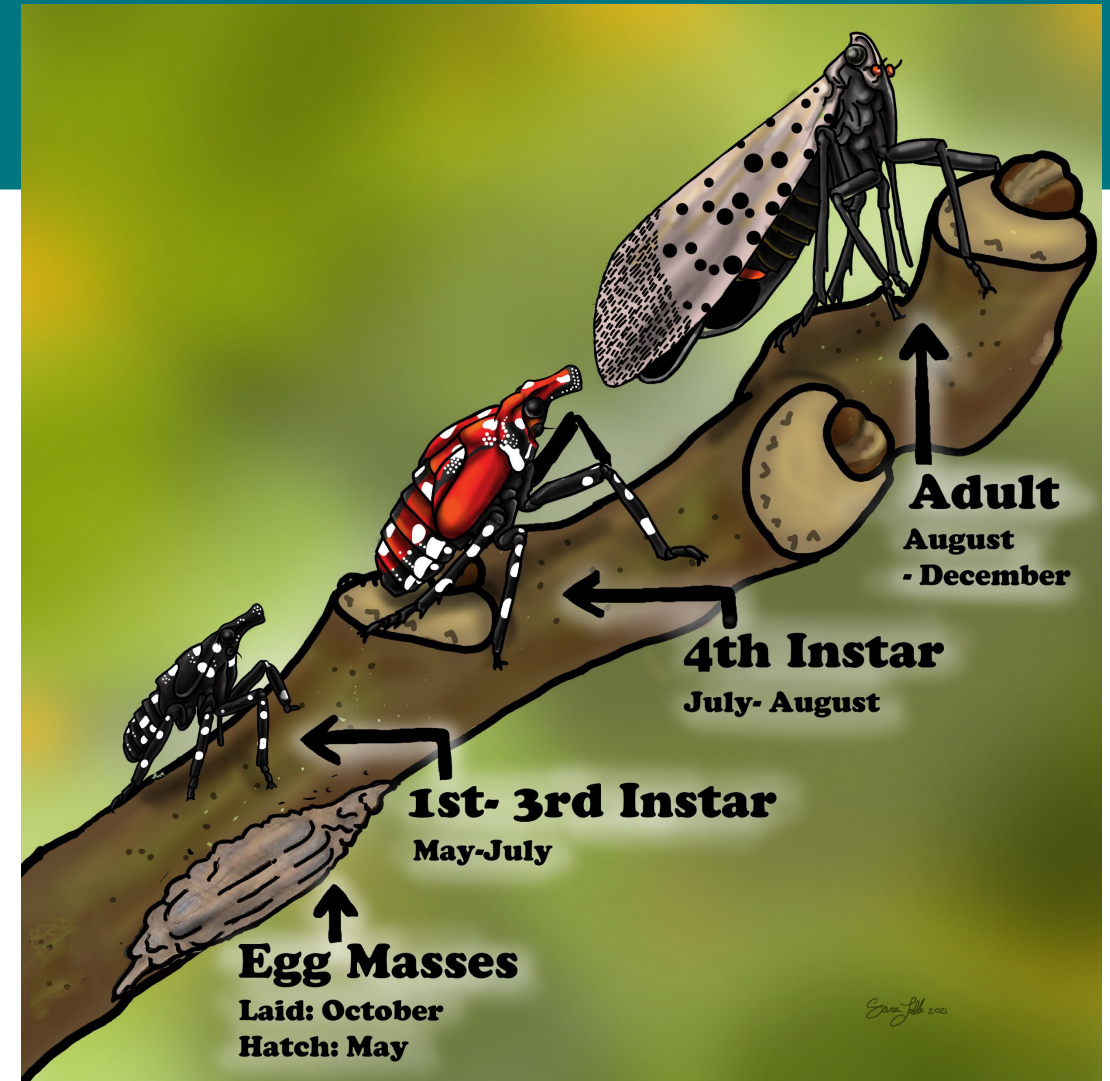


**Agriculture
and Markets**

Adult Stage



Photo: Amy Stone



Adult Stage



Photo: Amy Stone



**Agriculture
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Gravid Females Ready to Lay Eggs



Eggs



Photo: NYS DOT



**Agriculture
and Markets**

Egg Masses - Under Bark



Photos: USDA

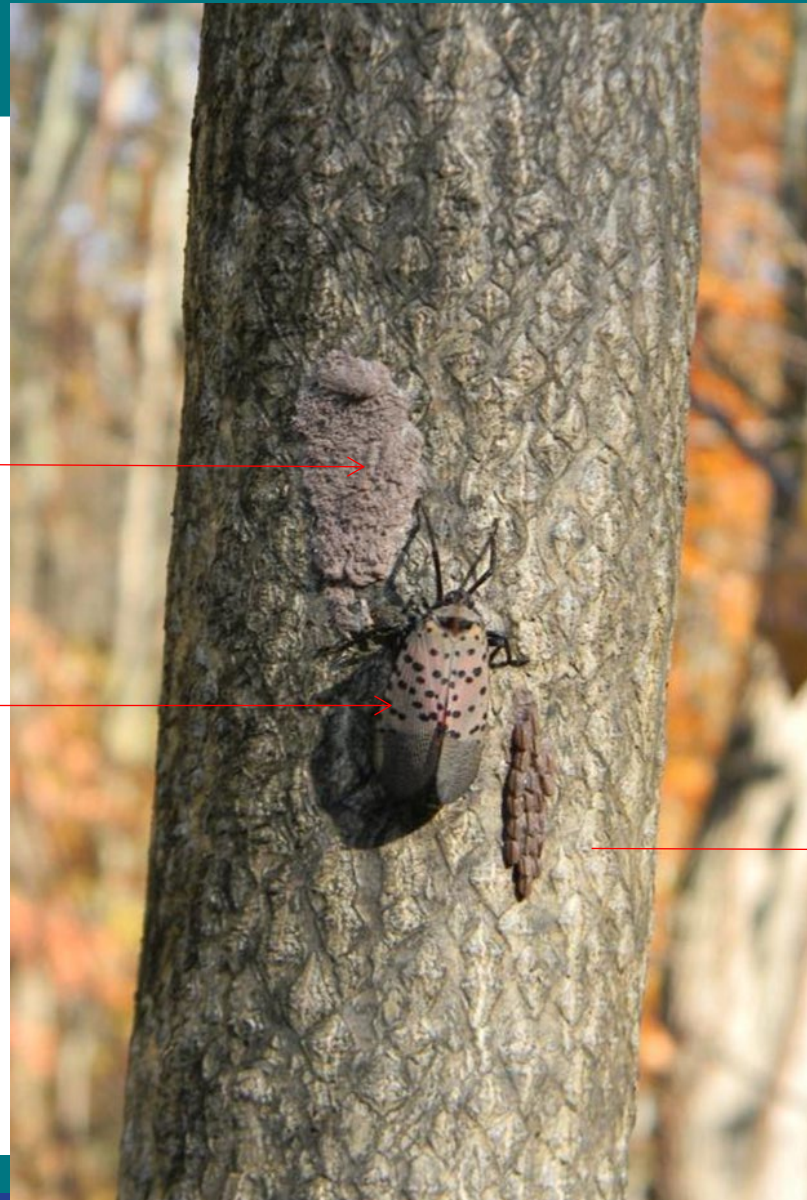


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Eggs

Covered egg mass

Adult SLF



Uncovered egg mass

Eggs



Photo:
NYS DAM

Photo: Willistown Township, PA



Photo: Penn State Extension

Early Emergence

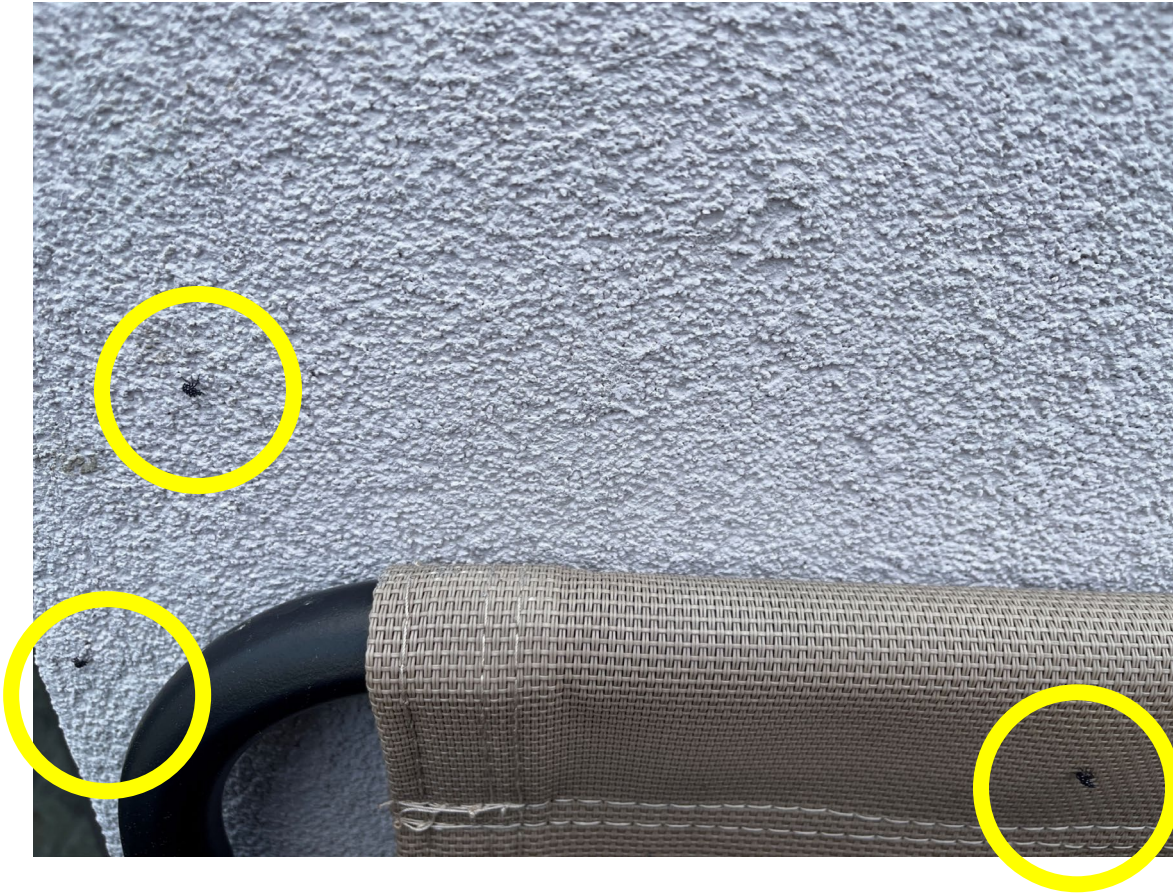


Photo: Louis Sorbera

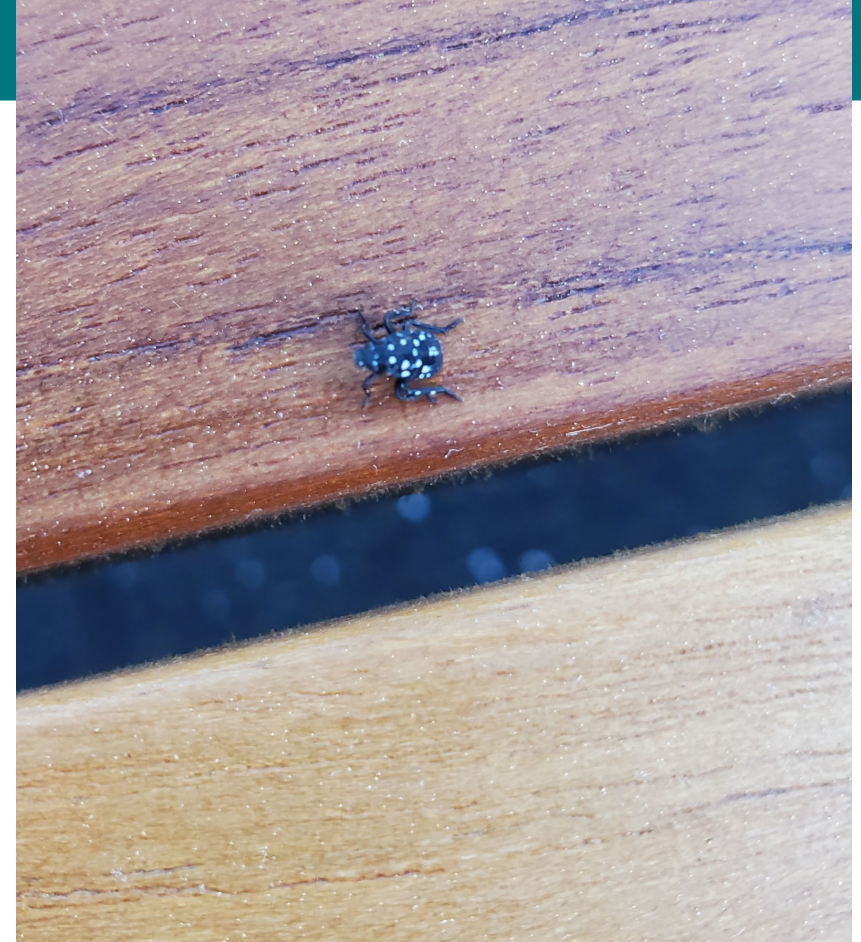


Photo: Dr. Dave Popple

Second Instar Nymphs



Photos: USDA



Nymphs on Black Walnut & TOH



Photo: Richard Gardner



Photo: Univ. of Virginia

Emergence of Forth Instar Nymphs



Photo: Steve Ausmus USDA

Photo: iNaturalist –Landmanagementintern



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Fourth Instar Nymphs



Photo: Steve Ausmus USDA



Photo: PA Dept. of Agriculture

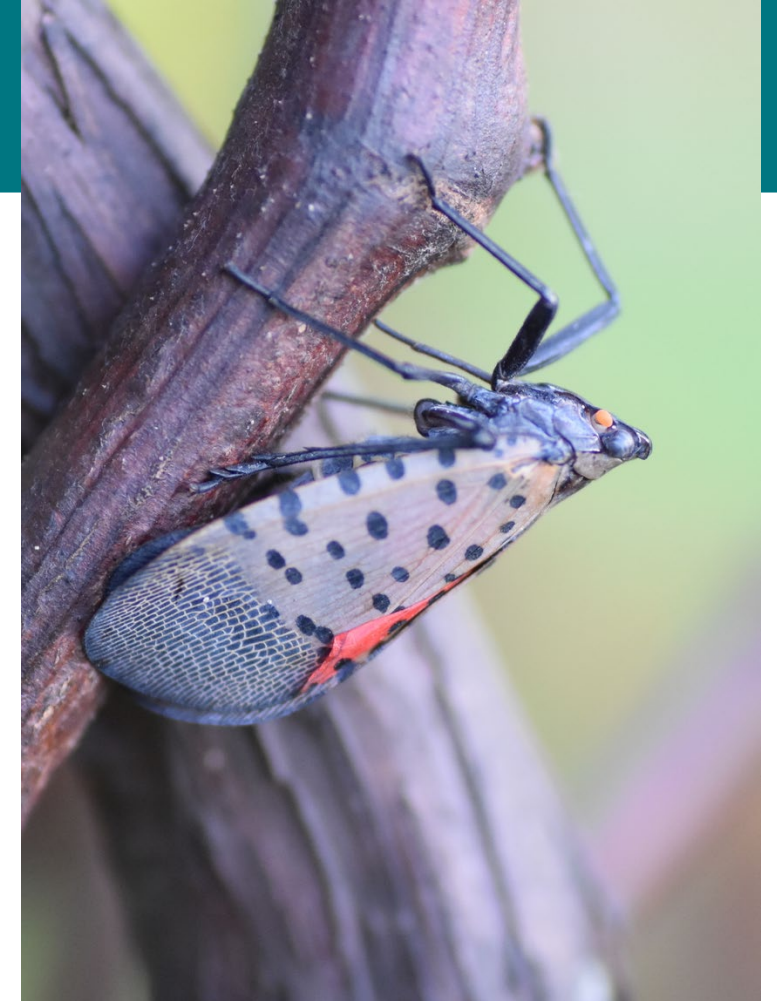


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Adult Emergence Reports



Photo: Mark Andrews



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Dispersion

- Jumping and flying
- Individuals can move 3-4 miles walking, jumping, and flying
- **Hitchhiking is the most common form of movement over long distances**



Survey Tips



Photo: USDA PPQ



Photo: PA Dept. of Agriculture

Survey Tips



Photo: PA Dept. of Agriculture



Photo :Lower Hudson PRISM



Photo: Liz Willow

NY/NJ Trail Conference/ LH PRISM Detector Dogs



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Scraping Egg Masses

- Scrape into re-sealable bag that contains rubbing alcohol or hand sanitizer and dispose of them in the solution
- Scrape using scraper cards, or anything else that is hard, tapered, and/or flat
- Put eggs into doubled bags, alcohol with hand sanitizer or kill them completely

Trapping

Circle trap is what we recommend, and instructions can be found through Penn State Extension's we

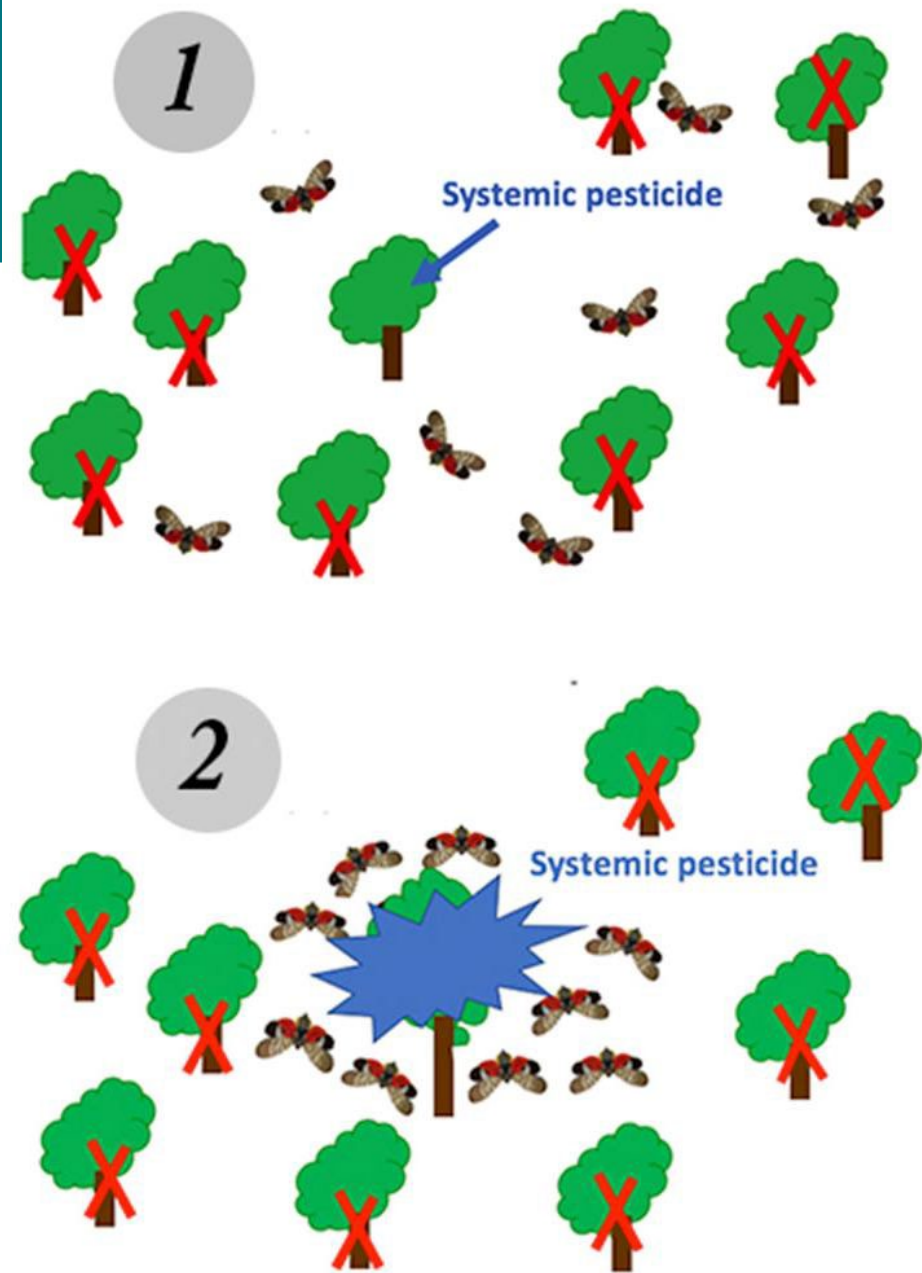


Photo: NYS AGM



What About Trap Trees?

- As of April 2019, trap trees are not recommended as a management tool
- Tree-of-heaven serves as low population monitoring tool
- Tree-of-heaven removal is likely to send SLF to other desirable (or economically important crops like maple and walnut)



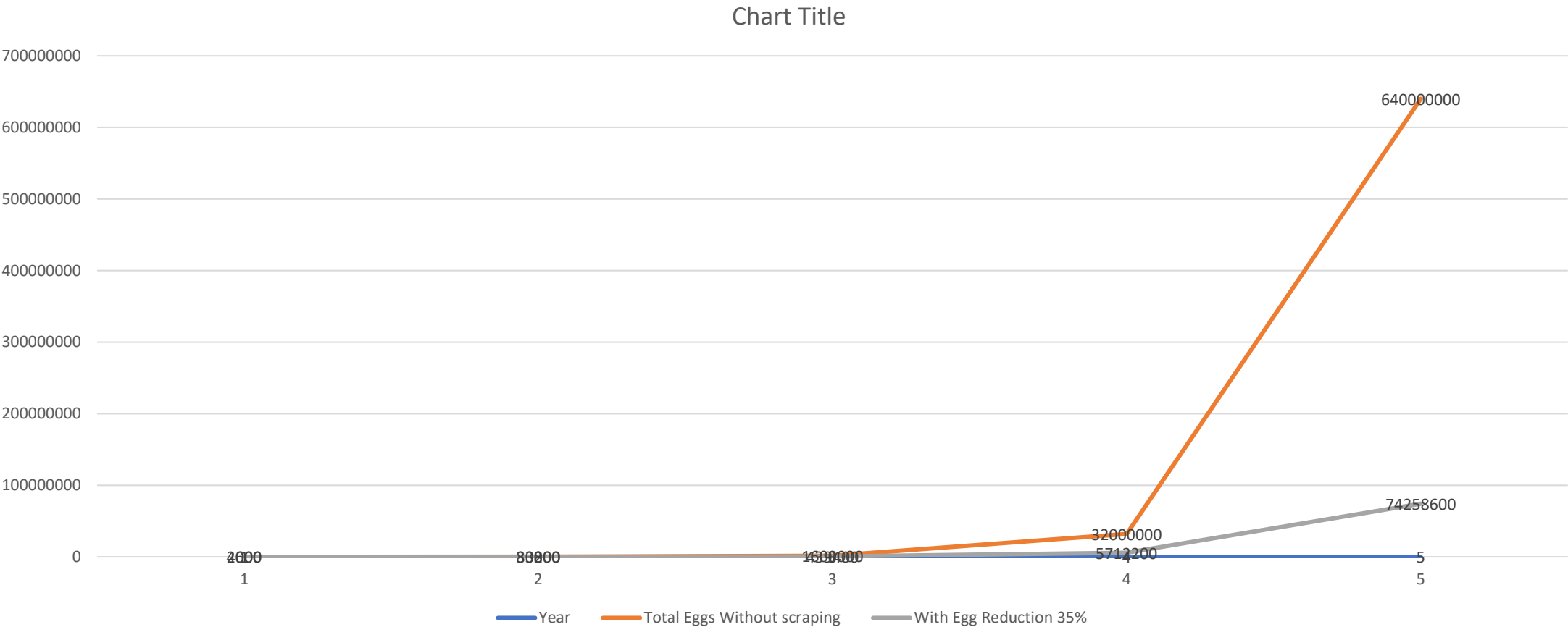
What About Tree Removal?

- Host tree removal has been used in limited very low population areas with minimal impact
- The risk is dispersal to other hosts and further spread



Impact of Egg Mass Reduction

Year	Total Eggs Without scraping	With Egg Reduction 35%
1	4000	2600
2	80000	33800
3	1600000	439400
4	32000000	5712200
5	640000000	74258600



Projection based on 50 eggs per female



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Biological Control

- *Beauveria bassiana* - commercially available products labeled for SLF in NY
- *Batkoa major* - research still in progress



Photo: NYS IPM

Insecticide Control Help

For assistance with selecting a pesticide:

- Information on Control and Research
- [Spotted Lanternfly | New York State Integrated Pest Management \(cornell.edu\)](#)



Chemical Treatments



Management Options

[Spotted Lanternfly | CALS \(cornell.edu\)](https://cals.cornell.edu/spotlight/2014/08/20/spotlight-spot-spotted-lanternfly/)

Management Tools and Tactics



Management

Biology and Lifecycle

Damage



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Reporting SLF

- People living in the following counties **do not** need to report Spotted Lanternfly sightings to the Department or collect samples at this time:
- Dutchess
- Nassau
- New York City counties
- Orange
- Putnam
- Rockland
- Suffolk
- Sullivan
- Ulster
- Westchester
- **If you see a Spotted Lanternfly in the counties listed above, kill it immediately by stepping on it or crushing it.**



Reporting SLF

- If you live **outside of the counties on the map**, you can help the Department by reporting SLF immediately after it is found. Follow these steps:
- Take a photo
- Collect a sample and place it in a freezer or in a jar with rubbing alcohol or hand sanitizer
- [Contact the SLF responders](#)
- After you have reported SLF in your area and collected a sample, you should kill any additional SLF you see by stepping on it or crushing it.

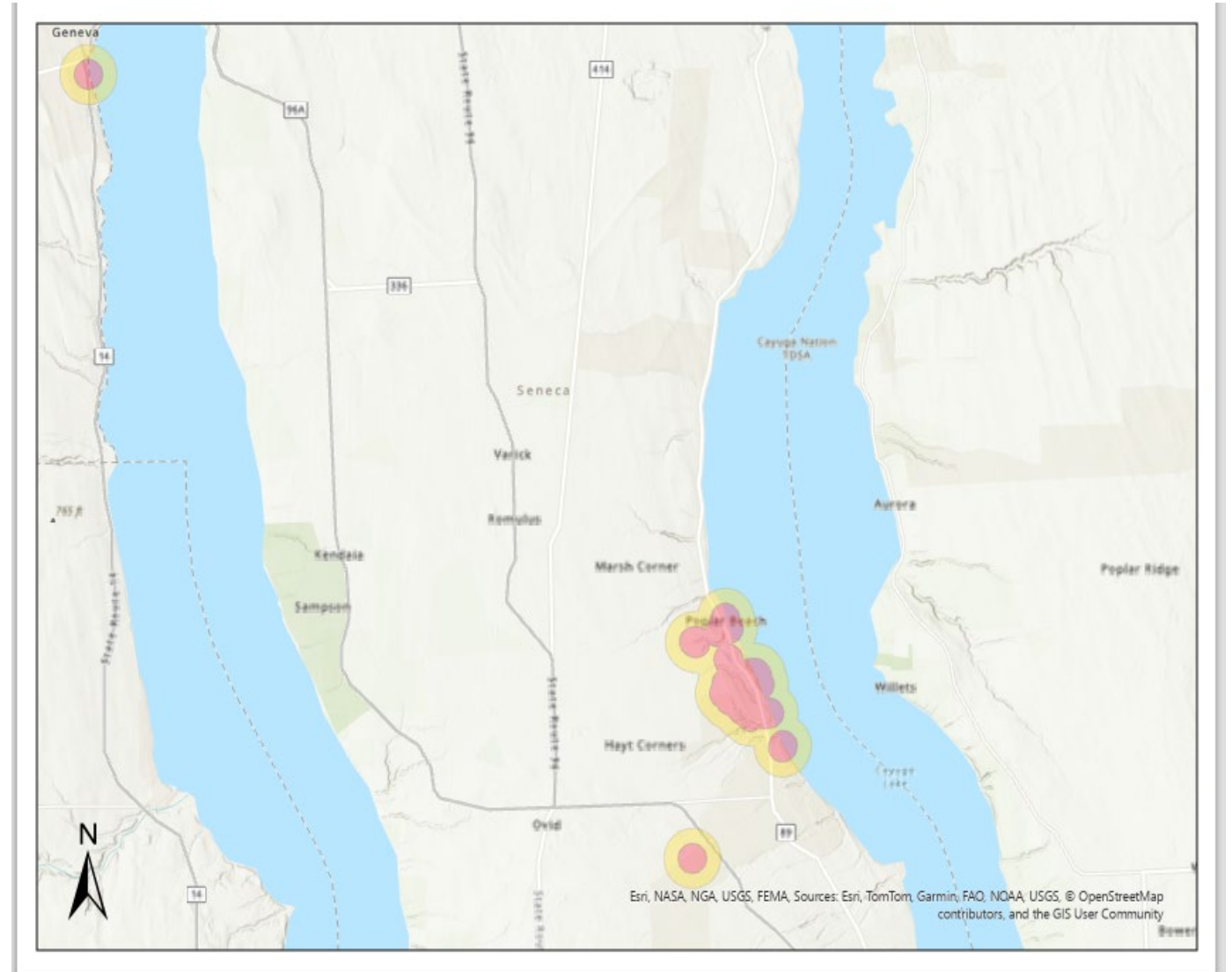
Reporting SLF

- [NY's invasive species database and mapping system | NY iMapInvasives](#)

The screenshot displays the NY iMapInvasives website. The header features a green navigation bar with links for 'Blog', 'Volunteers', 'Professionals', 'Training Network', 'WISPA', 'Educators', and 'View map'. A prominent yellow banner reads 'Sign up for an SLF Grid Square!'. Below this, a dark green bar contains the 'iMapInvasives' logo, a 'Report an Invasive' button, and links for 'Data & Maps', 'Training', 'Resources', and 'About Us'. A search bar is also present. The main content area has a green background with the text 'Welcome to NY iMapInvasives' and a description: 'NY iMapInvasives is an online, collaborative, GIS-based database and mapping tool that serves as the official invasive species database for New York State. Learn more about iMap.' To the right, a map titled 'Confirmed Reports of Tree-of-Heaven in iMapInvasives' shows numerous green dots representing sightings across New York State. On the left, a 'Featured species:' section shows a photo of a plant. At the bottom, there are buttons for 'Report an invasive' and 'Create account'.

FINGER LAKES NEW DETECTIONS

SENECA
GENEVA



Take Home Messages

- Currently looking for Egg Masses
- Flat protected areas – (think under & behind)
- Rusty Metal
- Negative is good!



Photo: Ryan Zucker

Part 575 Regulation

- New York State Invasive Species Task Force
 - Better coordinate and streamline Invasive Species regulatory process

FINAL REPORT

of the

NEW YORK STATE INVASIVE SPECIES TASK FORCE

Fall 2005



**New York State Department of
Environmental Conservation**

Acting Commissioner Denise M. Sheehan



**New York State Department of
Agriculture and Markets**

Commissioner Nathan L. Rudgers

Part 575 Invasive Species Regulation

- **DEC regulation 6 NYCRR Part 575**
- [Browse - New York Codes, Rules and Regulations \(westlaw.com\)](#)



Part 575 Regulated Plants

- Species which cannot be knowingly introduced into a free-living state
- Must be labeled, but can be sold



Part 575 Prohibited Plants

- **Prohibited invasive species cannot be knowingly possessed with the intent to sell, import, purchase, transport or introduce**
- **Currently 69 plants on the prohibited list**
- [List of regulated and prohibited invasive species and Q&A \(ny.gov\)](#)



Part 575 Regulated Plants

- Black Locust *Robinia pseudoacacia*
- Burning Bush *Euonymus alatus*
- Chinese Silver Grass *Miscanthus sinensis*
- Japanese Virgin's Bower *Clematis terniflora*
- Norway Maple *Acer platanoides*
- Winter Creeper *Euonymus fortunei*



Part 575 Conditionally Exempt Cultivars

- Chinese Silvergrass *Miscanthus sinensis*
 - 'My Fair Maiden' & 'Scout'
- Winter Creeper *Euonymus fortunei*
 - 'Kewensis' & 'Vanilla Frosting'
- Japanese Barberry *Berberis thunbergii*
 - 'Aurea', 'Crimson Cutie', 'Lemon Cutie', 'Lemon Glow', & 'Mr. Green Genes'



Photo: AGM

Part 575 Conditionally Exempt Cultivars

In 2022 an additional conditionally exempt cultivar was added to the list of previously approved conditionally exempt cultivars.

***Berberis thunbergii* 'Mr. Green Genes'**
'Mr. Green Genes' Barberry



Photo: Plant Addicts

Part 575 Conditionally Exempt Cultivars

- What is NOT conditionally exempt???
- **EVERYTHING** else
- [Invasive Species Regulations - NYDEC](#)

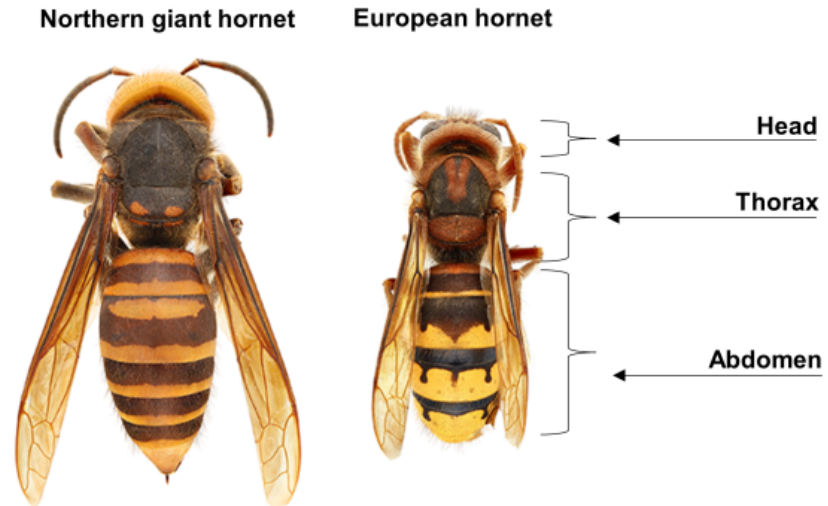


Northern Giant Hornet *Vespa mandarinia*



The European hornet:

- doesn't occur west of the Rocky Mountains,
- is roughly half the size of a northern giant hornet (one to one and a half inches long), and
- has varied markings, typically including distinctive teardrop markings on the back of the abdomen, not uniform bands like the northern giant hornet.



(Left) northern giant hornet (*Vespa mandarinia*) | (Right) European hornet (*Vespa crabro*). USDA Photo by Hanna Royals.

Yellow Legged Hornet *Vespa velutina*

- **NOT** in New York
- Found in Georgia & South Carolina



Yellow-legged hornet

Vespa velutina

Legs:	Yellow at ends
Head:	Black from above, orange face
Thorax:	Black and velvety
Abdomen:	Mainly black with one obvious yellow/orange band
Size:	< 2.5 cm abdomen to head Queens up to 3 cm
Activity:	Never active at night



European hornet

Vespa crabro

Legs:	Brown
Head:	Brown from above, yellow face
Thorax:	Black and brown
Abdomen:	Mainly yellow with black bands, spot marks like 'dripping paint'
Size:	larger: < 3 cm abdomen to head Queens up to 3.5 cm
Activity:	May be active at night



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