Emerging Invasives in the Watershed

John Thompson

Catskill Regional Invasive Species Partnership

Director

jthompson@catskillcenter.org

INVASIVE SPECIES MANAGEMENT CATSKILLS

CATSKILLCENTER

What Is an Invasive Species?

- Not native to the ecosystem
- Causes harm to the economy, human health, or the environment
- Defined by New York State Environmental Conservation Law Title 17, Article 9, 2008

Asian Longhorned Beetle

Northern Snakehead

Invasive Species Are a Threat

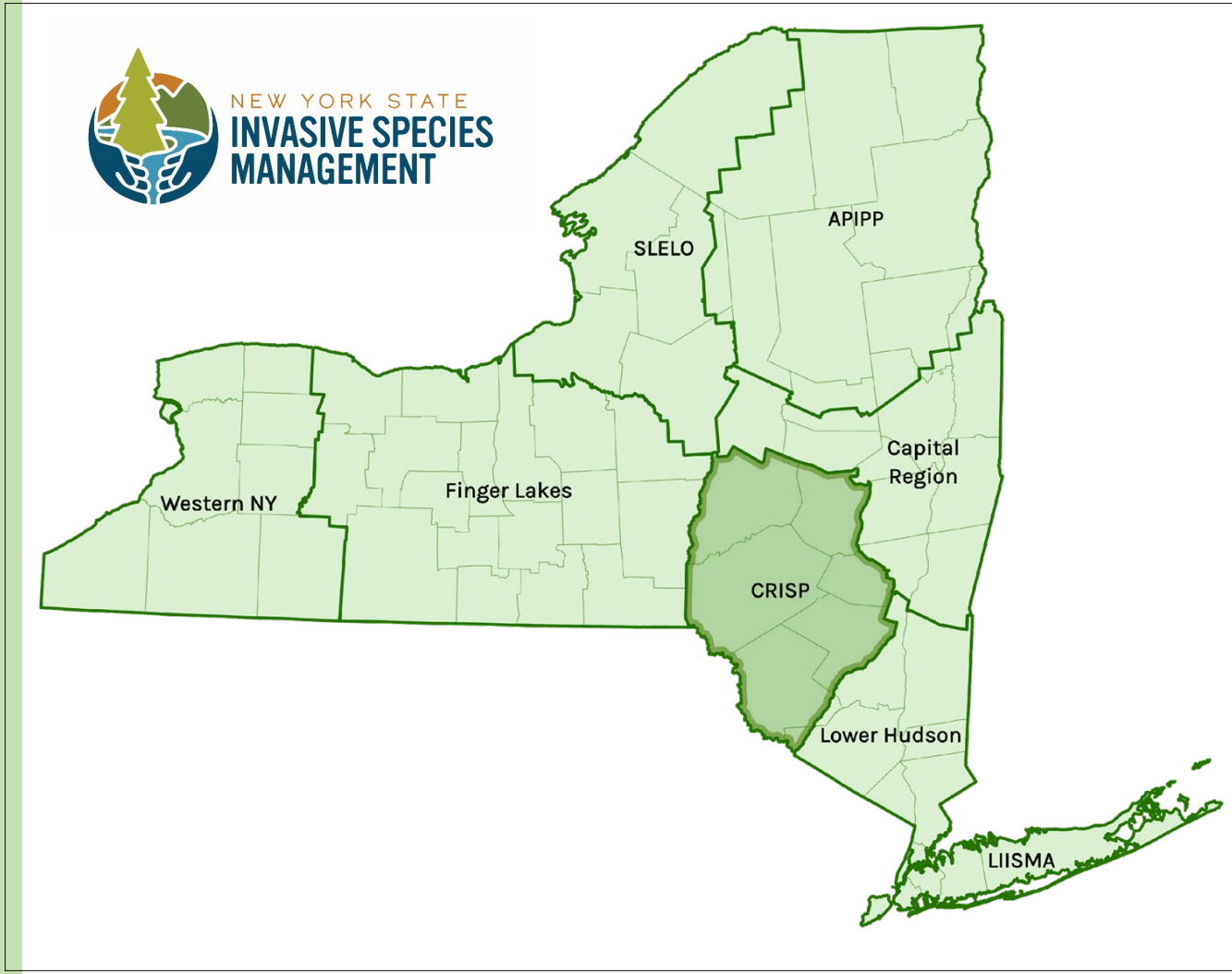
Invasive species are one of the greatest threats to New York's biodiversity and threaten many aspects of our human well-being

Because invasive species contribute to:

- Habitat degradation and loss
- Decreased water quality
- The loss of native fish, wildlife and plants
- The loss of recreational opportunities and tourism income
- Crop and forest damage

INVASIVE SPECIES MANAGEMENT
CATSKILLS

Promote education, prevention, early detection and control of invasive species to limit their impact on the ecosystems and economies of the Catskills

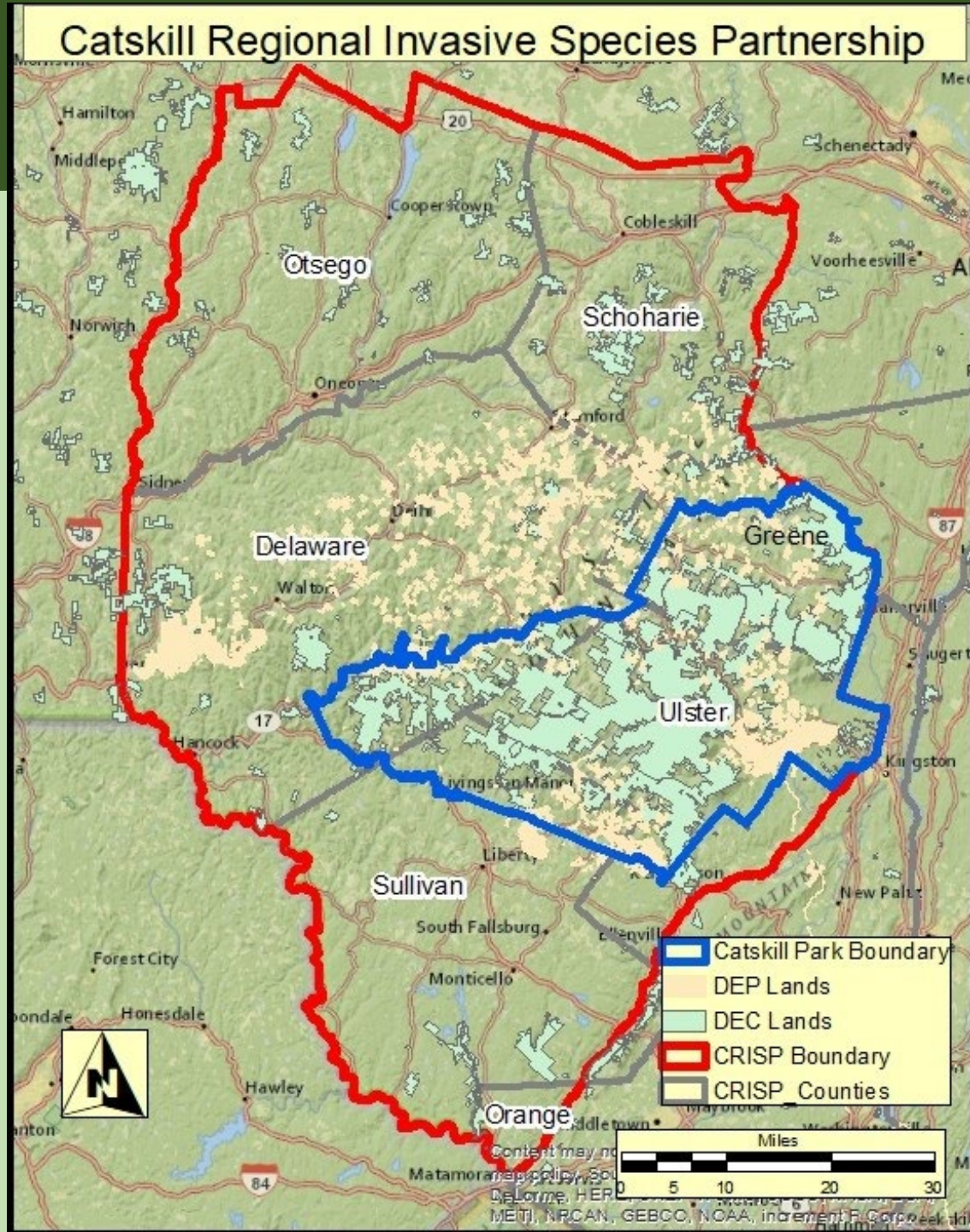


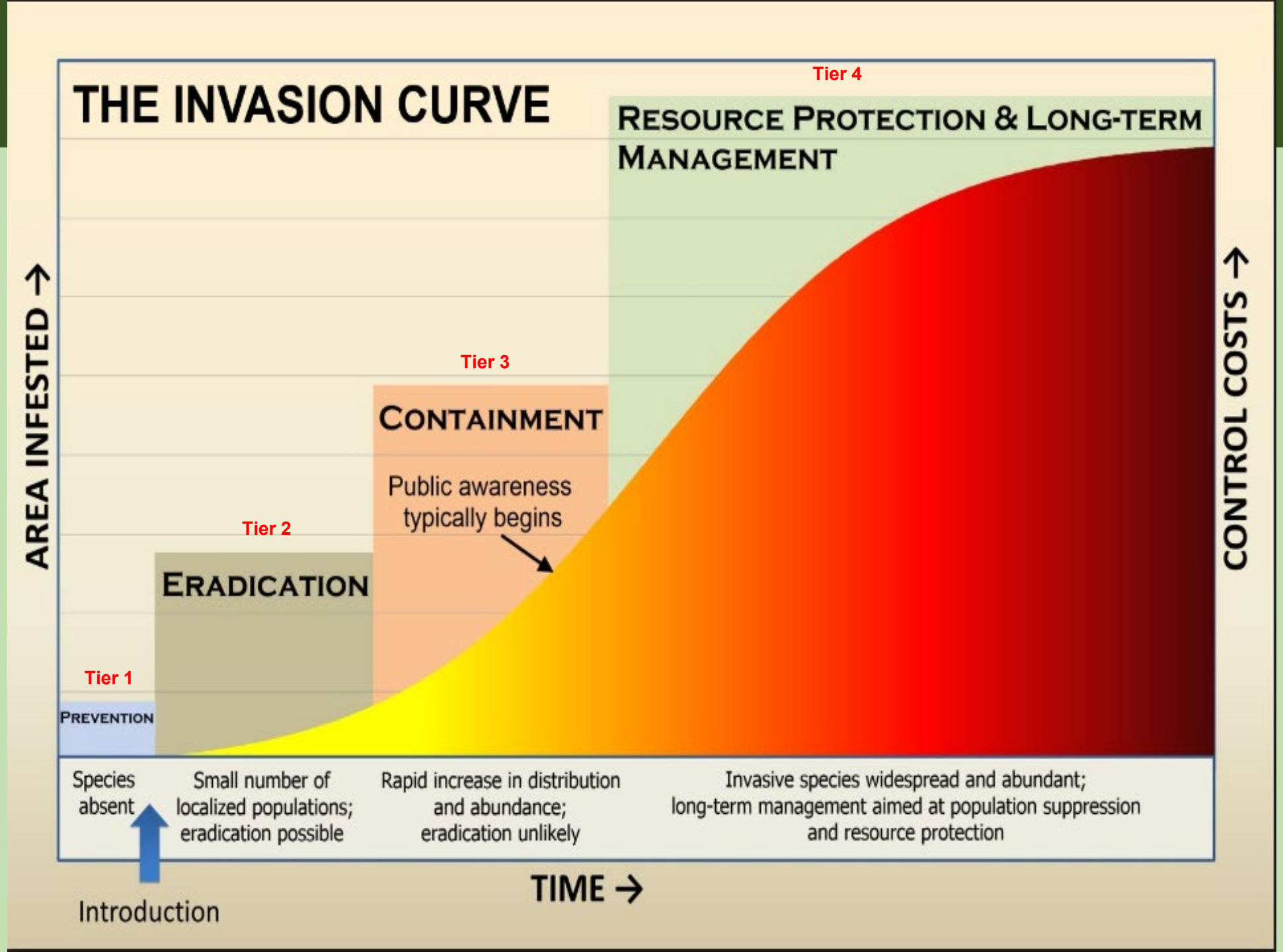
CRISP Region

- Otsego
- Schoharie
- Delaware
- Greene
- Ulster
- Sullivan &
- Orange

Major Landowners

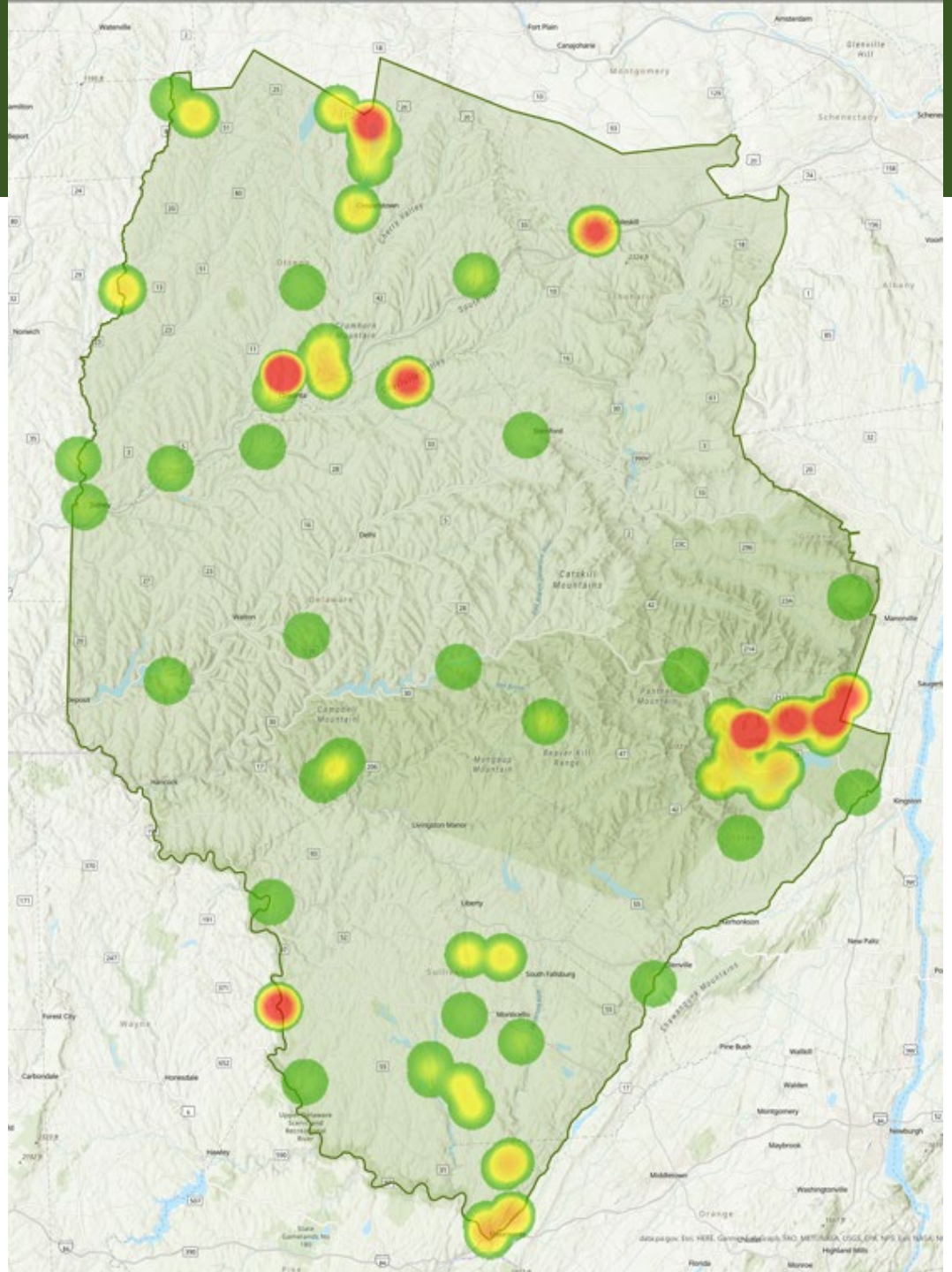
- NYS DEC 406,874 ac.
- NYC DEP 154,720 ac.

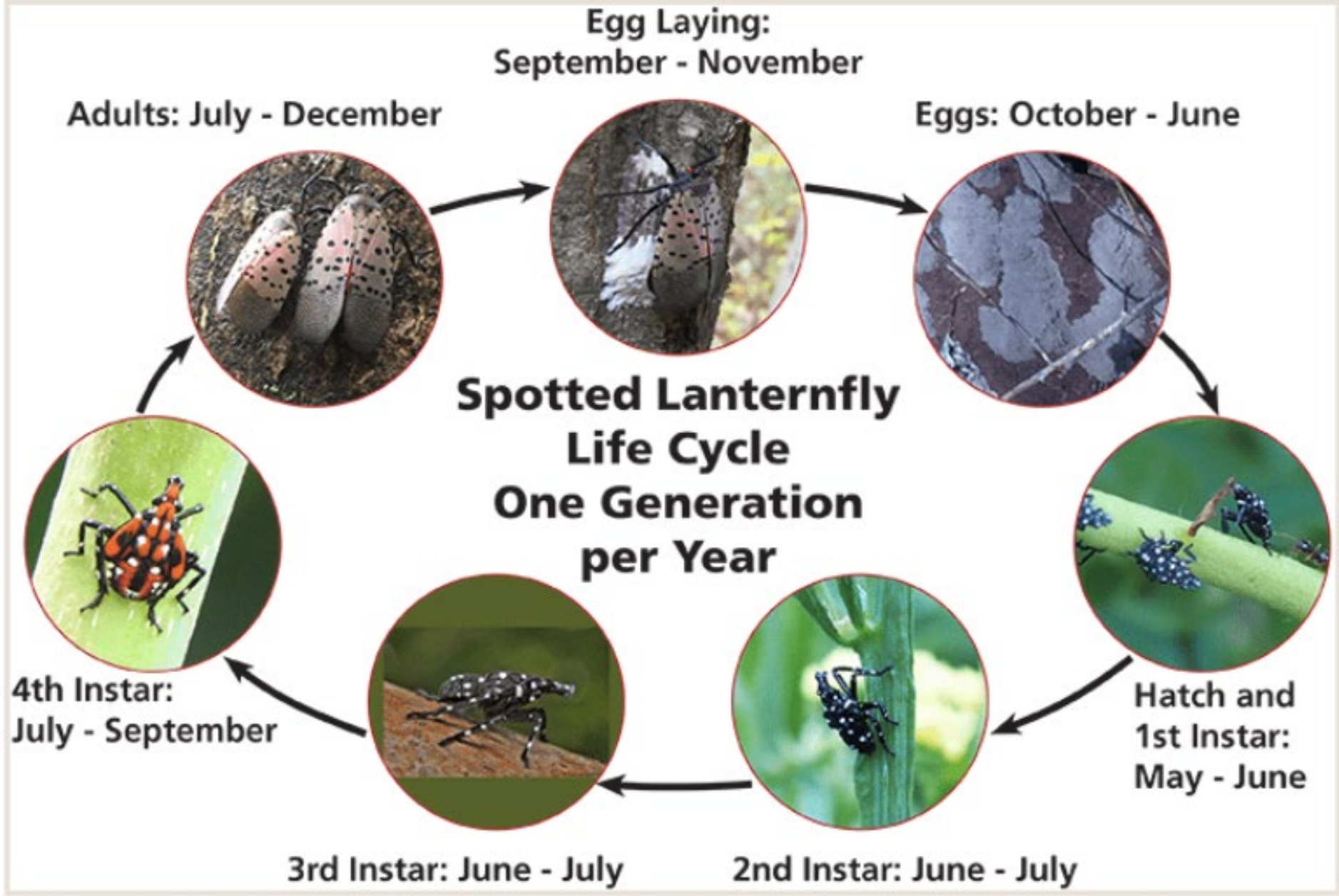



THE INVASION CURVE
Tier 4
RESOURCE PROTECTION & LONG-TERM MANAGEMENT
Tier 3
CONTAINMENT
Public awareness typically begins
Tier 2
ERADICATION
Tier 1
PREVENTION
AREA INFESTED →
CONTROL COSTS →
Species absent
Small number of localized populations; eradication possible
Rapid increase in distribution and abundance; eradication unlikely
Invasive species widespread and abundant; long-term management aimed at population suppression and resource protection
Introduction
TIME →

CRISP Tier 2 Terrestrial Species

- Mile-a-Minute (*Persicaria perfoliata*)
- Japanese Angelica Tree (*Aralia elata*)
- Japanese Hops (*Humulus japonicus*)
- Black Jetbead (*Rhodotypos scandens*)
- Beautybush (*Kolkwitzia amabilis*)





Photos: Egg Laying, Hatch and 1st Instar, 2nd Instar, Adults: Emelie Swackhamer, Penn State University, Bugwood.org; Eggs: Lawrence Barringer, PA Dept. of Agriculture, Bugwood.org; 3rd Instar: Dalton Ludwick, USDA-ARS/Virginia Tech; 4th Instar: Richard Gardner, Bugwood.org.

Spotted Lanternfly *Lycorma delicatula*

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Eggs												
Nymphs												
Adults												

Emilie Swackhammer, PSU

Dorgan

REPORT SPOTTED LANTERNFLY
send a photo to ReportSLF.com

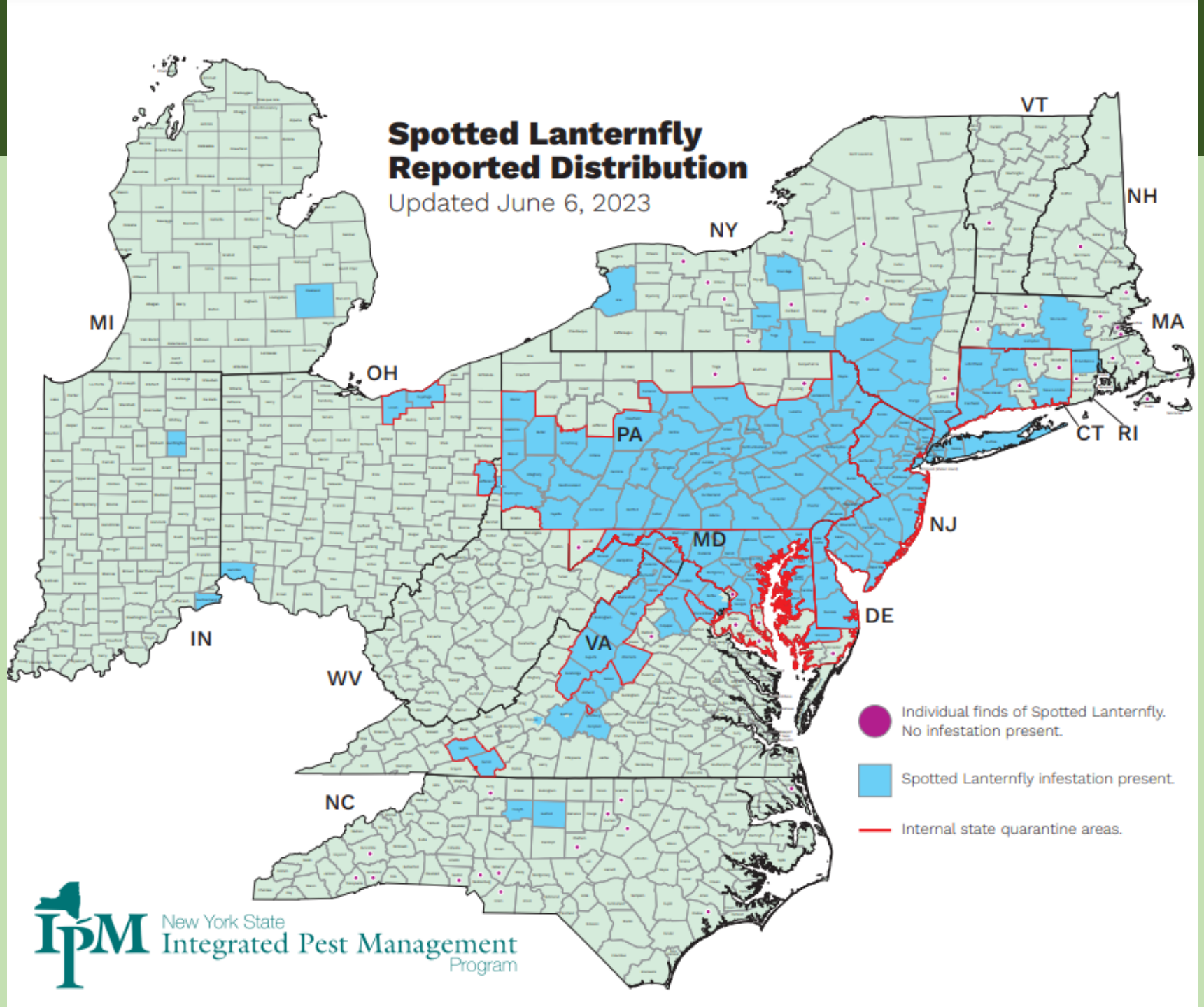
Spotted Lanternfly Impacts

- Adults in high populations can impact our quality of life
- Adult clustering, swarming and Honeydew accumulation can impact quality of life
- Honeydew promotes sooty-mold growth

PA Dept. of Agriculture

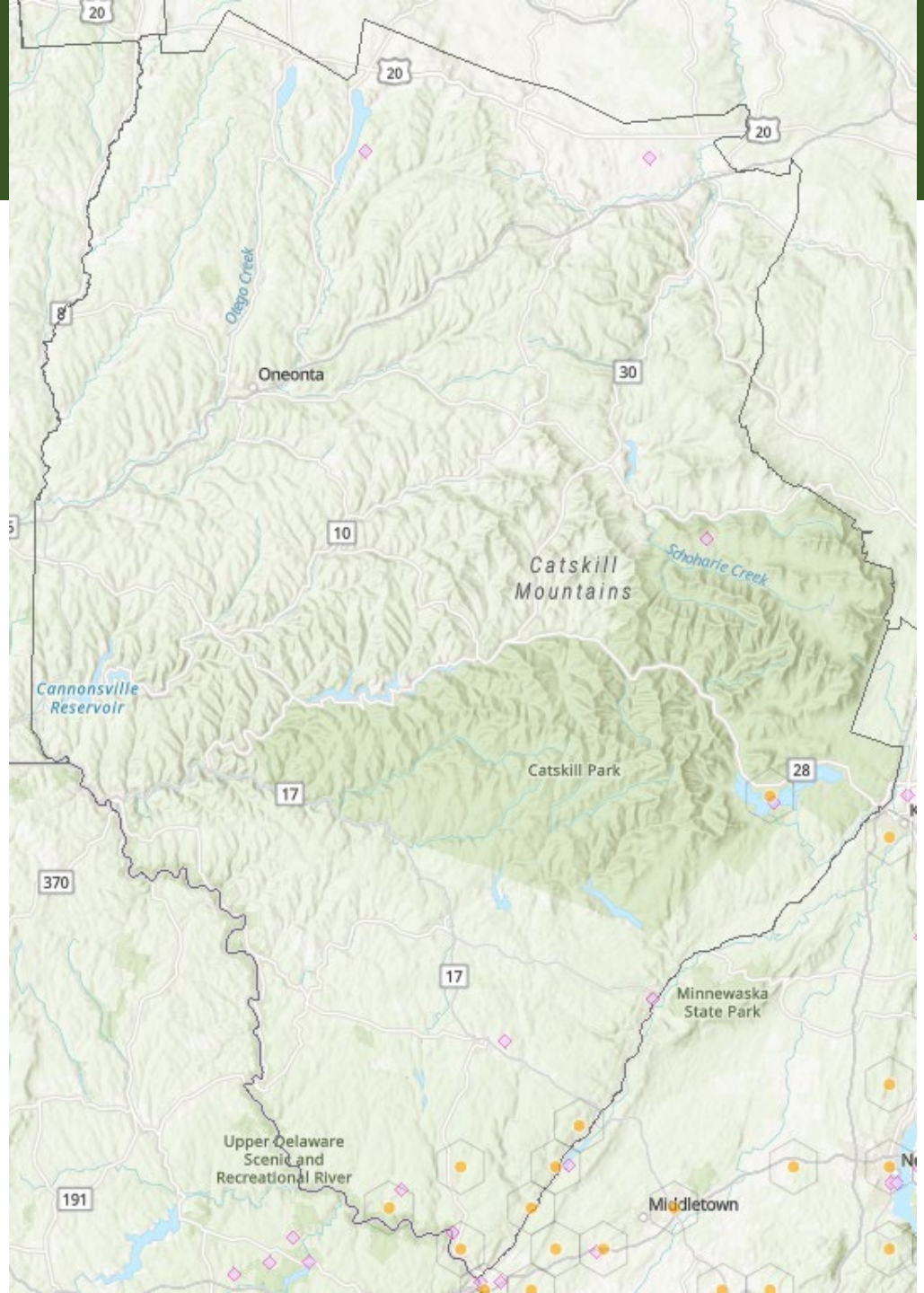
Spotted Lanternfly Are Hitchhikers

- All life stages can hitchhike to new areas
- Eggs and Adults pose the greatest risk for movement


Spotted Lanternfly
Reported Distribution
Updated June 6, 2023
VT
NH
NY
MA
MI
OH
PA
CT
RI
NJ
MD
DE
IN
VA
WV
NC
Individual finds of Spotted Lanternfly. No infestation present.
Spotted Lanternfly infestation present.
Internal state quarantine areas.
New York State
Integrated Pest Management
Program

Spotted Lanternfly in CRISP

- Established populations in Port Jervis area
- Adults found in locations over a wide area in CRISP



https://www.nyimapinvasives.org/slf

Spotted Lanternfly & Tree-of-heaven: *NY needs your help!*

Spotted lanternfly (SLF) is an invasive pest from Asia that feeds on a variety of plants including grapes, hops, and maple trees, posing a severe threat to NYS forests and agriculture (more info). SLF's preferred host plant, Tree-of-heaven (TOH), is already found in much of the state. SLF was first found in PA in 2014, and several populations have since been found in NY. Agencies and conservation partners across the state are working to protect our state resources from these invasives, and we are requesting help from volunteers to complement these efforts.

Photo collage of Spotted Lanternfly (*Lycorma delicatula*) and Tree-of-heaven (*Ailanthus altissima*)

Volunteers needed:

New York State is seeking volunteers like **you** to look for SLF and TOH in your area. You can supplement NYS efforts to prevent negative impacts from invasive species by knowing what to look for and how to report observations to New York's official invasive species database, iMapInvasives.

Webinar Series: *Identifying & Reporting Spotted Lanternfly and Tree-of-heaven with NY iMapInvasives*

Watch our May 25th recording here:

Play Webinar

Next webinar scheduled for the fall, more info coming soon

What does being a volunteer entail?

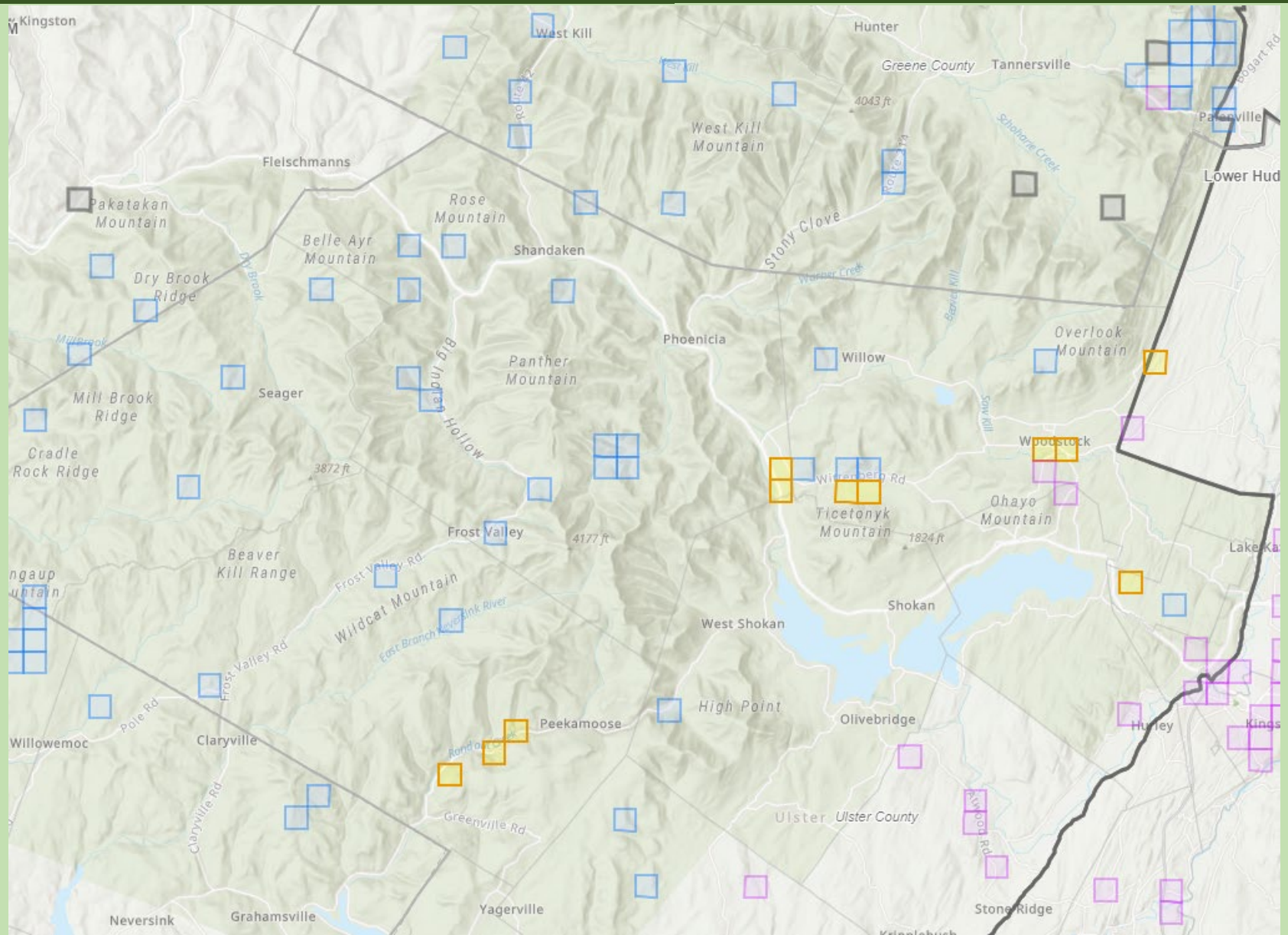
- Picking a location to go to and survey at least **three times** in 2022 *(once in Spring, Summer, and Fall)*
- Checking for spotted lanternfly and tree-of-heaven
- Reporting your observations to iMapInvasives

More info below!

Conservation partners have identified 1km grid squares across the state where volunteer survey efforts would be most helpful. These may be close to known infestations, along major pathways, and/or near important commodities that could be harmed by SLF. Use the interactive map below to sign up for a grid square!

Volunteers Needed to Adopt Survey Blocks

https://www.nyimapinvasives.org/slf



Beech Leaf Disease

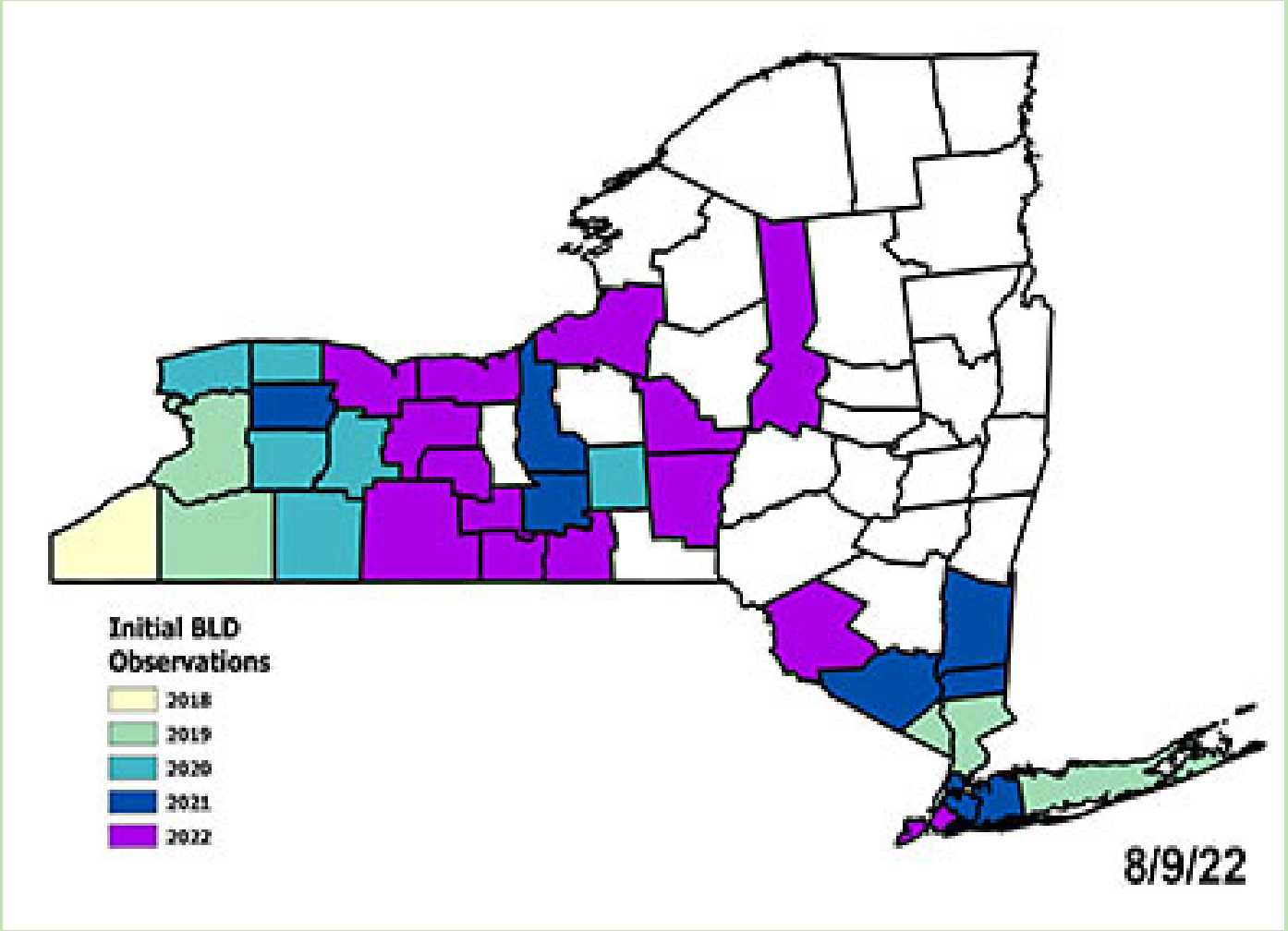
Litylenchus crenatae mccannii

Polarized light microscopy of live *Litylenchus crenatae mccannii*
(a) female (b) male (c) eggs (d) juvenile

FIGURE 1 Leaf symptoms include darkened green bands, chlorosis and necrosis, Perry, OH Fall 2017 (a) American beech *Fagus grandifolia;* (b) European beech, *Fagus sylvatica* images of David McCann

Beech Leaf Disease Spread Since 2018

- Found in Ohio in 2012
- Found in NY in 2018
- Now in 12 States



Beech Leaf Disease Symptoms

Light Banding

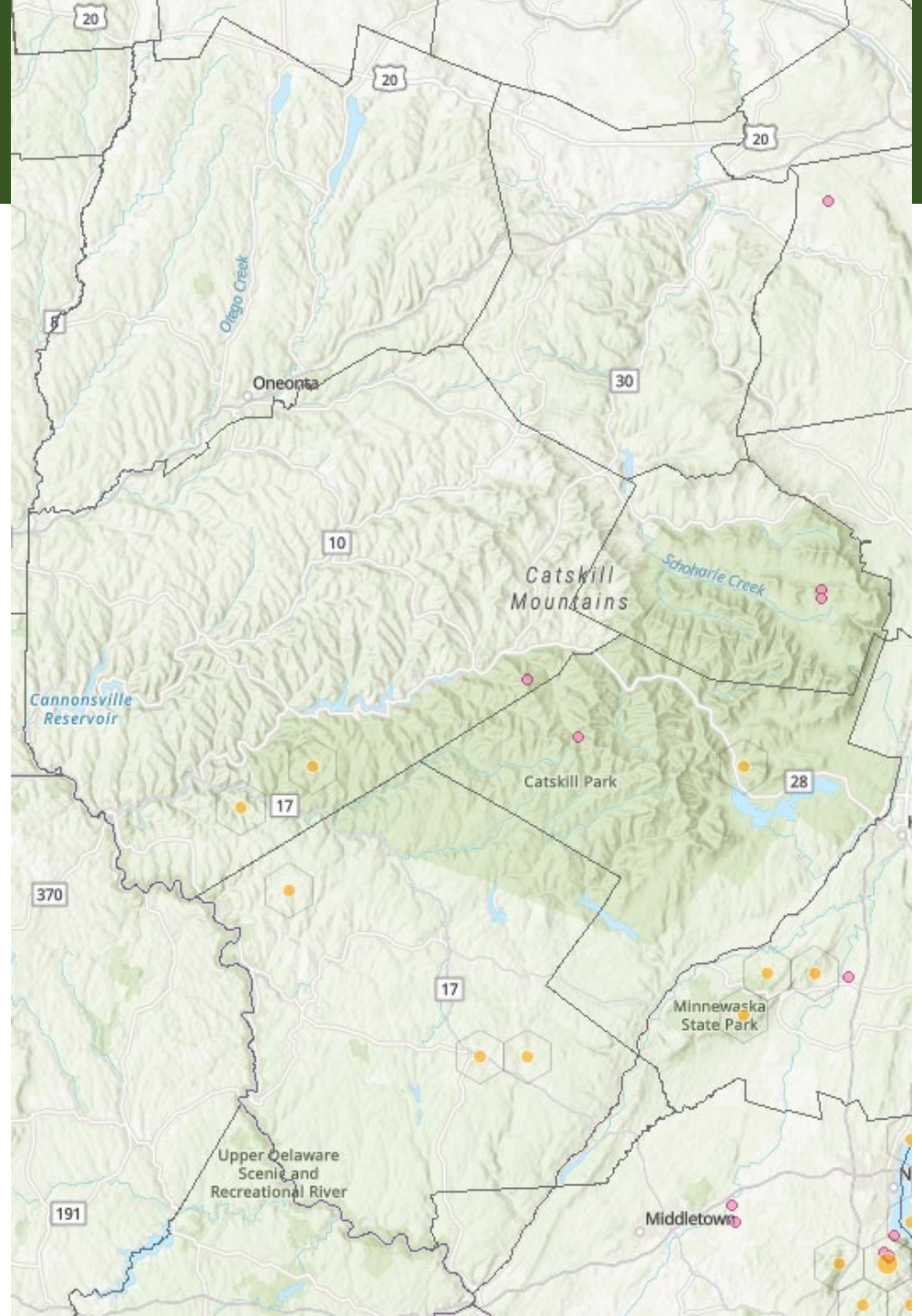
Heavy Banding

Chlorosis
Necrosis
Puckering
Curling

Beech Leaf Disease in CRISP

Confirmed in Sullivan County in 2022
- Continues to spread in County

Confirmed in 2023:
- Delaware County
- Ulster County – Kenneth Wilson SP
- Greene County



When in Doubt, Please Report

- Location
- # of trees looked at # of trees showing symptoms
- Good clear photos

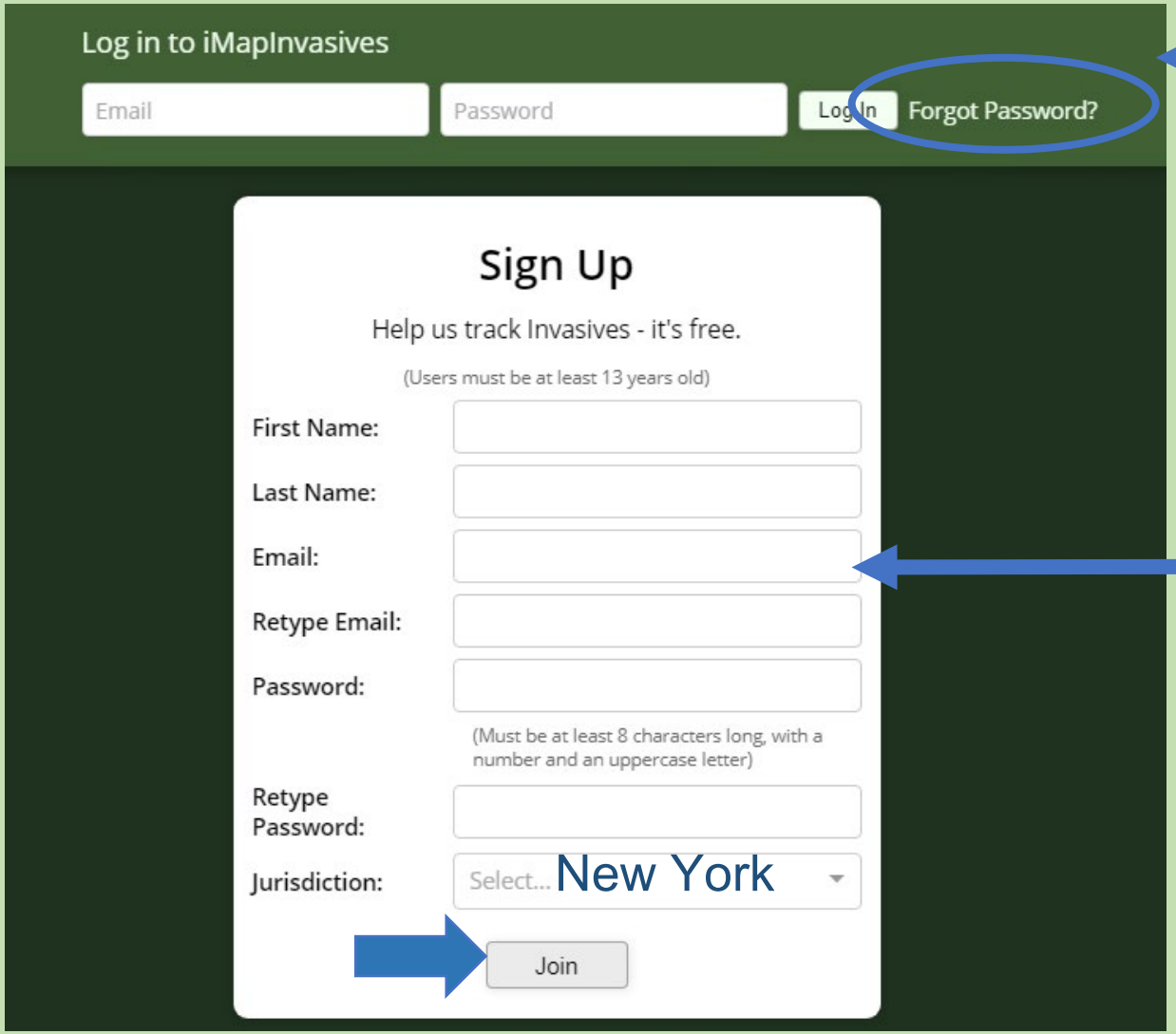
The best diagnostic photos show the banding from below

Report through **iMapInvasives** or email **forestthealth@dec.ny.gov**

Negative data is good data!

Create Account/Login

www.imapinvasives.org



Login (if you have account)

Create Account

Check email for link ("click here"), click open the User Agreement.

Read User Agreement and accept

Photo courtesy NYC DEP

INVASIVE SPECIES MANAGEMENT
CATSKILLS

John Thompson
CRISP Director
jthompson@catskillcenter.org

www.catskillinvasives.com
Facebook: @catskillinvasives

CATSKILLCENTER