

# Entomology and Plant Pathology Program Overview 2025



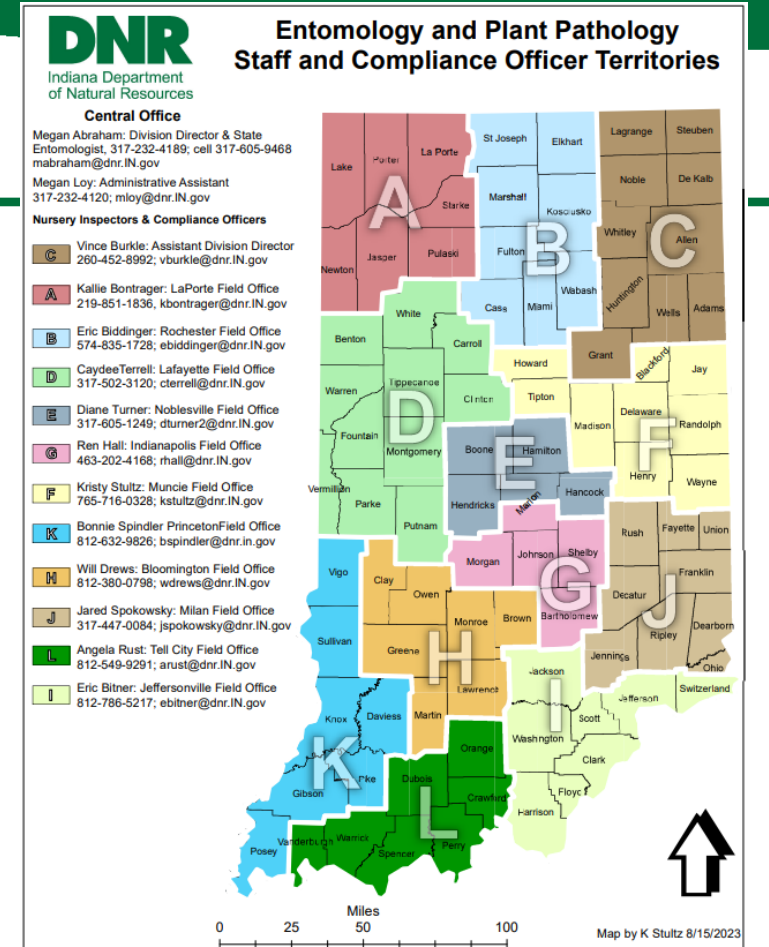
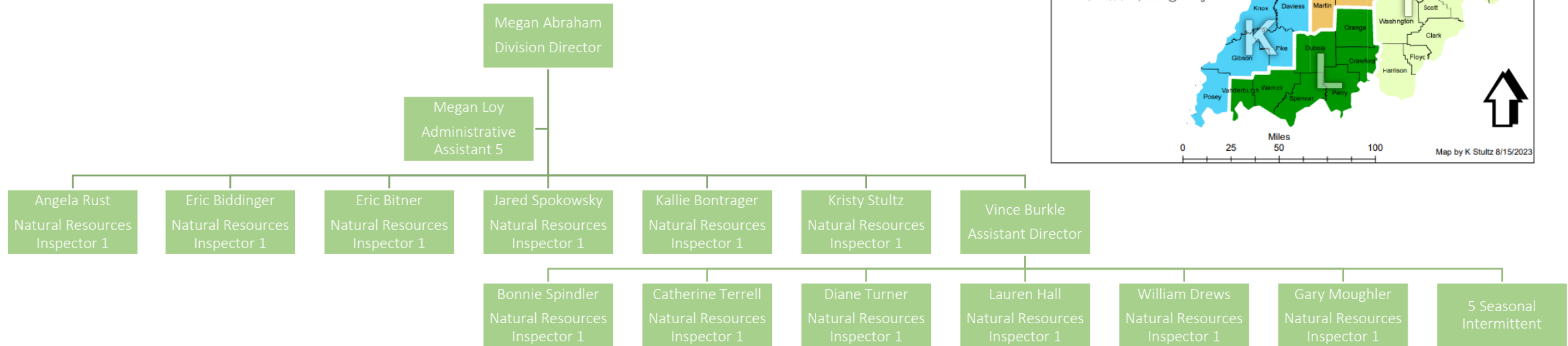
Megan Abraham  
Director  
Division of Entomology and Plant Pathology

# History of Division

- Indiana State Legislature created Entomologist Office with Act of 1899
- Control San Jose scale in orchards and nurseries then bees
- Only 9 State Entomologists since 1899
- Indiana Code 14-24; 312 IAC 18
- Right of entry/ quarantine formation
- Do have the ability to fine per the code/rule for violations
- Preference for education/ outreach approach

# Introductions

- Division Director: Megan Abraham
- Assistant Director: Vince Burkle
- Division Staff: 13 + 5 Seasonal Intermittent





DIVISION OF  
**Entomology and Plant Pathology**

MISSION

To manage plant and apiary pests for the preservation and protection of cultivated natural resources, to facilitate trade, and to enhance the quality and appreciation of the environment.

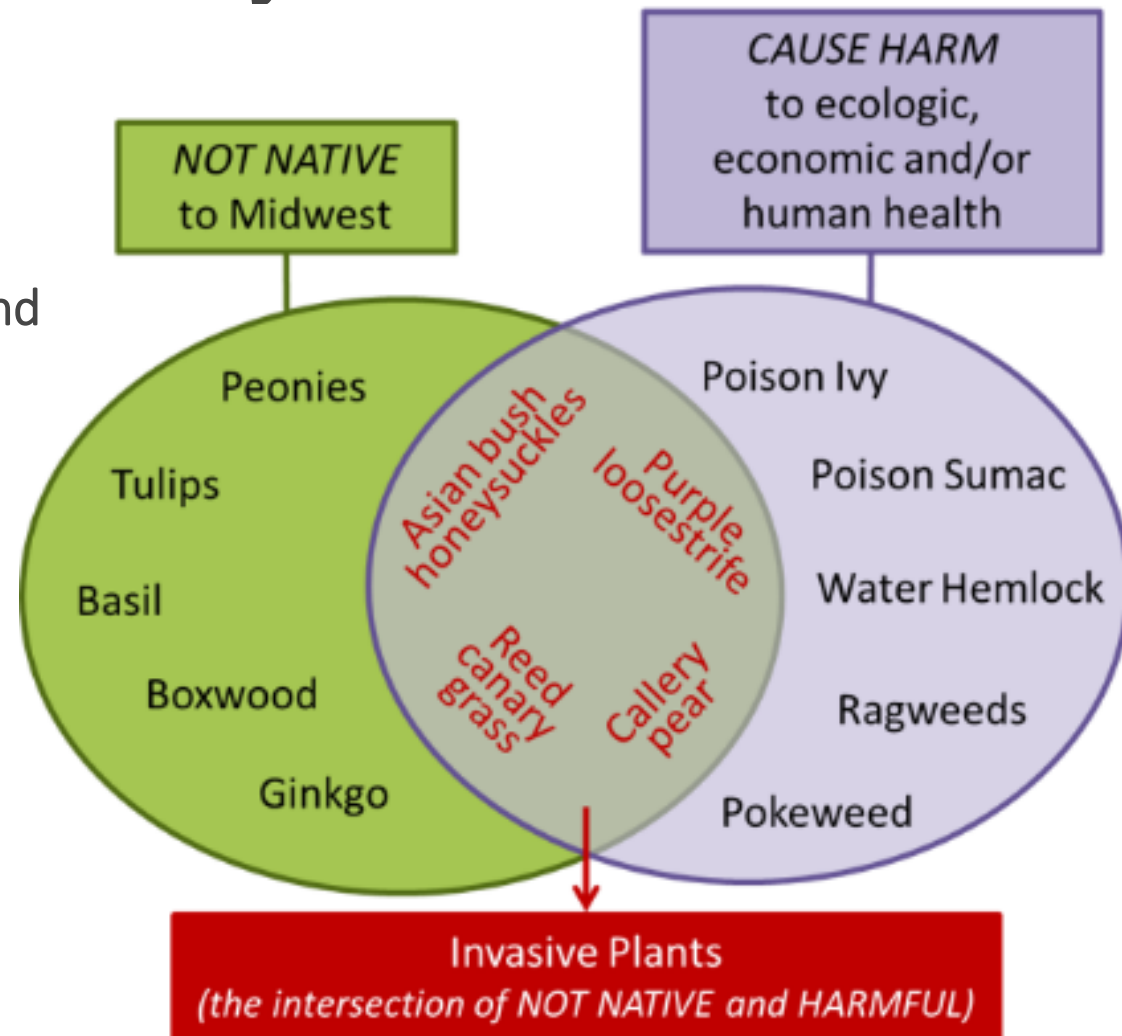
VISION

Effectively and efficiently navigate the regulatory requirements of IC 14-24 and 312 IAC 18 in a time when globalization and consolidation of markets continues to introduce and spread invasive species. Through survey and management, mitigate invasive populations in Indiana to ensure that they do not impact trade either nationally or internationally or damage local natural resources.

# What does invasive actually mean?

As per Executive Orders 13112 and 13751 an invasive species is defined as a species that is:

- 1) non-native (or alien) to the ecosystem under consideration and
- 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health.



North America has more non-native insect species than any other world region!



Managing Invasive Forest Pests: A Futile or Fertile Effort?

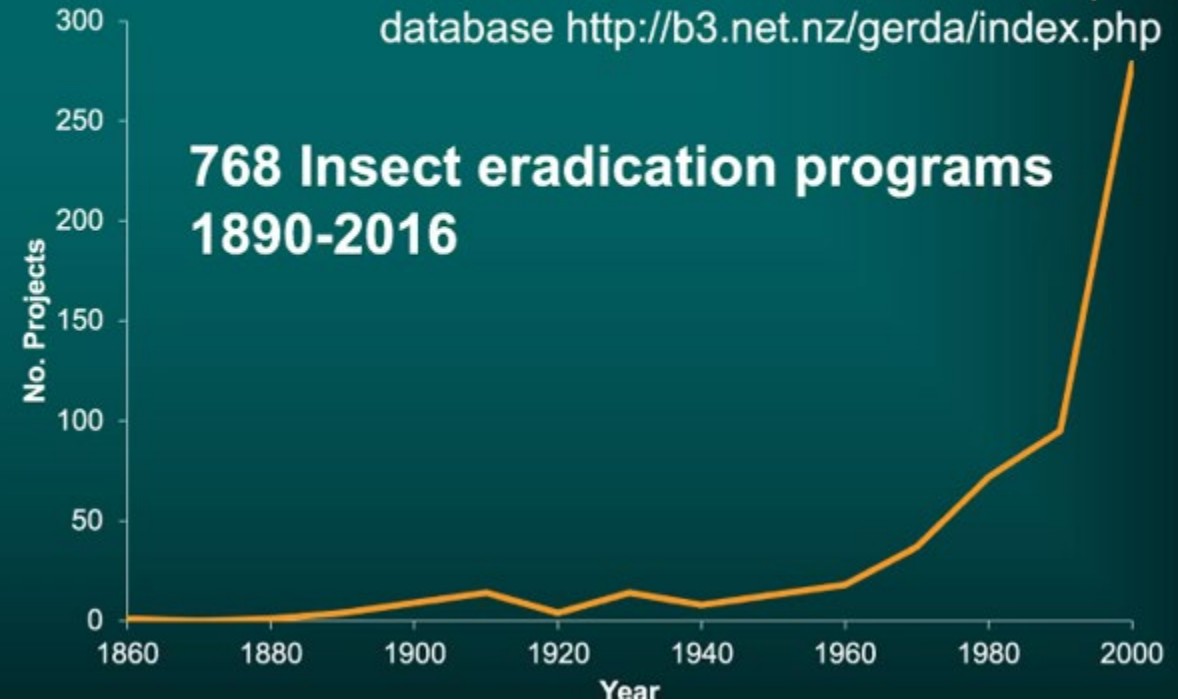
Andrew (Sandy) Liebhold, Research Entomologist, US Forest Service

<http://www.emeraldashborer.info/eabu.php>

## History of Plant Pest Eradications



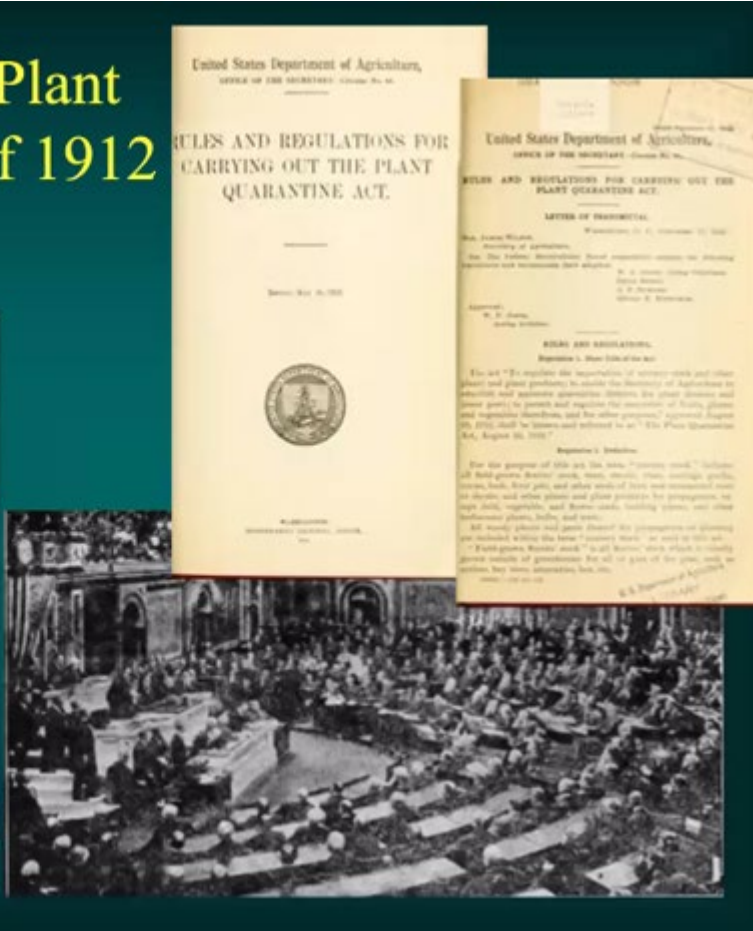
Kean, J.M. Global eradication and response database <http://b3.net.nz/gerda/index.php>



## Congress passes Plant Quarantine Act of 1912



Charles Marlatt,  
USDA



Managing Invasive Forest Pests: A Futile or Fertile Effort?

Andrew (Sandy) Liebhold, Research Entomologist, US  
Forest Service

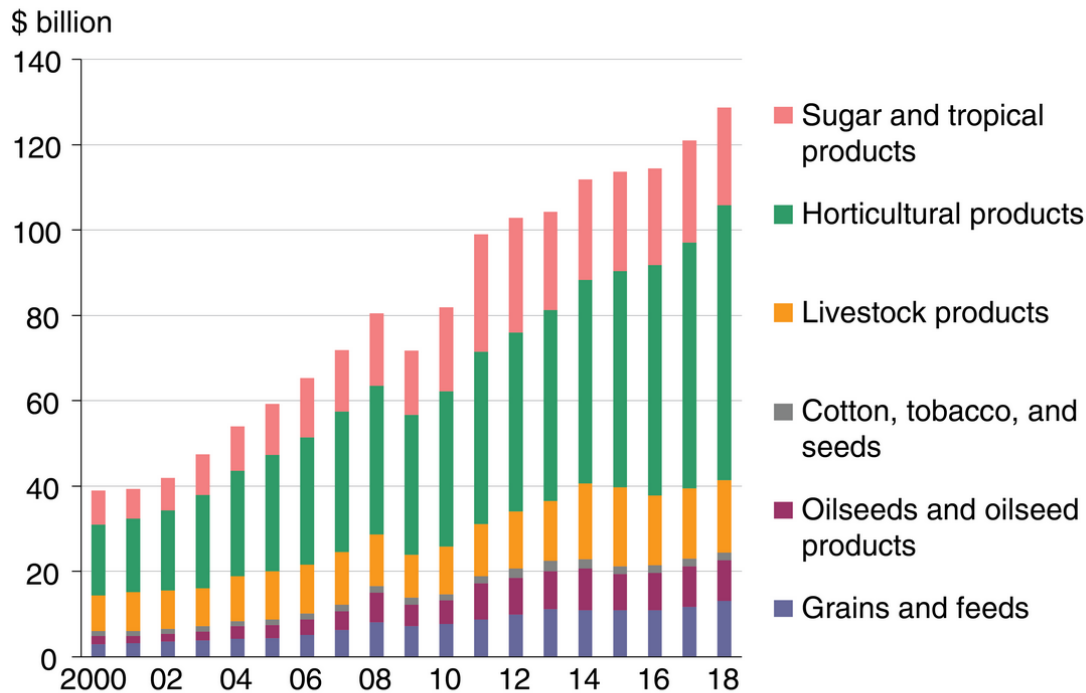
<http://www.emeraldashborer.info/eabu.php>

## Imports to the USA, 1867-2013



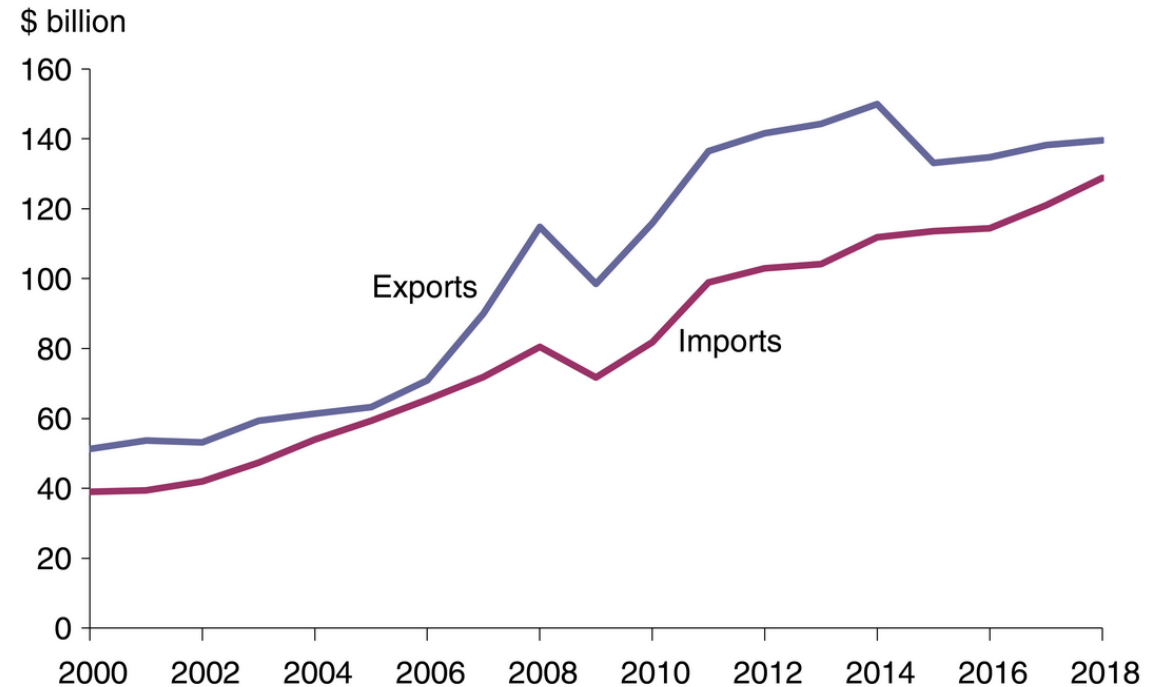
# Nearly two-thirds of U.S. agricultural imports consist of horticultural and tropical products

**U.S. agricultural imports, 2000-18**



Source: USDA, Economic Research Service using data from U.S. Department of Commerce, U.S. Census Bureau, Foreign Trade Database.

**U.S. agricultural trade, 2000-18**



Source: USDA, Economic Research Service using data from U.S. Department of Commerce, U.S. Census Bureau, Foreign Trade Database.



# DIVISION OF ENTOMOLOGY & PLANT PATHOLOGY



At 1,345 acres, Savannah's Garden City Terminal is the largest container terminal in North America. (Port of Savannah)

Manila International Container Terminal

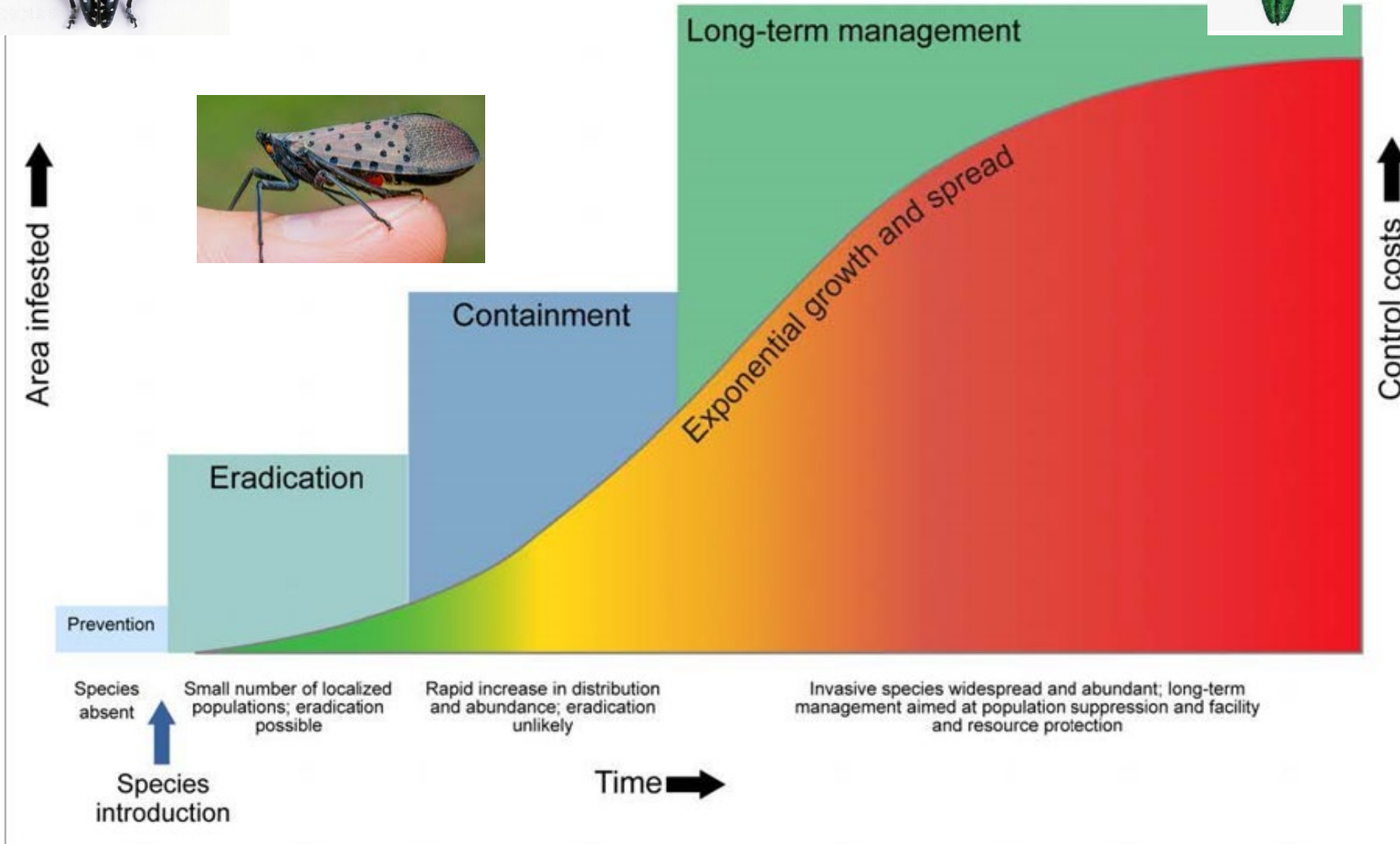


# Why should we care about invasive species?

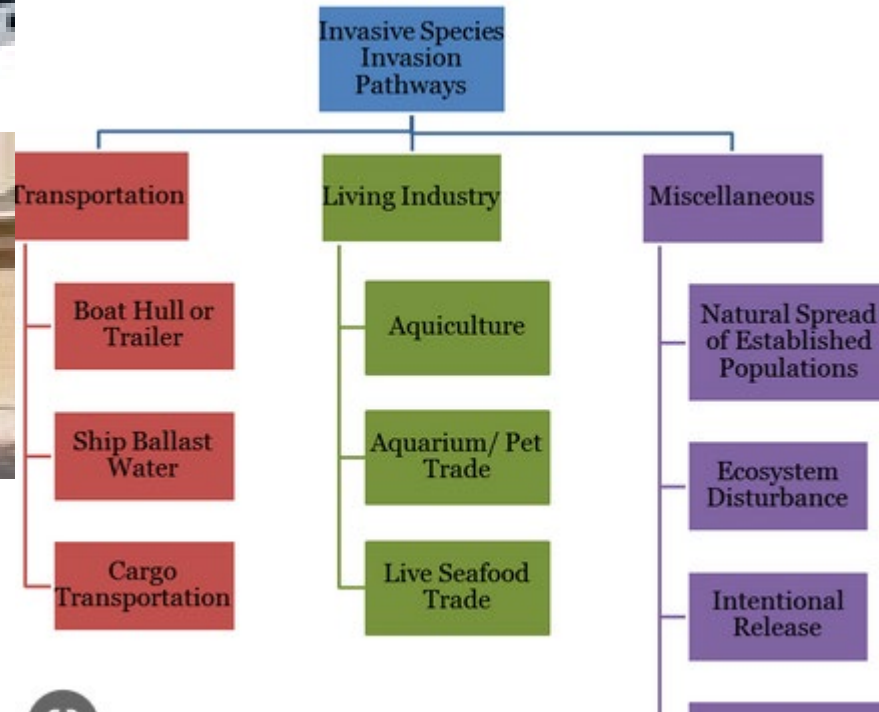
- Limit use of lands
- Inhibit hunting/fishing/bird watching/foraging/other recreational pursuits
- Habitat loss is major issue for decline of many species
- Degrade natural resources and negatively impact fishery/agricultural/forestry industries
- Destabilize soil and alter hydrology of water resources
- Out compete natives (many native species are endangered because of invasive species)
- Costly to control – estimated \$137 BILLION a year spent

# Economic impact

- \$8.6 million reported as spent by private and publicly held land managers in Indiana annually on invasive species
  - Not for profit groups
  - Naval bases
  - State, county, city parks
  - Ecological restoration companies
  - Private woodland owners- cost of control \$100 to \$1000/ acre
- 4.87 million acres of forest land in Indiana
- \$7 billion (2.4%) of Indiana's Gross Domestic Product –timber and hardwood industry







# Pathway for new pests to enter

- Accidental release (spongy moth)
- Intentional release/ biocontrol (cane toad in Australia)
- Solid wood packaging material hitch-hiker (EAB/ALB)
- Movement of raw materials (TCD)
- Erosion control (kudzu)
- Pet trade (Elodea / Giant African Snail)
- Shipping Nursery plants from out of state (P. ramorum)
- Escape from ornamental garden (wintercreeper)



## Inspection/ Survey

- Nursery Stock inspections
  - Growers and Dealers
- Phytosanitary Inspections
  - Federal and State
- Apiary Inspections
- Federal Funded surveys
  - Specialty Crop Survey
  - Bark Beetle Survey
  - Spotted Lanternfly Survey
  - Apiary Survey
  - CAPS Survey- SOD/ Boxwood
  - Forest Service – Forest Health Mgmt

## Management & Outreach

- Regulations
  - Quarantines and Admin rules
- Education & Outreach
  - Industry Meetings to school visits
  - Forest Pest Outreach Survey Program
  - Media; Billboards; Fliers
- Pesticide Treatments
  - Kudzu/ Gypsy moth/ Spotted Lanternfly
- Trace Forward/ Back follow-up
- Biological Control- EAB



# Nursery Inspections

- Annual for nursery growers and voluntary growers
- Every other year for nursery dealers with nursery stock on premises- globalization making this a challenge would prefer to conduct several annually

## • What are they looking for?

- ❖ Quarantined Pests and Pathogens
- ❖ Insect Damage
- ❖ Fungus
- ❖ Bacteria
- ❖ Virus

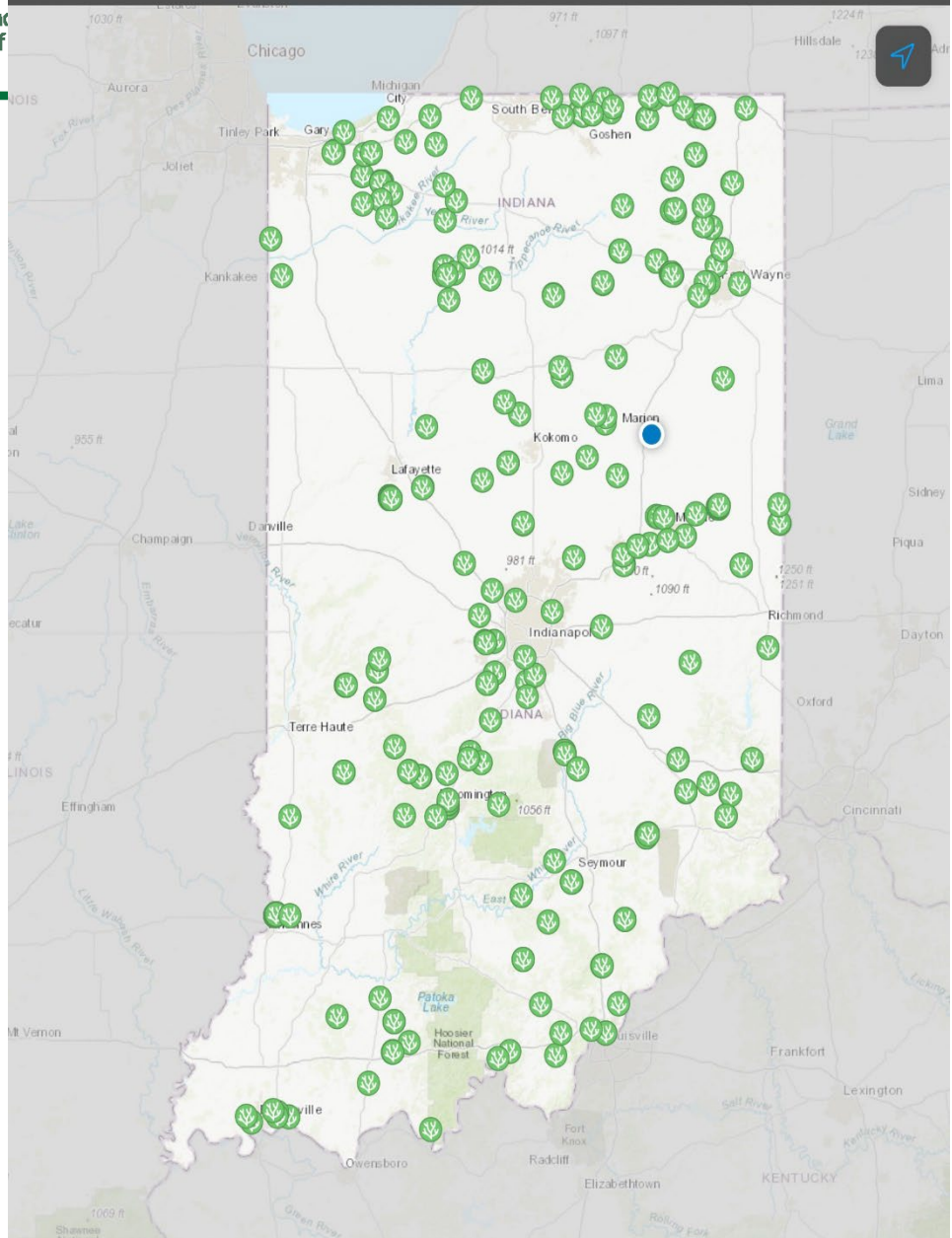


## Grower

- 300 acre business
- 1 acre in backyard
- Online sales
- High school with greenhouse planning a plant sale

## Dealer

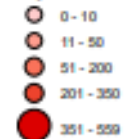
- Grower
- Box store
- Small family business
- Landscaper
- Online retail sales
- Grocery (affiliate)
- Fundraising group
- Not for profit



# 2022 Nursery Inspector & Compliance Officers

## Legend

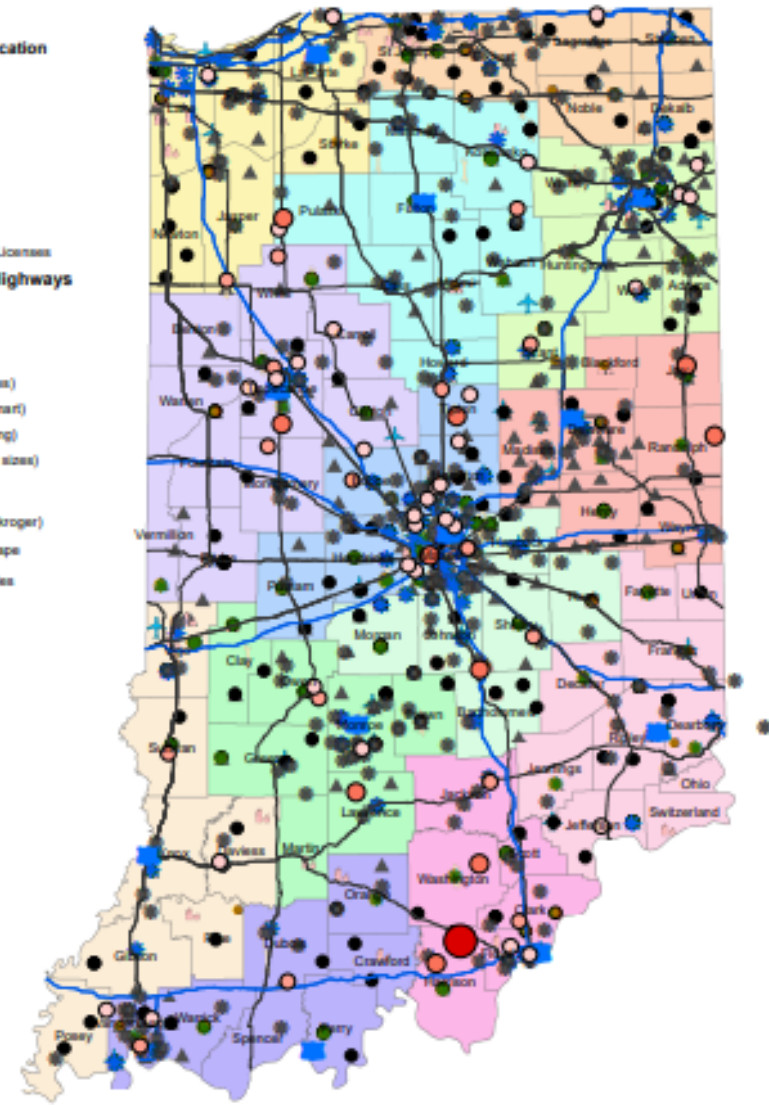
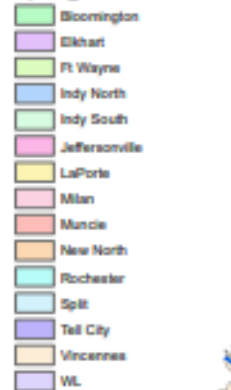
### Phytos Issued by Location



### Inspector & License Types

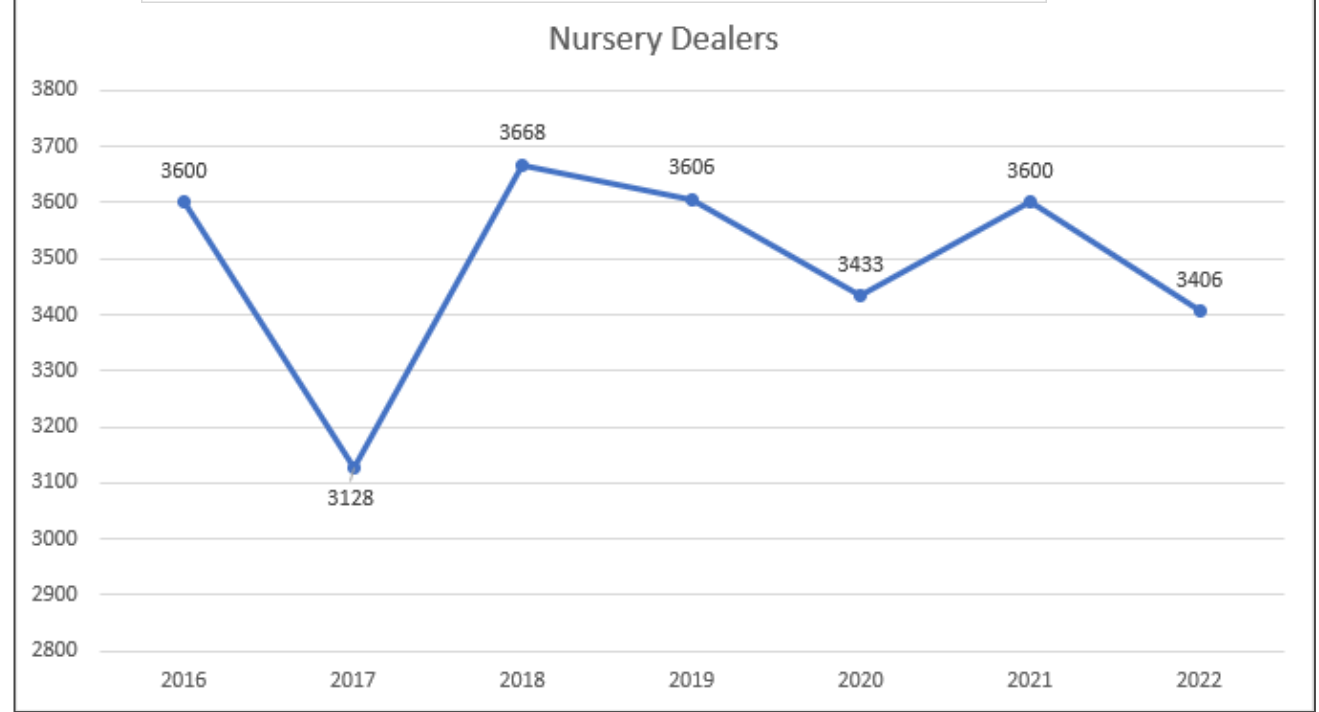
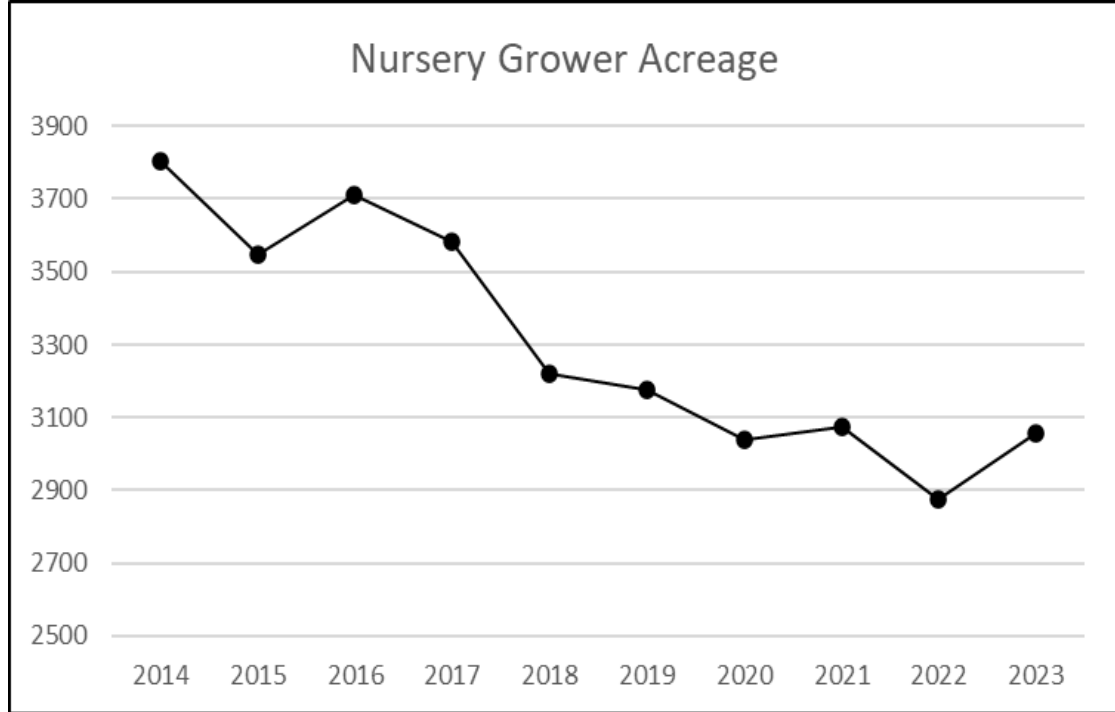
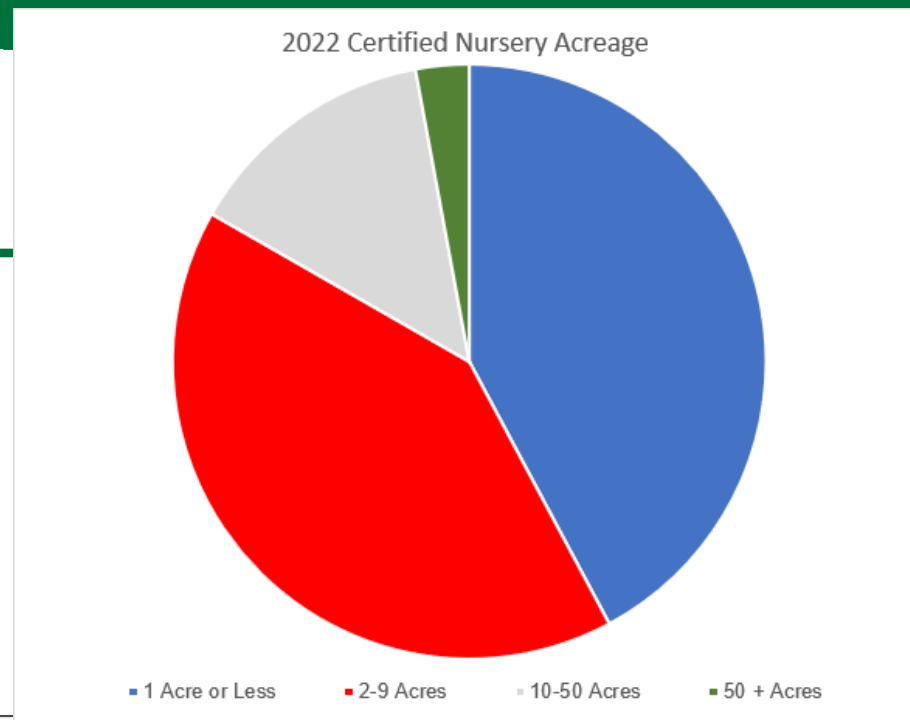


### Option\_B





# DIVISION OF Entomology and Plant Pathology



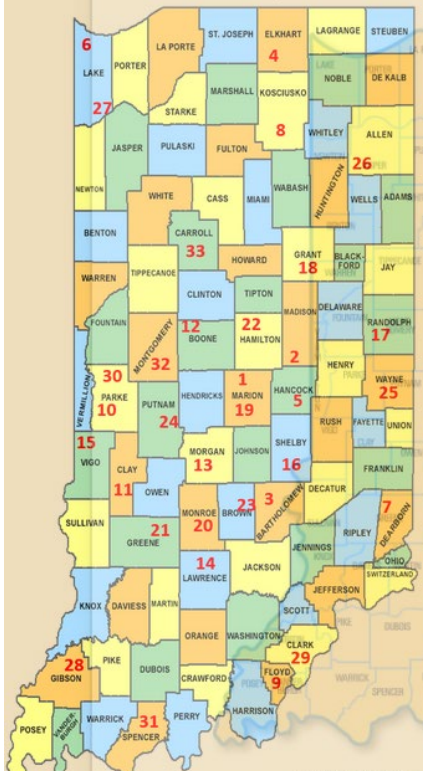
# DIVISION OF Entomology and Plant Pathology



## Indiana Beekeepers Swarm List



## Local Clubs of The Beekeepers of Indiana





★ Jun 4 **BAMBOO TIME TO PLANT YOUR**

craigslist



300 seeds Water Spinach Thai Pa...  
GrownYourOwnGarden  
**\$6.99**

**INTRODUCING AMAZON PLANTS STORE**  
SUCCEULENTS, SHRUBS, ANNUALS, PERENNIALS AND MANY MORE





**lively root**

Green Gifting is in!

Shop our curated collection of perfect gift-able plants for those special people in your life ❤️



**easyplant**

**Our Plants  
Water Themselves**

Let's Go

**facebook**

**Marketplace**

An advertisement for Facebook Marketplace showing several small green plants in blue pots, supported by a blue stake. The plants are arranged in a row against a light-colored wall.

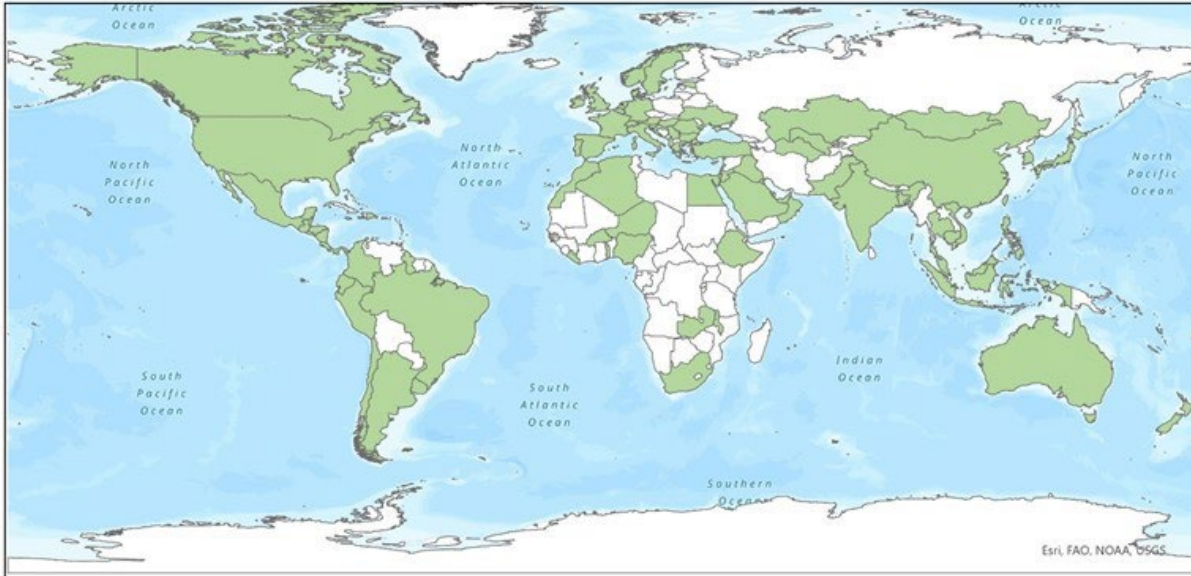
Holiday Duo Deluxe  
*Holiday exclusive!*

Globalization is  
Changing the  
way business  
is conducted  
across the  
board-  
contributing to  
loss of origin

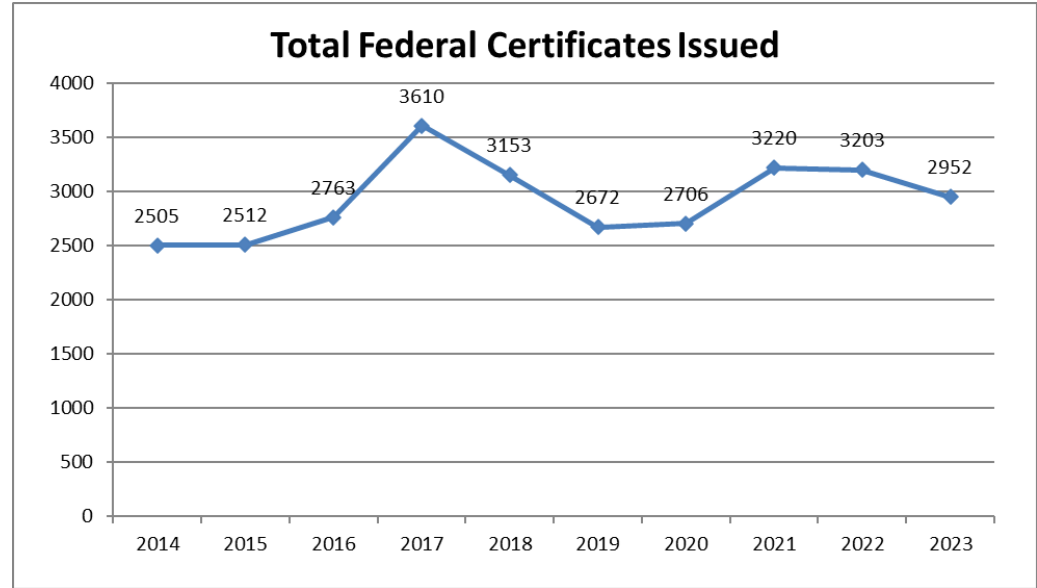




## Countries Indiana Exported to in 2023



195 species of plant products to 91 countries  
One of the few states that offer inland fumigation for logs



3-year average is 3,164; 5-year average is 2,999



# Trade ramifications

Subject: Important Korea summary change to log exports

Korea has restricted Oak logs shipments to Korea as of September 30th from the following states:

- Nebraska
- Oklahoma
- Kansas
- Iowa
- Missouri
- Illinois
- Indiana



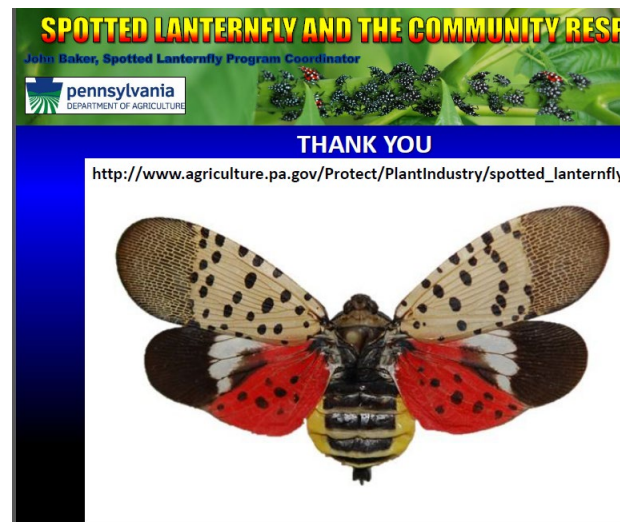
It looks like it applies to oak logs with bark only. Please check PExD for update.

The official notification delivered to APHIS states, “The import restriction measures for newly added areas will be applied from the consignments shipped on and after 30 September, 2019.” Based on this, regulation will begin on shipments leaving this coming Monday. Shipments leaving port prior to Monday from those states will not be regulated for *P. ramorum*.

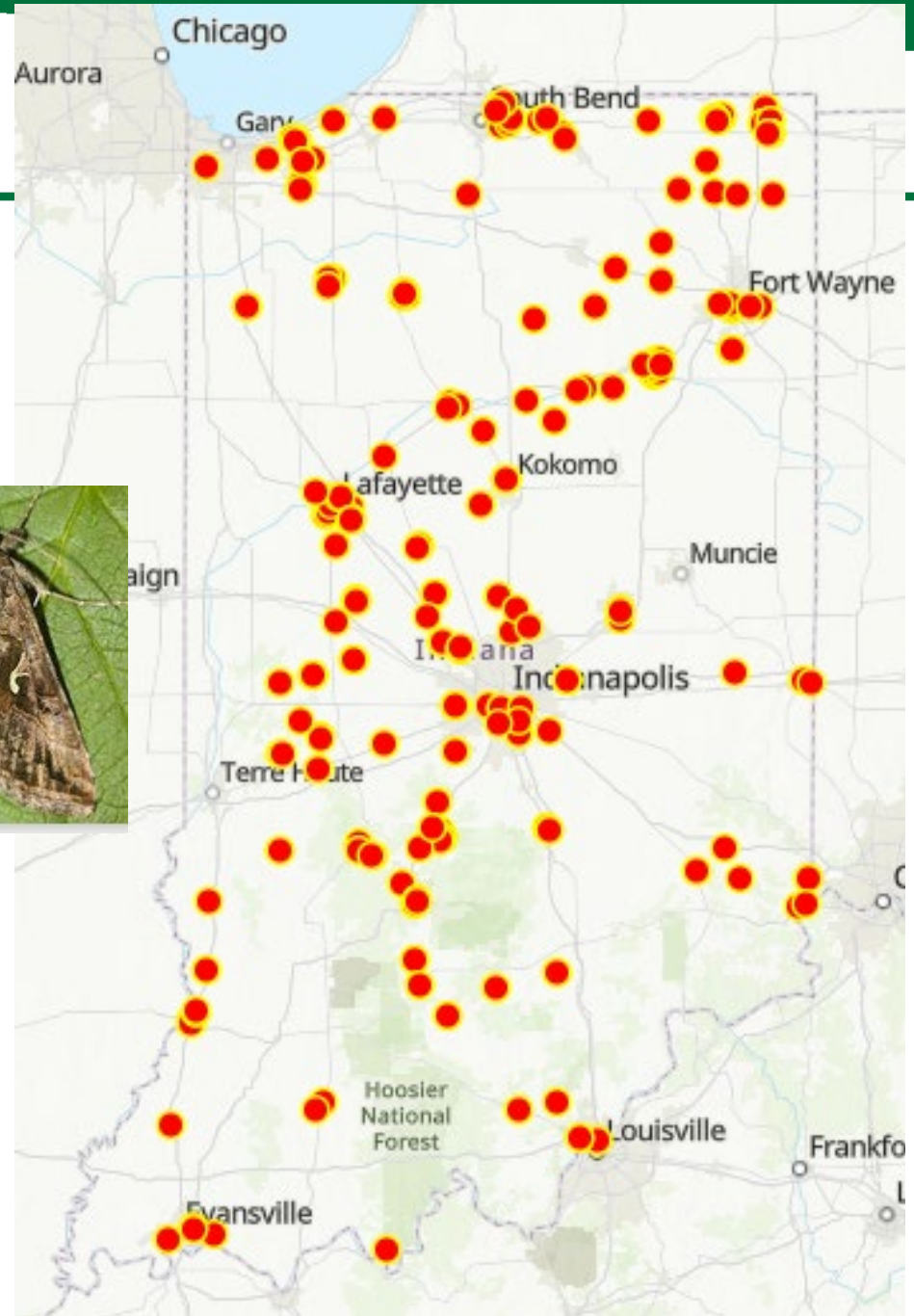
- Laney Campbell

## Surveying for:

- Asian Longhorned beetle
- Boxwood Blight
- Sudden Oak Death
- Hemlock Woolly Adelgid
- Thousand canker disease
- Spotted Lanternfly
- Vascular Streak Dieback

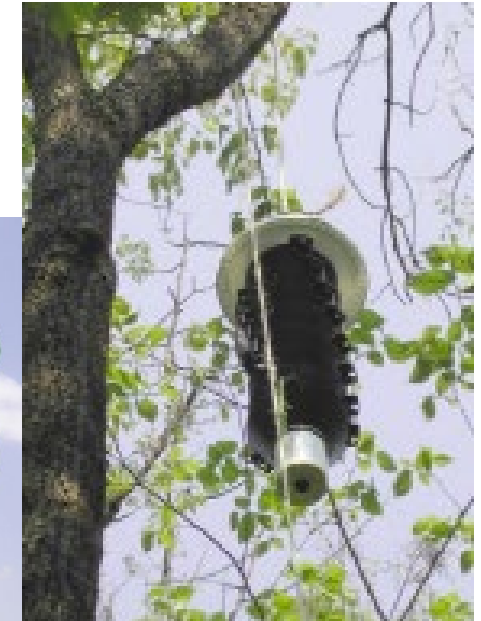


# Federally funded surveys



# Cooperative Agricultural Pest Survey (CAPS)

Scientific Name	Common Name	Pests of Economic and Environmental Importance	Additional Pests of Concern
<i>Adoxophyes orana</i>	Summer fruit tortrix moth		
<i>Agilus auroguttatus</i>	Goldspotted oak borer		
<i>Agilus biguttatus</i>	Oak splendour beetle	X	
<i>Agilus planipennis</i>	Emerald ash borer		
<i>Alectra vogelii</i>	Yellow witchweed		
<i>Anguina tritici</i>	Wheat seed gall nematode	X	
<i>Anoplophora chinensis</i>	Citrus longhorned beetle		
<i>Anoplophora glabripennis</i>	Asian longhorned beetle		
<i>Anthonomus grandis</i>	Boll weevil		
<i>Archips xylosteanus</i>	Variiegated golden tortrix		
<i>Argyresthia pruniella</i>	Cherry blossom moth		
<i>Aspidiotus rigidus</i>	False coconut scale		
<i>Autographa gamma</i>	Silver Y moth		
<i>Bactrocera zonata</i>	Peach fruit fly		
<i>Belocaulus</i> spp.	No common name, leatherleaf slugs	X	



\$4/trap service fee vs \$20 national average; highest \$36/trap

# National Honey Bee Survey

**BEE INFORMED** HOME ABOUT US RESEARCH **PROGRAMS** MEDIA DONATE BLOG CONTACT   

APHIS SURVEY MANAGEMENT SURVEYS SENTINEL APIARIES EMERGENCY / DIAGNOSTICS POLLENCHECK ✓



## APHIS NATIONAL HONEY BEE SURVEY

Search the Site...

[Click to View APHIS National Honey Bee Survey Data](#)

The National Honey Bee Survey, in conjunction with the Bee Informed Partnership (BIP) and the USDA Animal Plant Health Inspection Service (APHIS), is a comprehensive examination of colony health throughout apiaries in [the United States](#). The NHBS began in 2009 to address the emerging concern about the diminishing health of

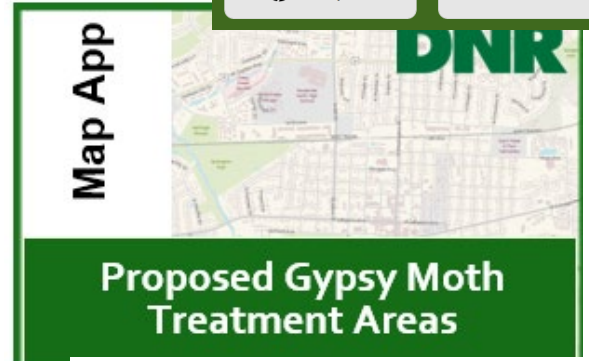
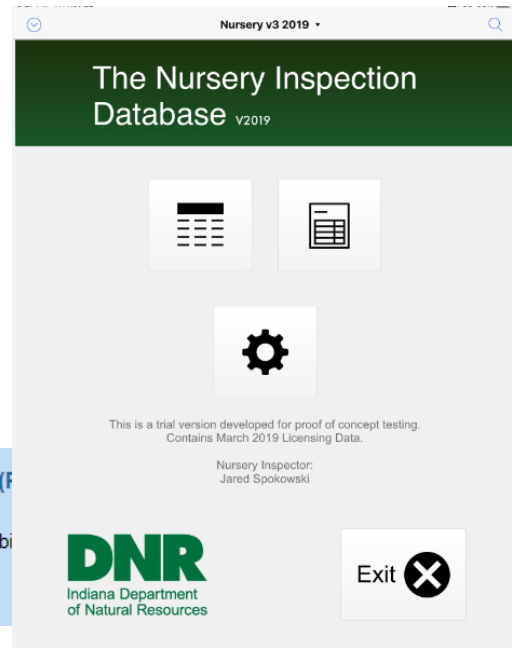
 [Sign Up for Updates](#)

# Tools

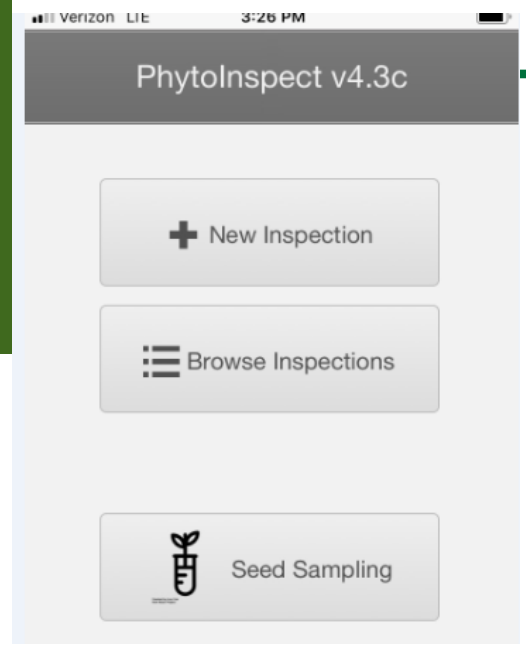


**Phytosanitary Certificate Issuance & Tracking System (PCIT)**

PCIT system tracks the inspection of agricultural products and certifies compliance with plant health standards of importing countries. This capability provides APHIS/PPQ better security, reporting functions, and monitoring capabilities for exported commodities.

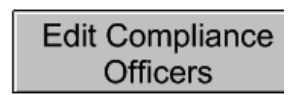


National Agricultural Pest Information System (NAPIS)



## Indiana Beekeepers Swarm List

## DNR Compliance Agreement Database

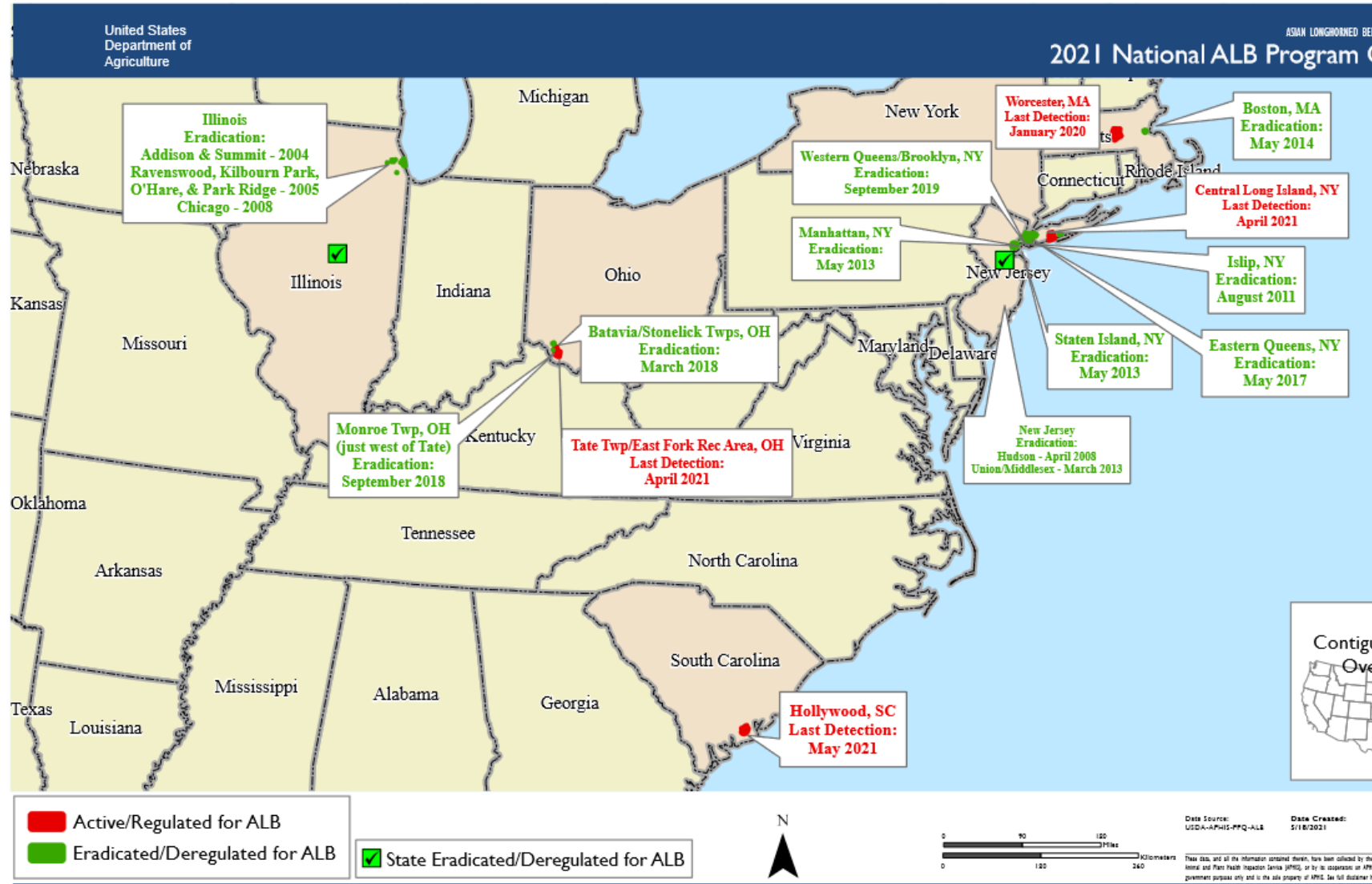


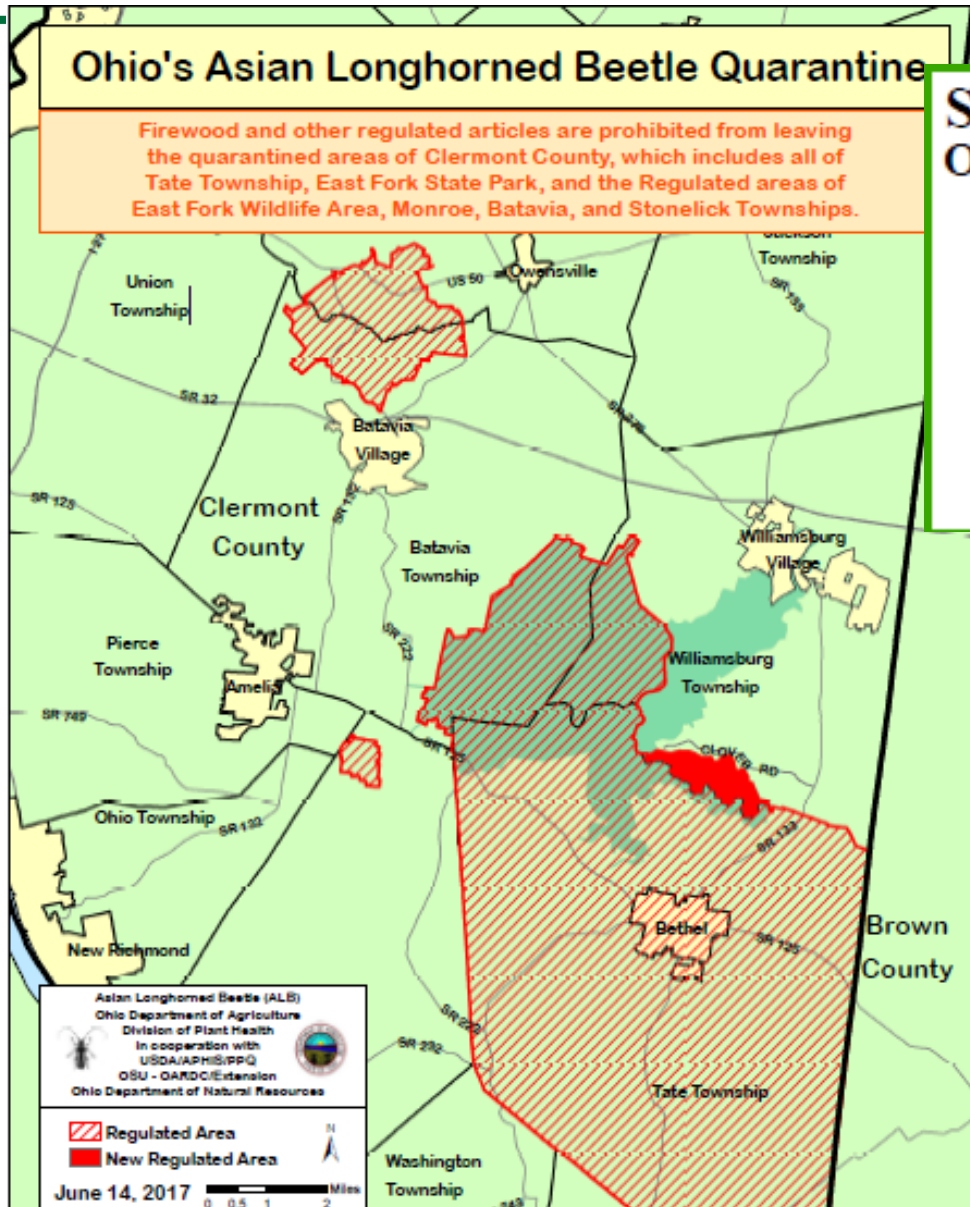
# Integrated Plant Health Information System

# Asian Longhorned Beetle



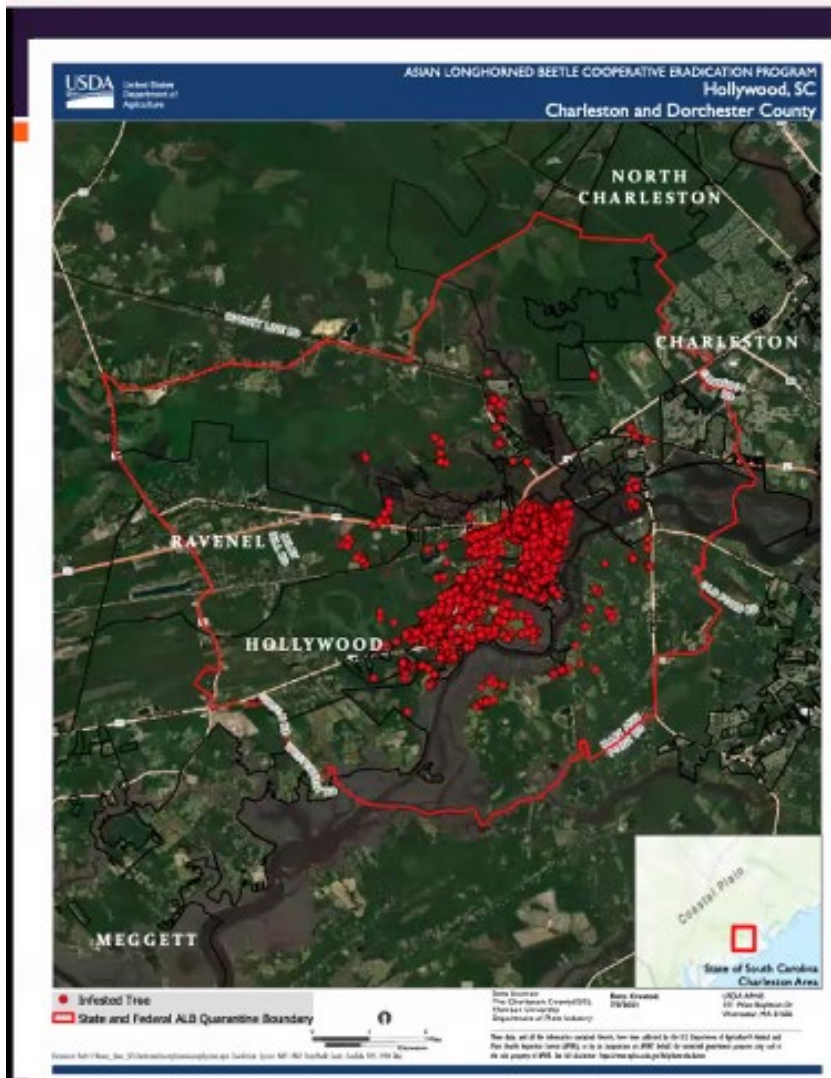






Closest infested site in Cincinnati where 2.5 million trees have been surveyed and 101k removed





## ALB in SC

### Status of Program Operations

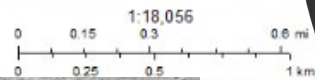
- Regulated area: 76.4 mi<sup>2</sup>
- Trees surveyed: 46,799
- Infested tree detections: 4,983
- Infested trees removed: 2,200
- High risk host trees removed: 1,237

ALB Survey Map 2020



July 20, 2020

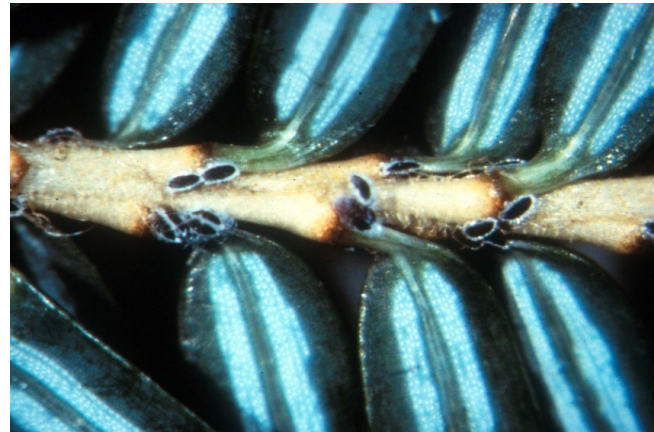
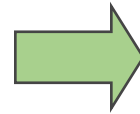
● Survey Point



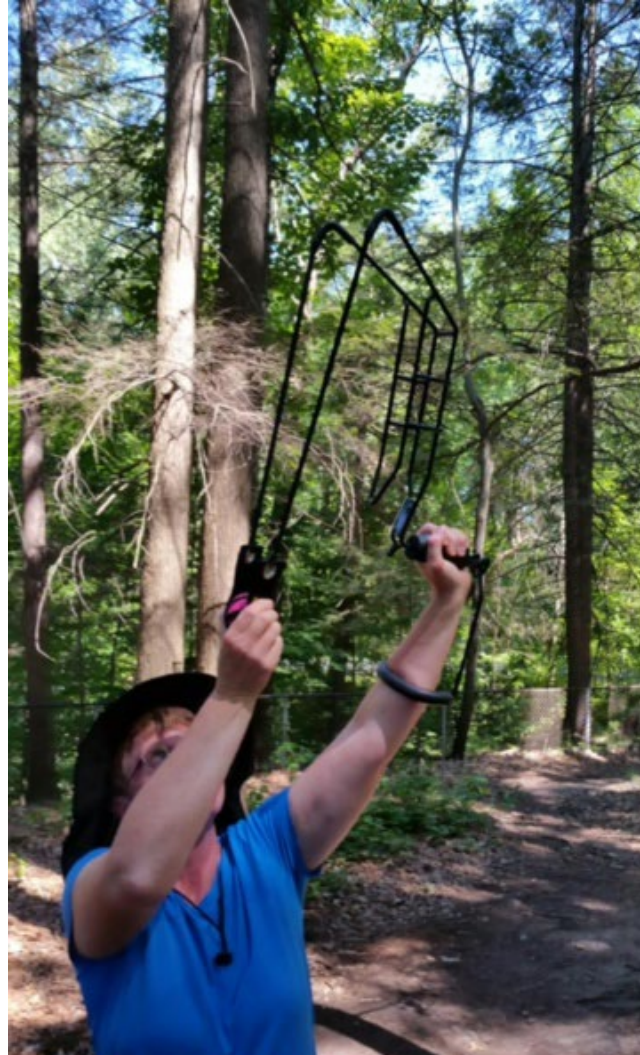
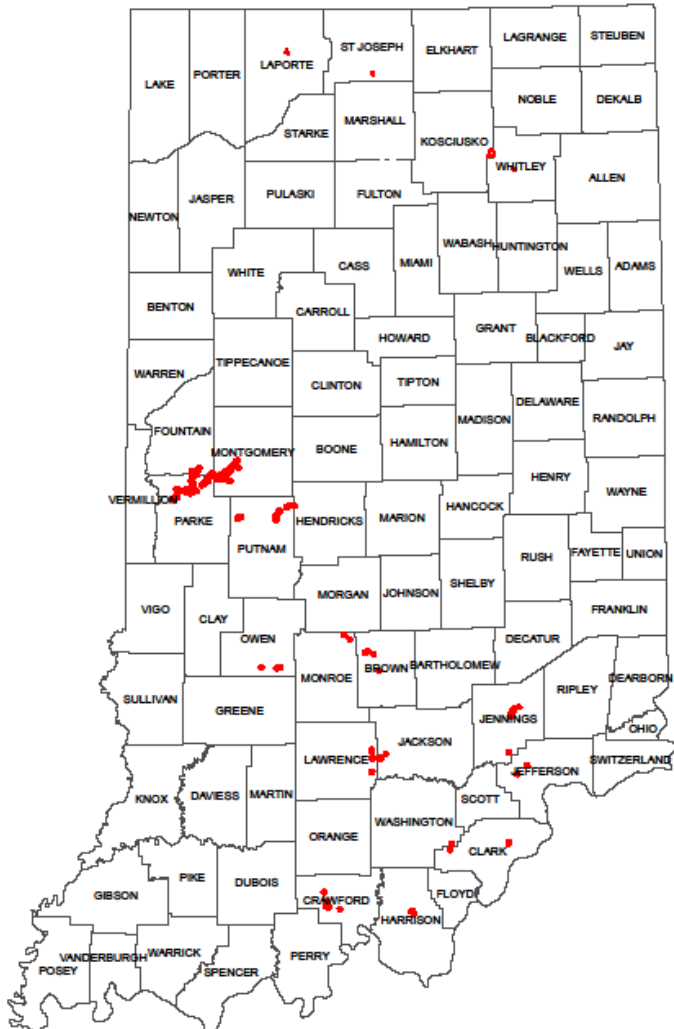
**INTERCEPTION**

UNCS, CHES/Albus DS,  
community  
Vincent Burke  
LEDA, PSA

# Hemlock Woolly Adelgid (HWA)



# Hemlock Stands in Indiana

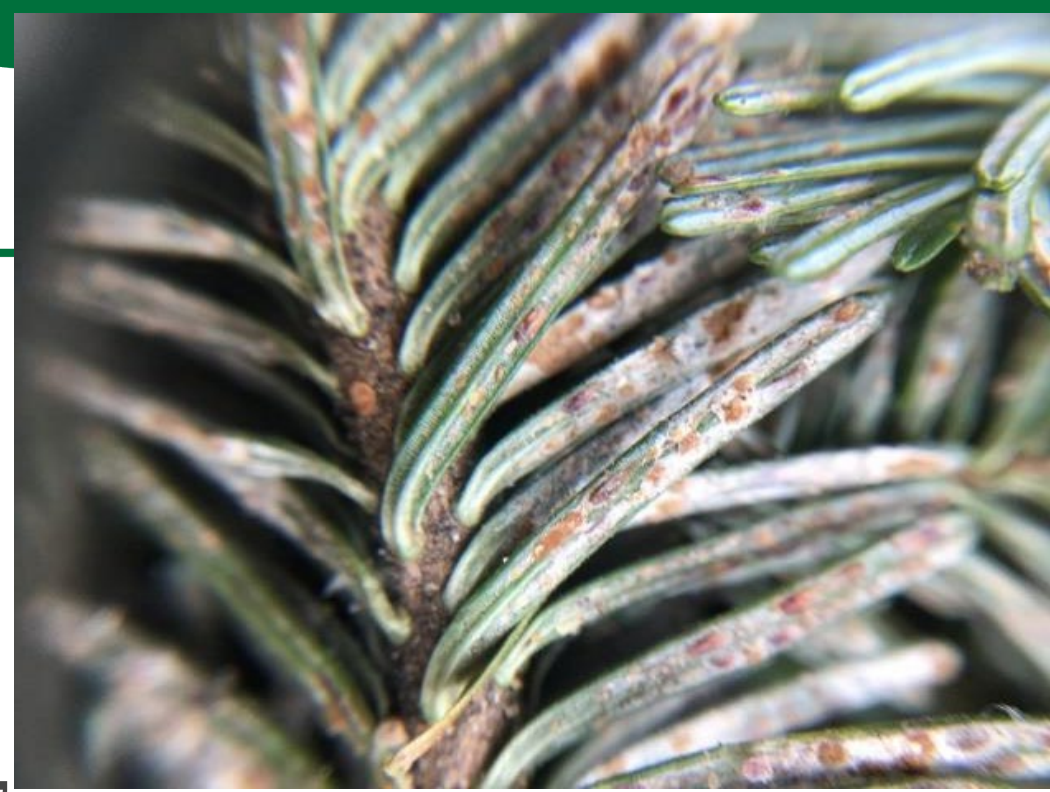


# Elongate Hemlock Scale (EHS, *Fiorina externa*)

Native to Japan

Armored scale

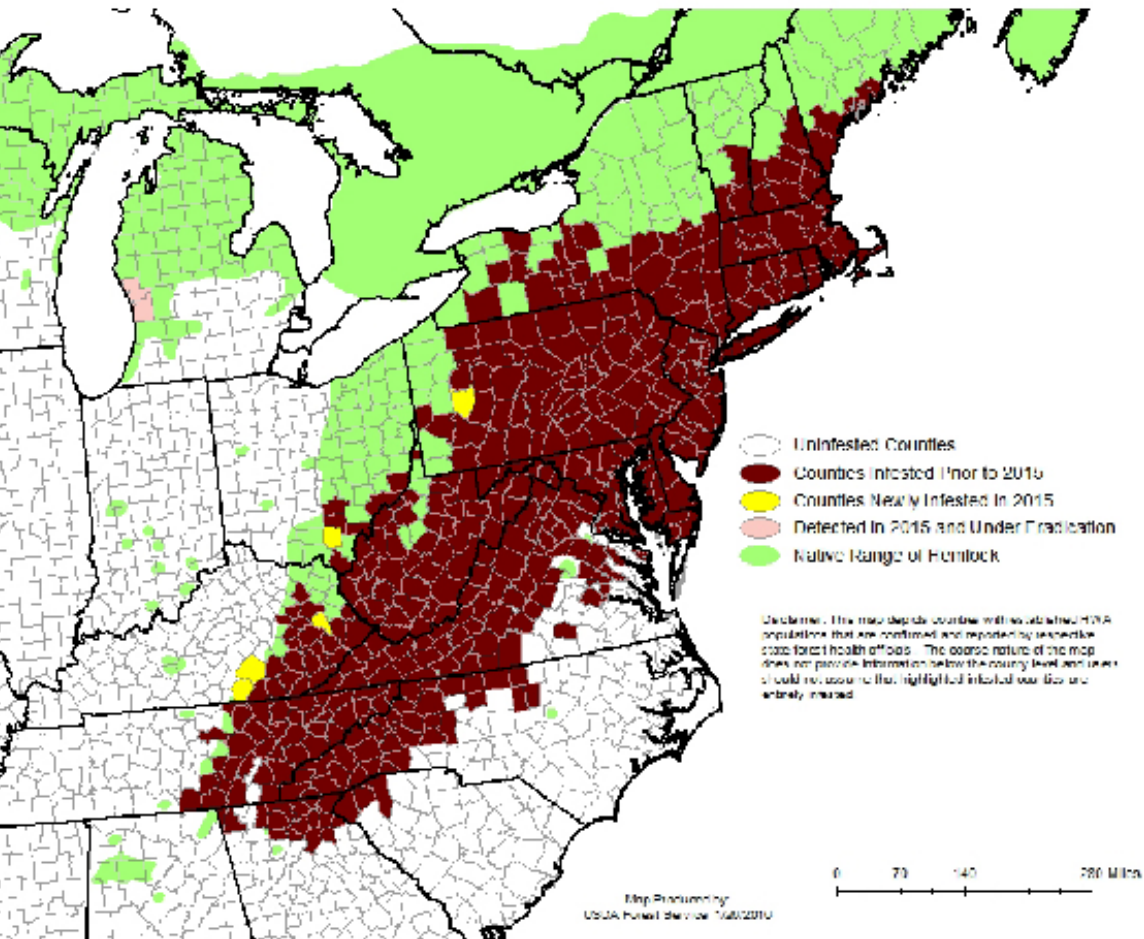
Feeds on 57 hosts: fir, spruce, hemlock, taxus, pine, Douglas fir



Adult male elongate hemlock scale courtesy of Jim Stimmel, PDA

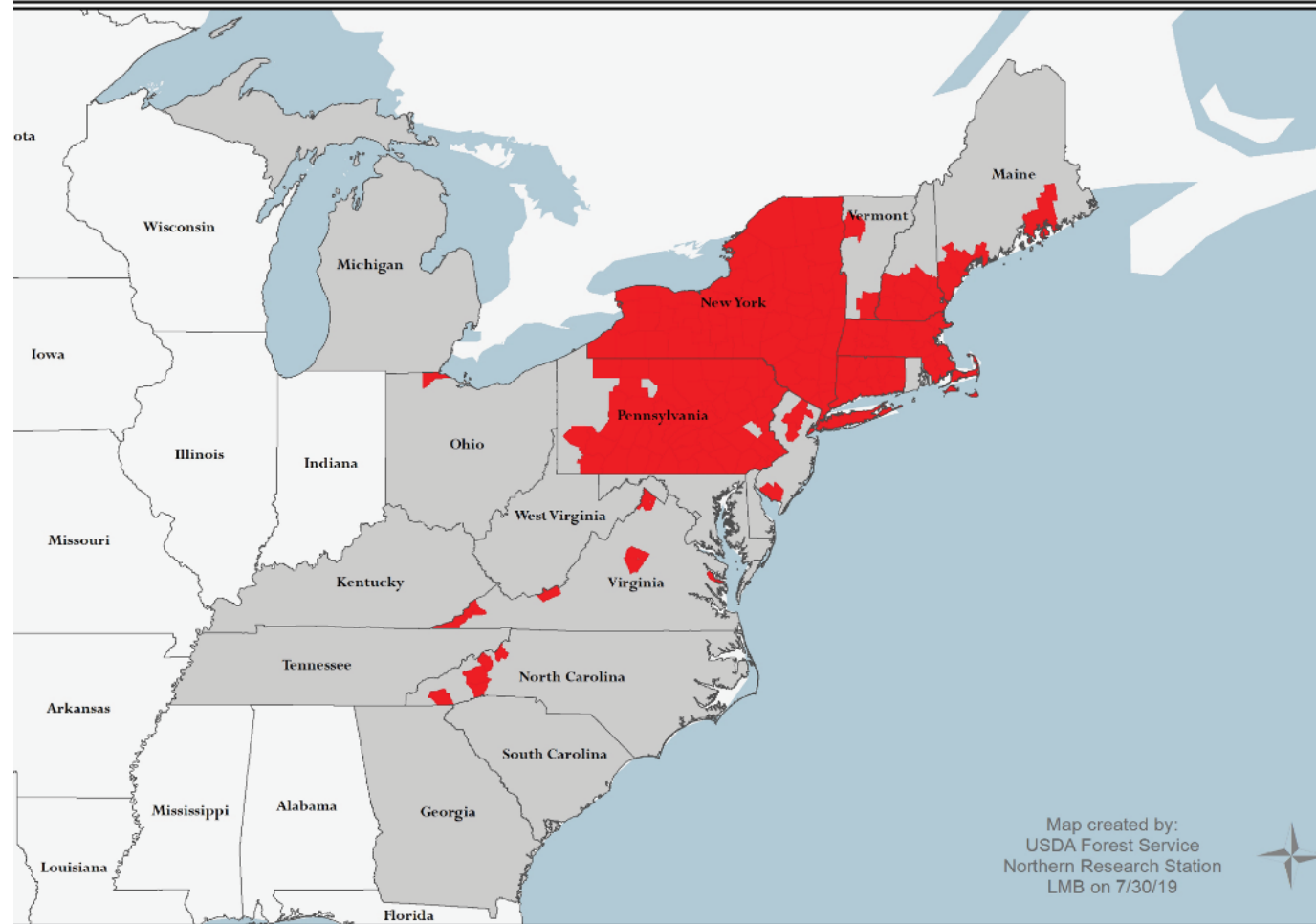


## Hemlock Woolly Adelgid Infestation



## Elongate Hemlock Scale

*Fiorinia externa* Ferris



State level report ■ County level observation



# Holiday Invaders



**INTERCEPTION**

# Thousand Cankers Disease of Black Walnut



German Township  
Bartholomew County



**INTERCEPTION**

# Sudden Oak Death Survey (*Phytophthora ramorum*)

Rhododendron  
Kalmia  
Camellia  
Pieris  
Viburnum

APHIS HOST LIST:

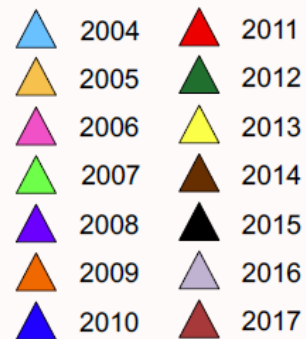
[http://www.aphis.usda.gov/plant\\_health/plant\\_pest\\_info/ram/downloads/pdf\\_files/usdaprlist.pdf](http://www.aphis.usda.gov/plant_health/plant_pest_info/ram/downloads/pdf_files/usdaprlist.pdf)

**Indiana Detections**  
**Porter County 2006**  
**St. Joseph County 2012**  
**Box store bonanza 2019**



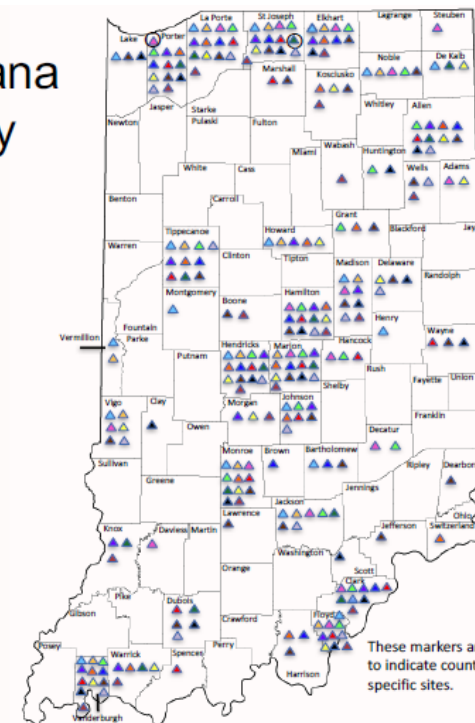
Diffused margins of diseased areas  
often along mid-vein of leaves

## *P. ramorum* Indiana Nursery Survey



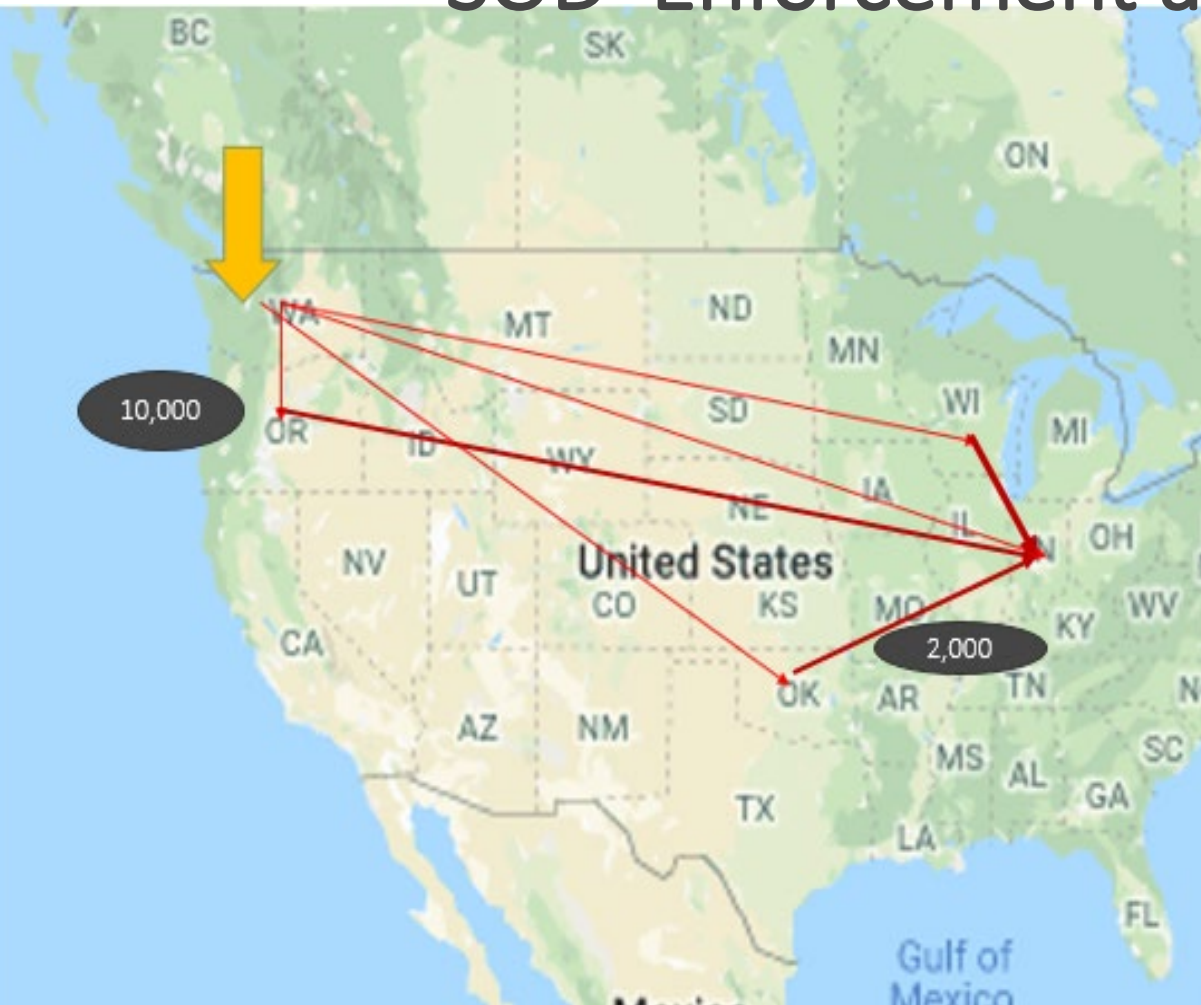
\*A circle (O) around the year's symbol for Porter and St. Joseph Counties indicate a positive find in that year. Sanitation and eradication were performed as per SOD protocol.

Other counties surveyed in 2013 through the Farm Bill Survey include Dubois, Elkhart, Jackson, Johnson, Knox, Lake, and Wayne.



These markers are used to indicate counties, not specific sites.

## SOD Enforcement and Interception in 2019



Nursery Dealer Chain A:

5,889 plants destroyed

942(55 varieties) put on stop sale

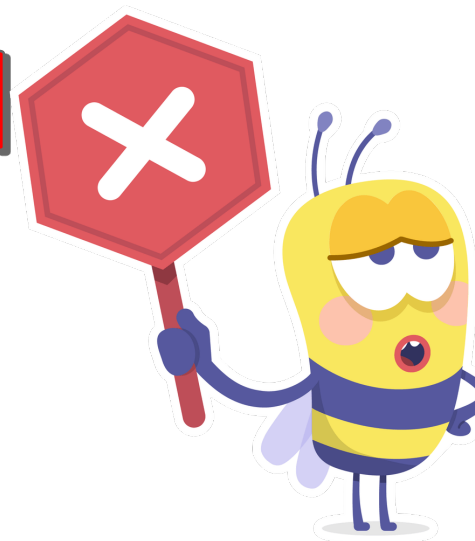
Nursery Dealer Chain B:

273 Plants destroyed

557 put on stop sale

Total of 174,512 plants shipped to stores. 1,930 Rhodo to 70 stores

# Trace Forward



# Box Tree Moth

BTM Damage  
S.W. Ohio



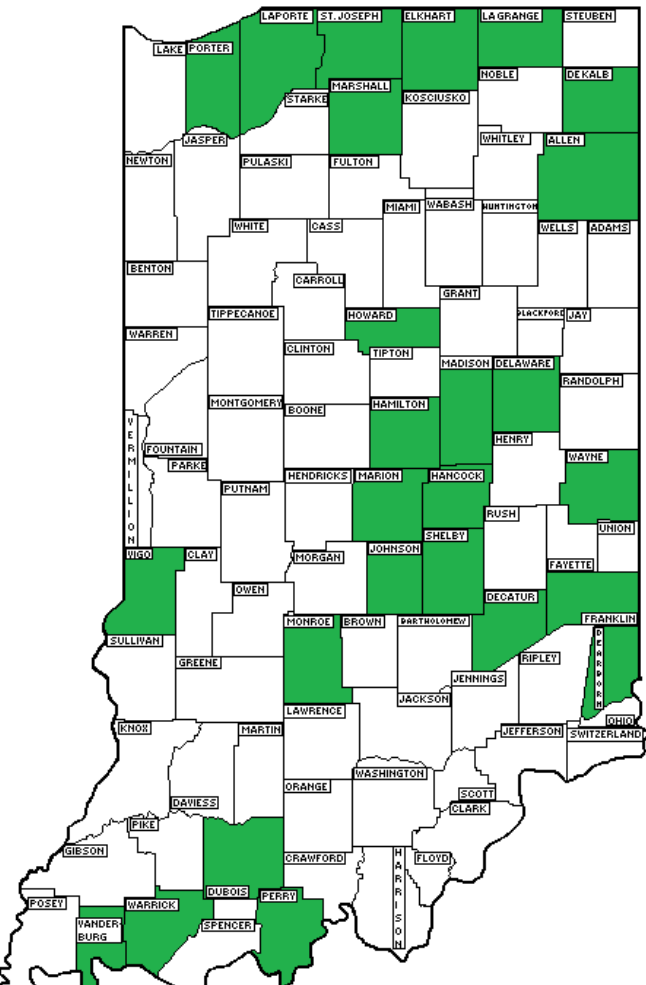
Box Tree Moth Safeguarding Meeting



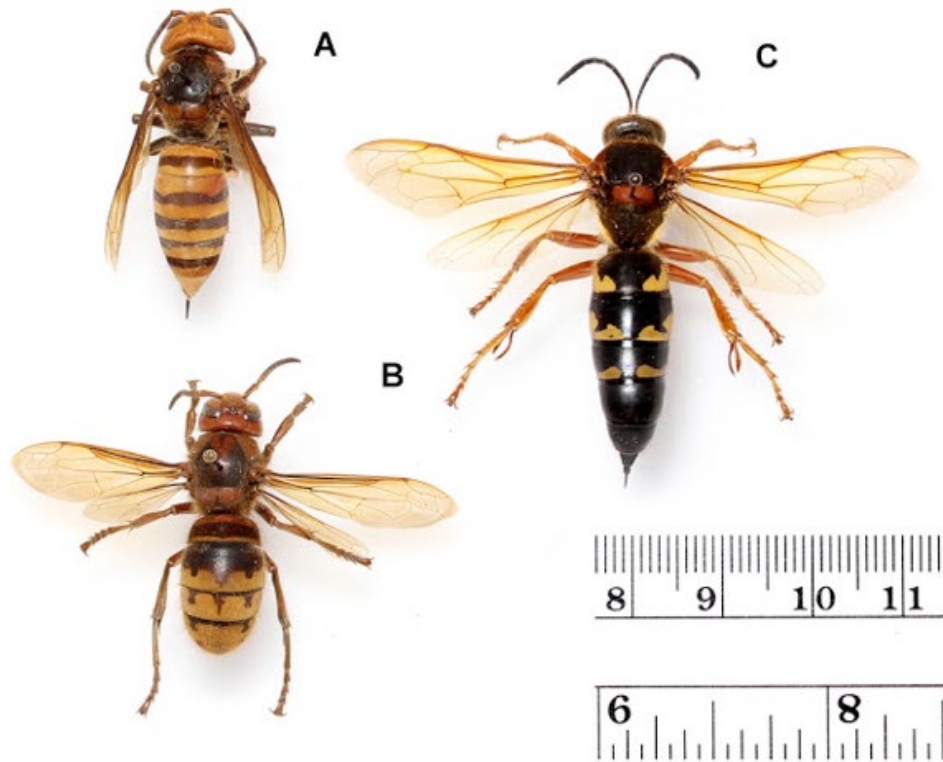


# Boxwood Blight

- 19 states found positive have sent material to Indiana in the past (OH, PA, NY, NJ, DE, CT, MA, MD, WV, VA, NC, SC, KY, TN, GA, AL, FL, KS, OR)
- First find in landscape in central Indiana in December 2018
- Fungal pathogen- *Cylindrocladium pseudonaviculatum*



# MURDER HORNET MANIA



Three giant wasps, the first of which you will not see in the US (but see note at the top of the article): A) Asian giant hornet (*Vespa mandarinia*), B) European hornet (*Vespa crabro*), C) cicada killer (*Sphecius wasps.jpg*). Note that different individuals of each of these wasps can vary in size. Photo by Matt Bertone.

**CNN** US Crime + Justice Energy + Environment Extreme Weather Space + Science

**LIVE**  
Senators grill Trump's Supreme Court nominee Amy Coney Barrett on a third day of confirmation hearings

## Murder hornets??!! Twitter is freaking out

By Alaa Elassar, CNN

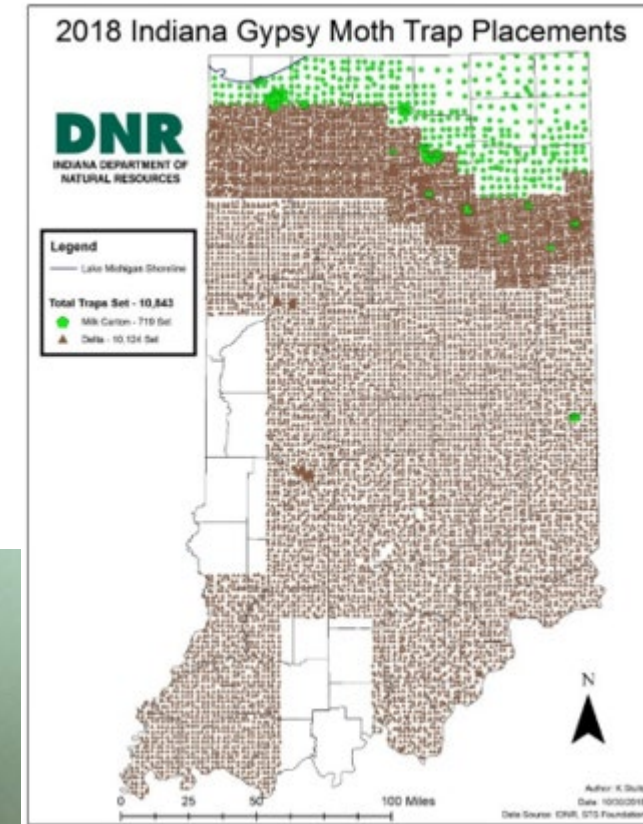
Updated 11:37 AM ET, Mon May 4, 2020



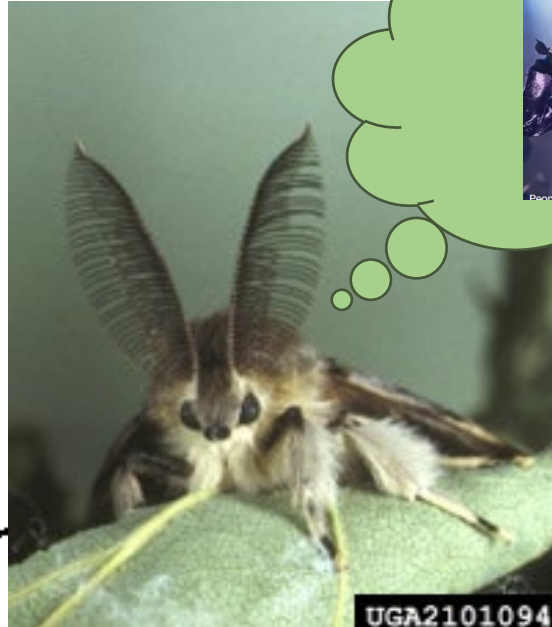
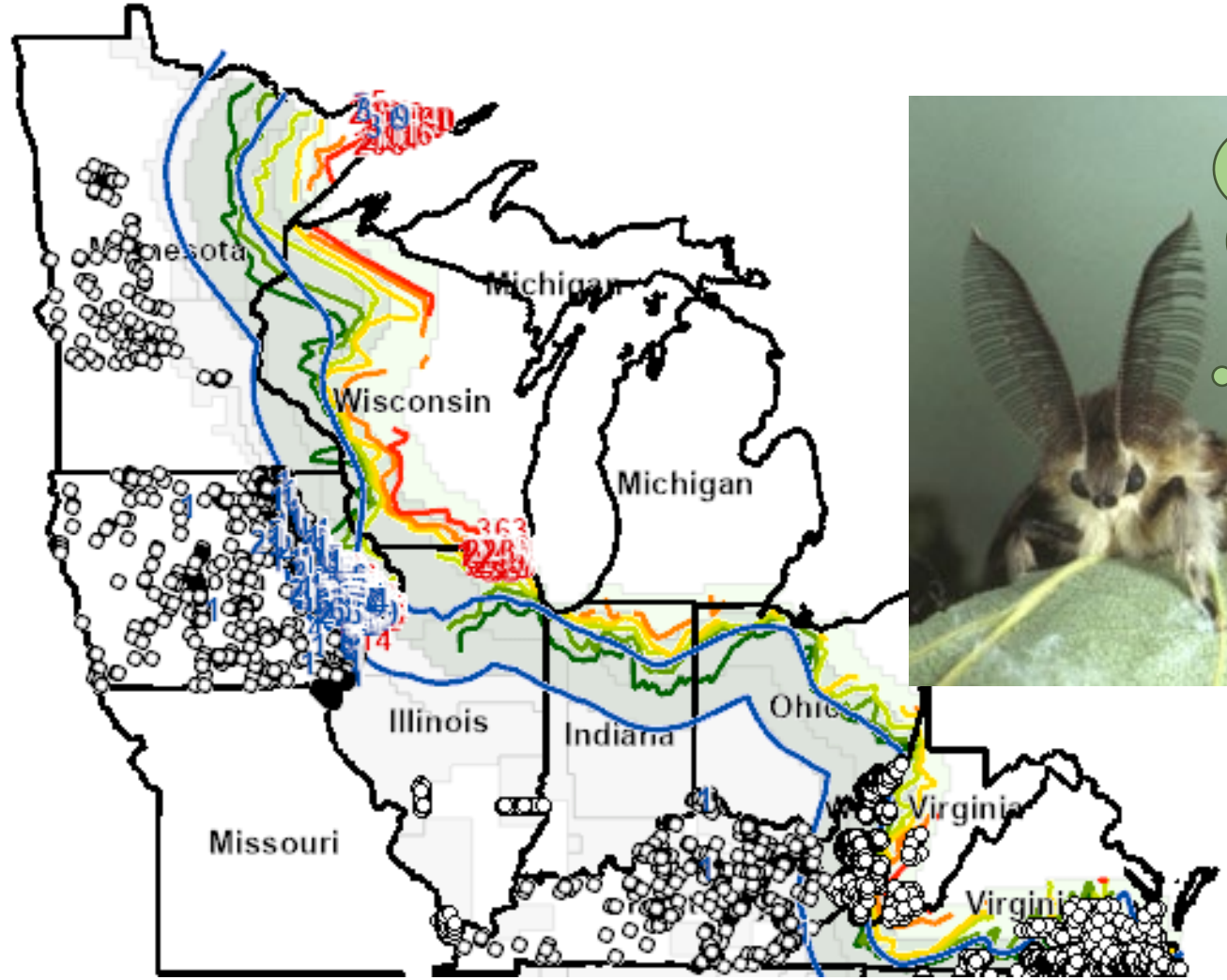


# Invasive Pest Species in Indiana

- Spongy Moth
- Emerald Ash Borer
- Kudzu
- Boxwood Blight
- Spotted lanternfly

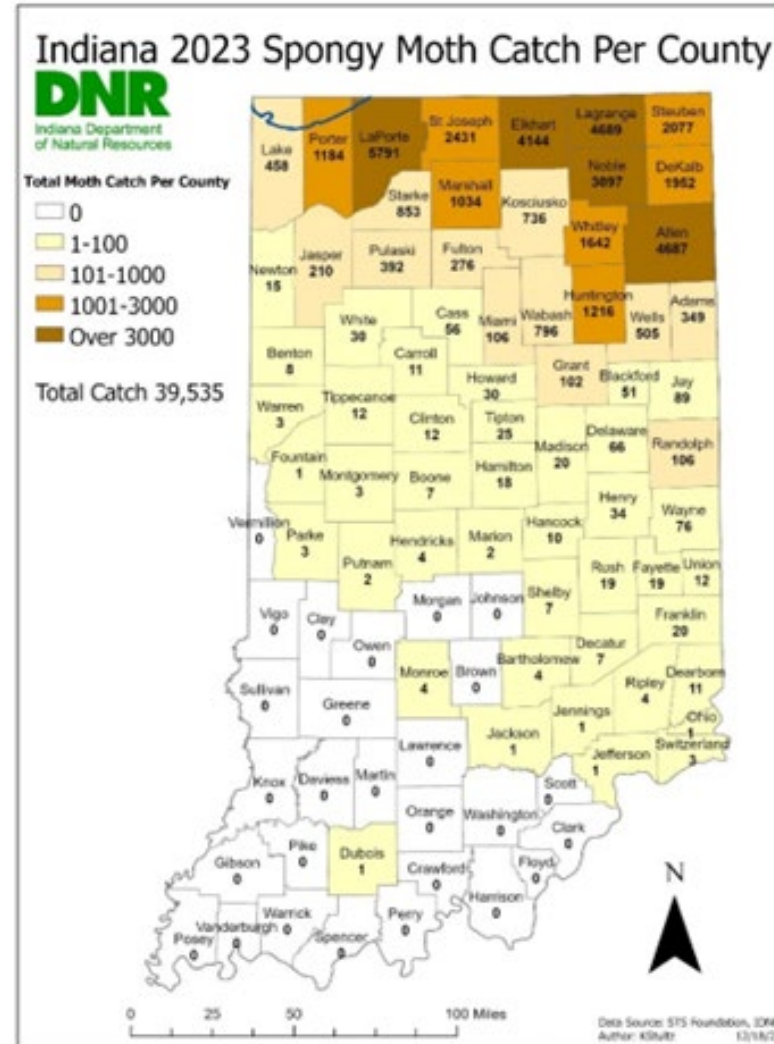
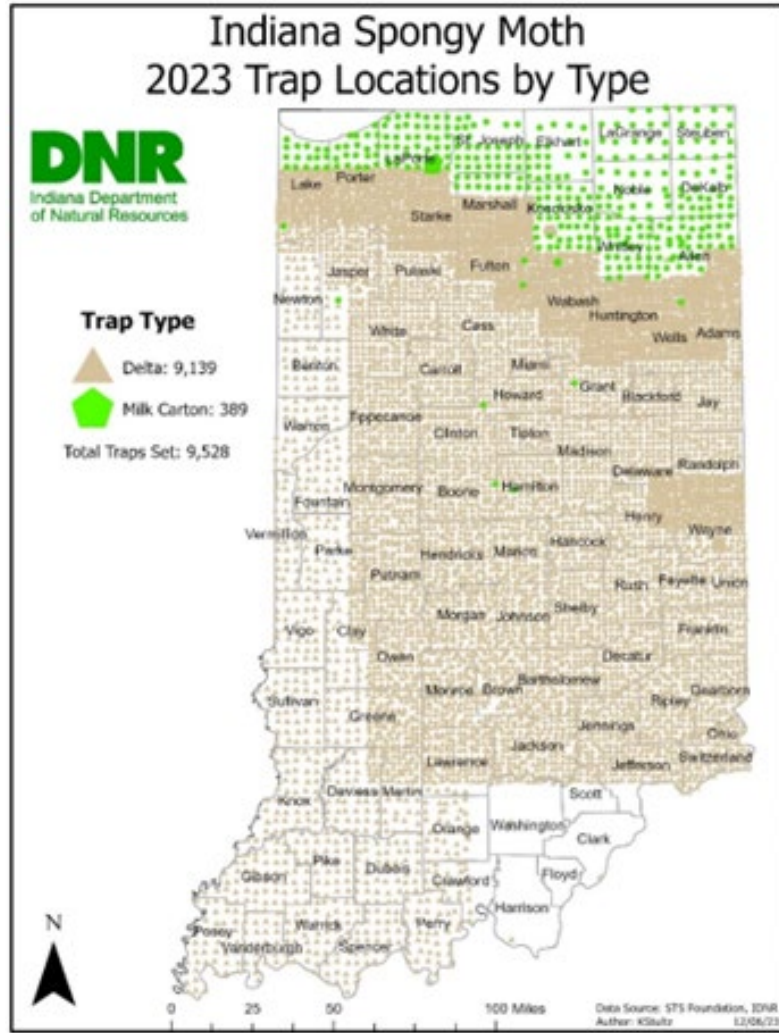


# Spongy Moth (formerly known as Gypsy)



**STS** Slow the Spread  
of the Gypsy Moth  
Slow the Spread Foundation, Inc.





### Indiana Spongy Moth (*Lymantria dispar*) Quarantined Counties



**Legend**  
Year County Quarantined

Blue	2023
Orange	2010
Light Orange	2007
Green	2000
Yellow	1999
Light Blue	1998

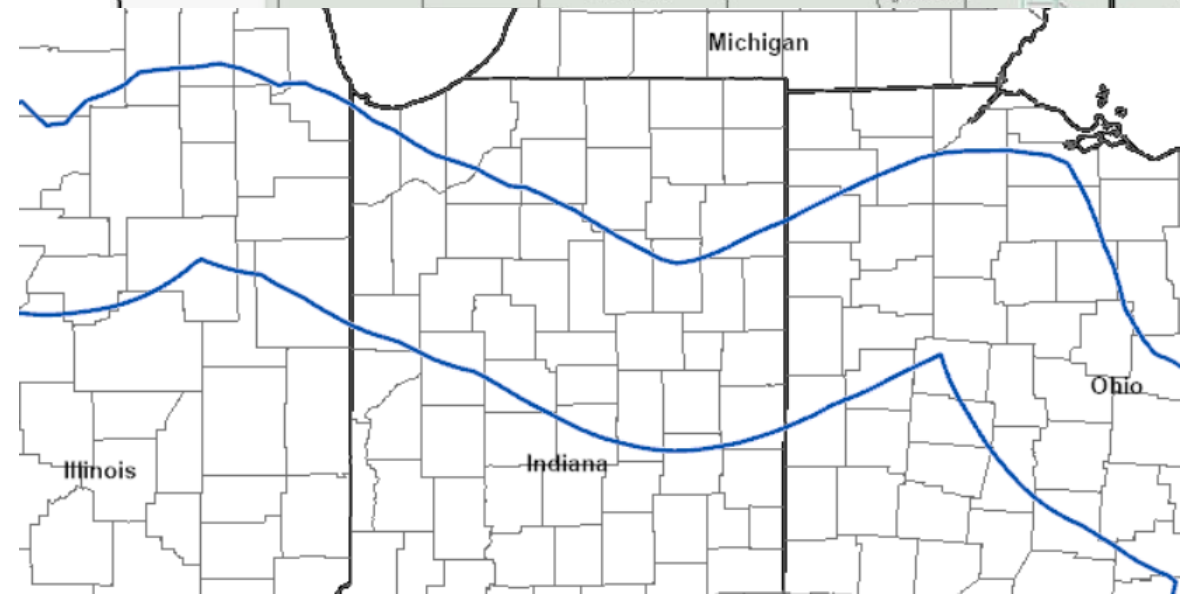
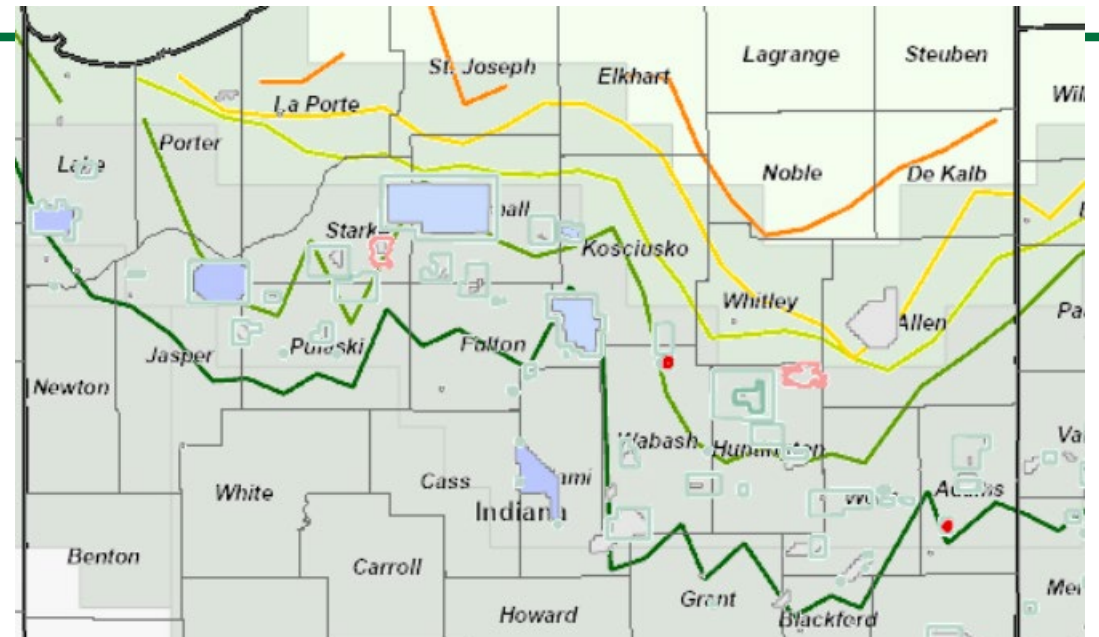
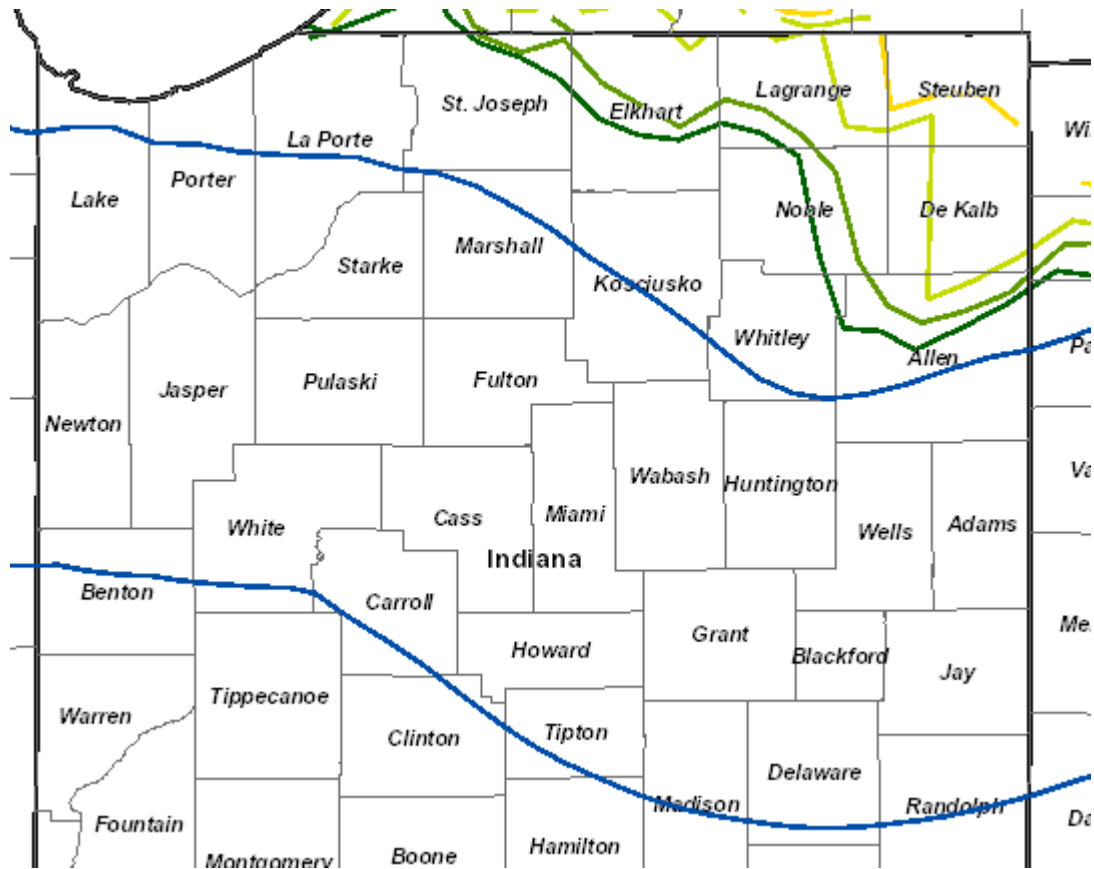


Treatments 2024

<https://indnr.maps.arcgis.com/apps/webappviewer/index.html?id=5377a51d8abe430e9e6ddac04c6f7cdb>

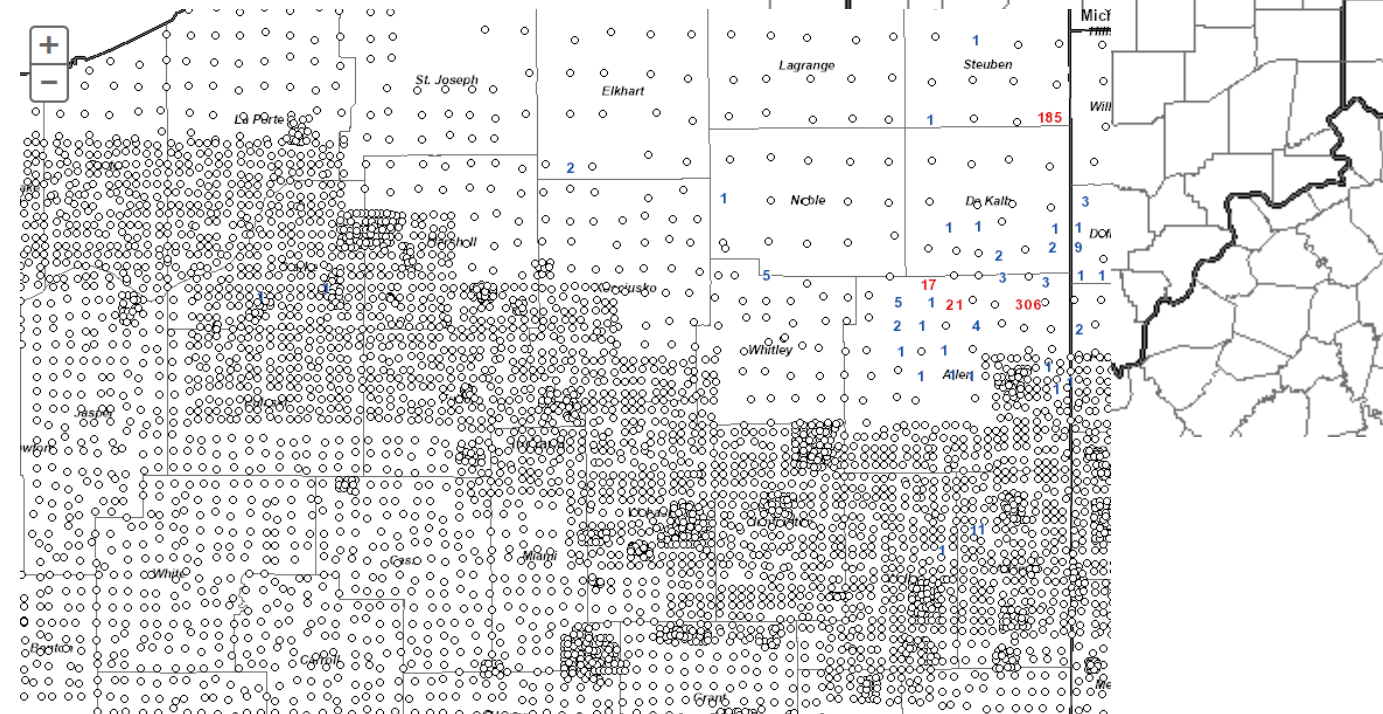
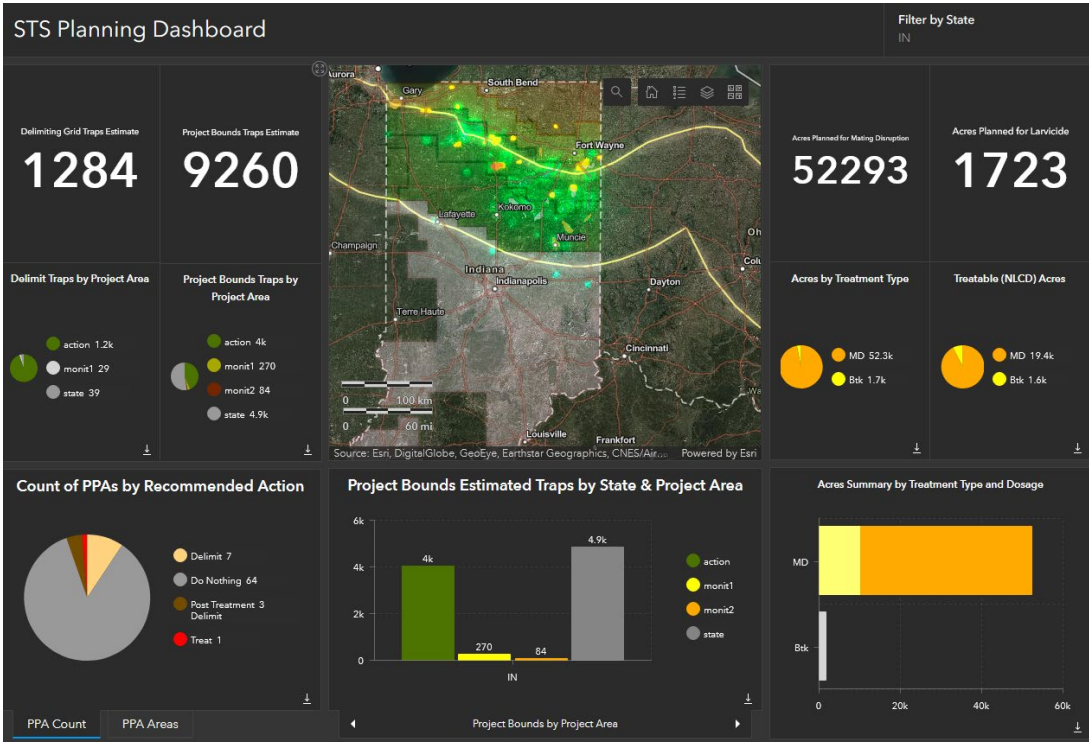
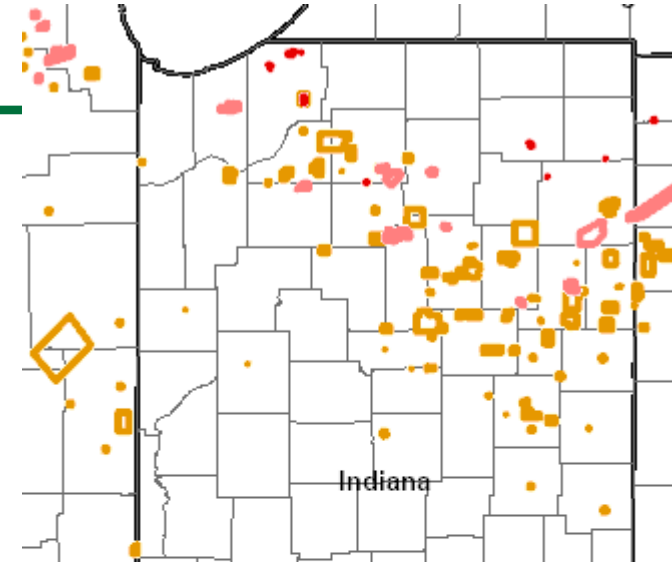


Moth lines 2022



# Gypsy Moth Treatment Program

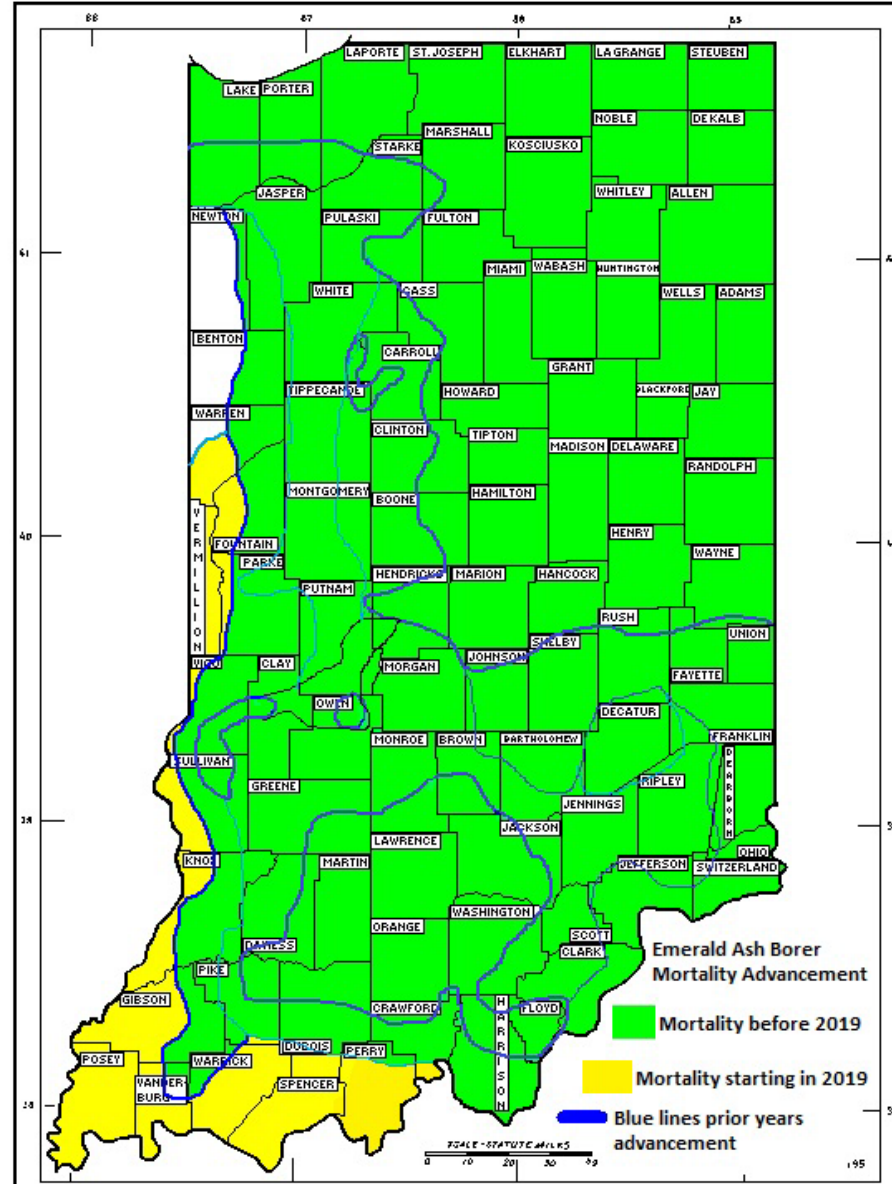
- Cost of treatment program over the last five years has ranged from \$50k to \$152k; 5 year average is \$94k



# Emerald Ash Borer



UGA900019



# Emerald Ash Borer Mortality





# EAB Parasitoid Release

*Tetrastichus planipennis* is a small wasp that can locate EAB larvae under the surface of the bark of ash trees.



*Oobius agrili* is a minute egg parasitoid about the same size as an EAB egg (approximately 1 mm)



*Spathius galinae* and *Spathius agrili* lay their eggs ON the larvae and not IN them.

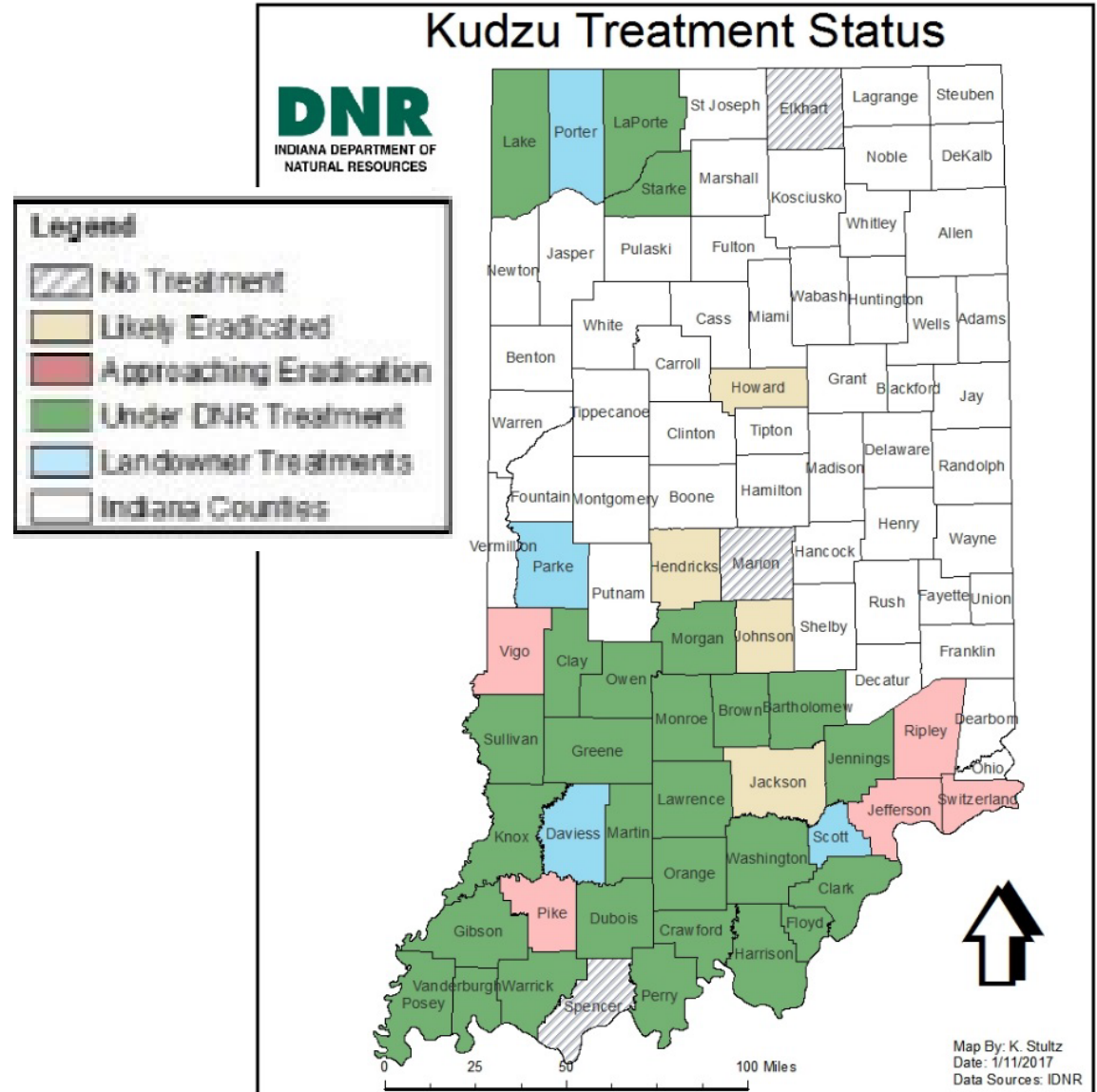




Kudzu in Indiana

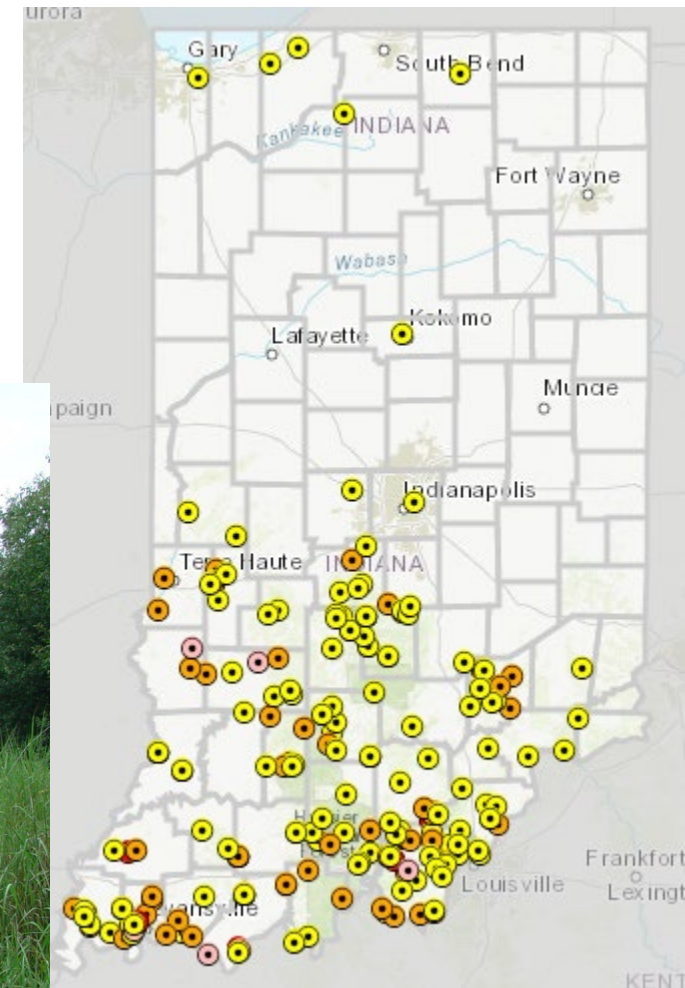
# Kudzu 2022

- 38 sites treated in 20 counties
- 63.21 acres treated
- 96% of treated kudzu sites are at 90% suppression after four years of treatment
- 217 known sites totaling 241.23 acres in 44 counties.
- Four new sites were confirmed in 2022



# Kudzu Treatment Program

- Cost of treatment program over the last five years has ranged from \$68k to \$76k; 5 year average is \$65k
- Acreage treated varied from 60-68 total acreage; 66 Acres on average

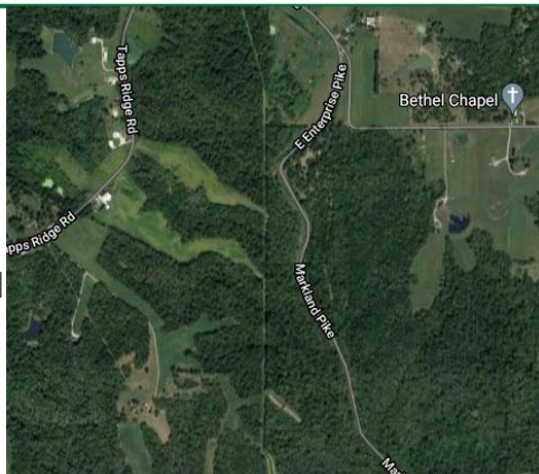


# Spotted Lanternfly (*Lycorma delicatula*)



"I found this on a tree at my house. Looks like a spotted lanternfly which from what I read had not been spotted in Indiana"

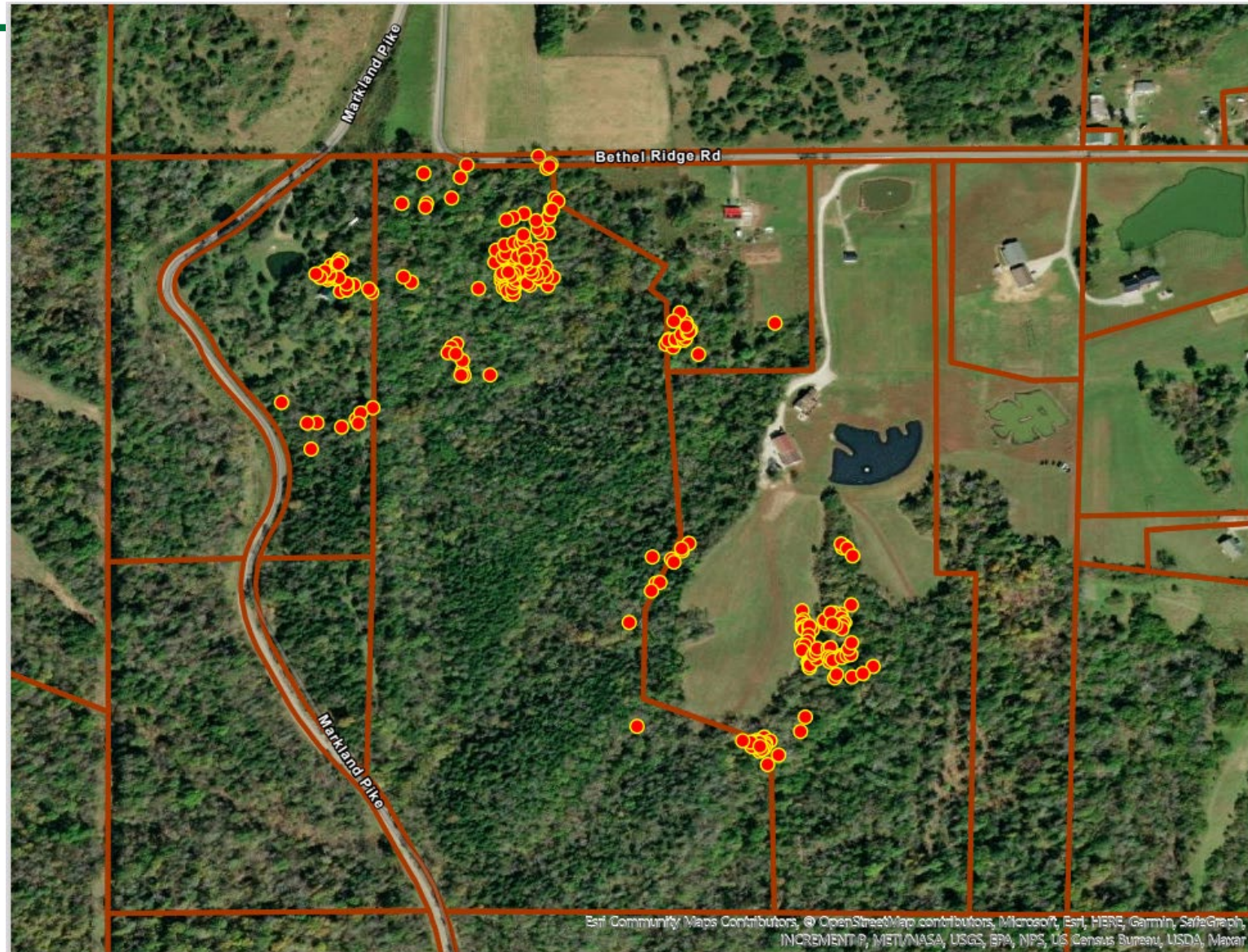
July 2021, Vevay, IN-  
Switzerland County



Home of the first commercial winery in the United States. (1802)



- 1) Trunk spray any ailanthus SLF was found on. Transtect-dinotefuran
- 2) The second treatment is a cover spray of all vegetation along the woodline edges.
- 3) Ailanthus 3" diameter and smaller treated with herbicide. (hundreds) Pathfinder II - Triclopyr







Tree marked for treatment



Dead SLF at the base of tree of heaven



SLF monitoring trap being hung



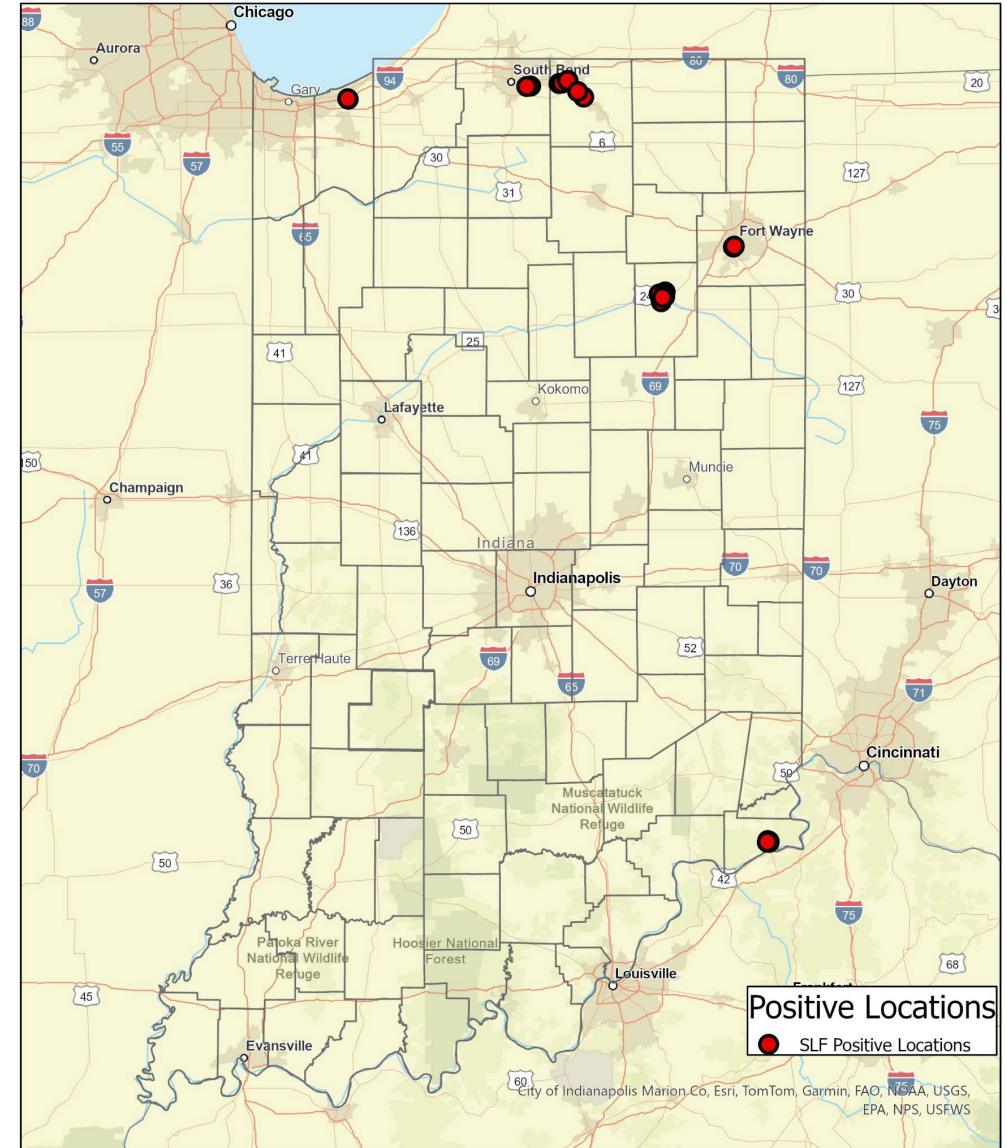
Treatment equipment



# 6 Positive Counties

- Allen, Elkhart, Huntington, Porter, St Joseph and Switzerland
  - Switzerland (2021) accidentally introduced by resident
  - Huntington (2022) introduced via trucking company
  - Allen, Elkhart, Porter and St Joseph (2023) introduced by rail.

Citizen reports with photos from Boone and Hendricks counties but surveys didn't detect populations

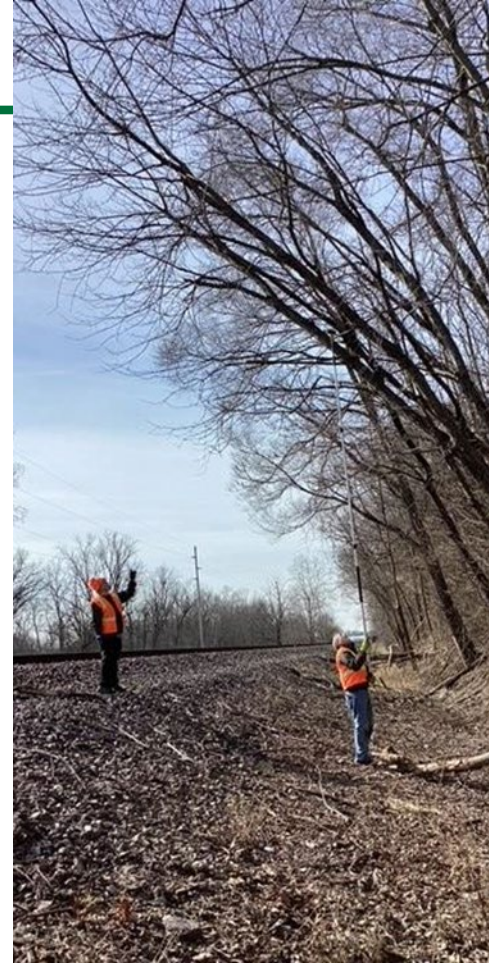


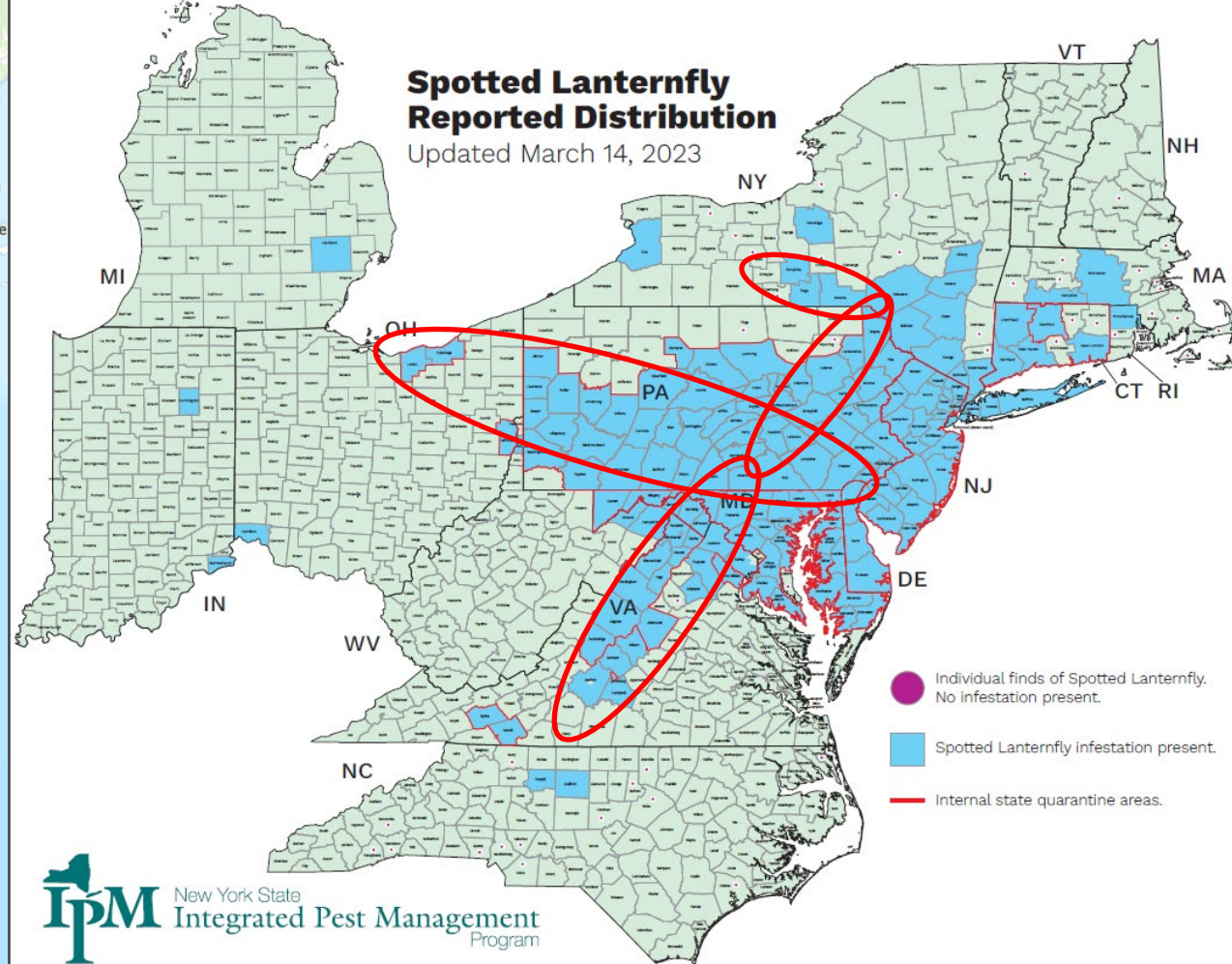
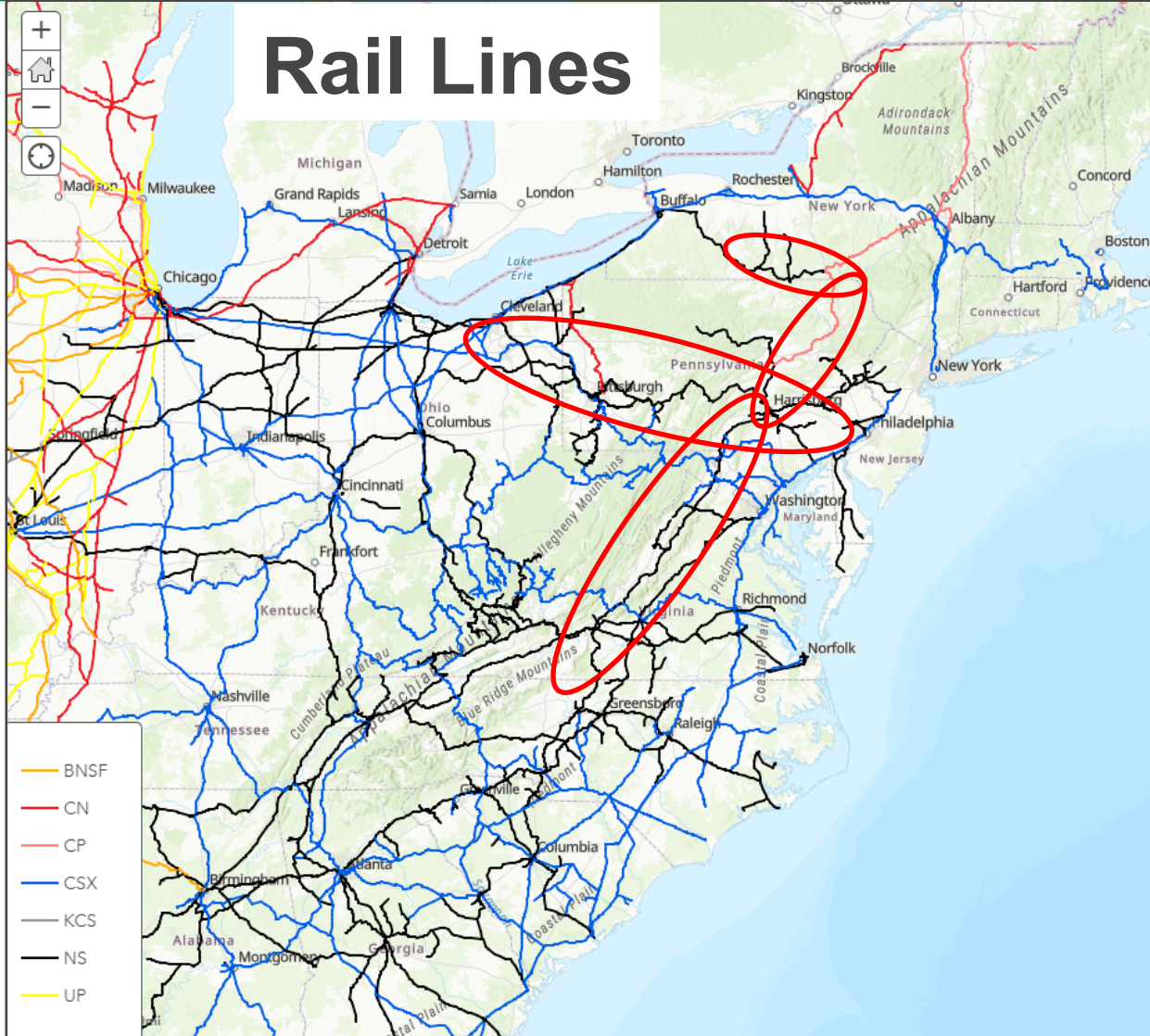
# Egg mass scraping

- 18,811 egg masses scraped in 2024 to date
- 16k in 2023



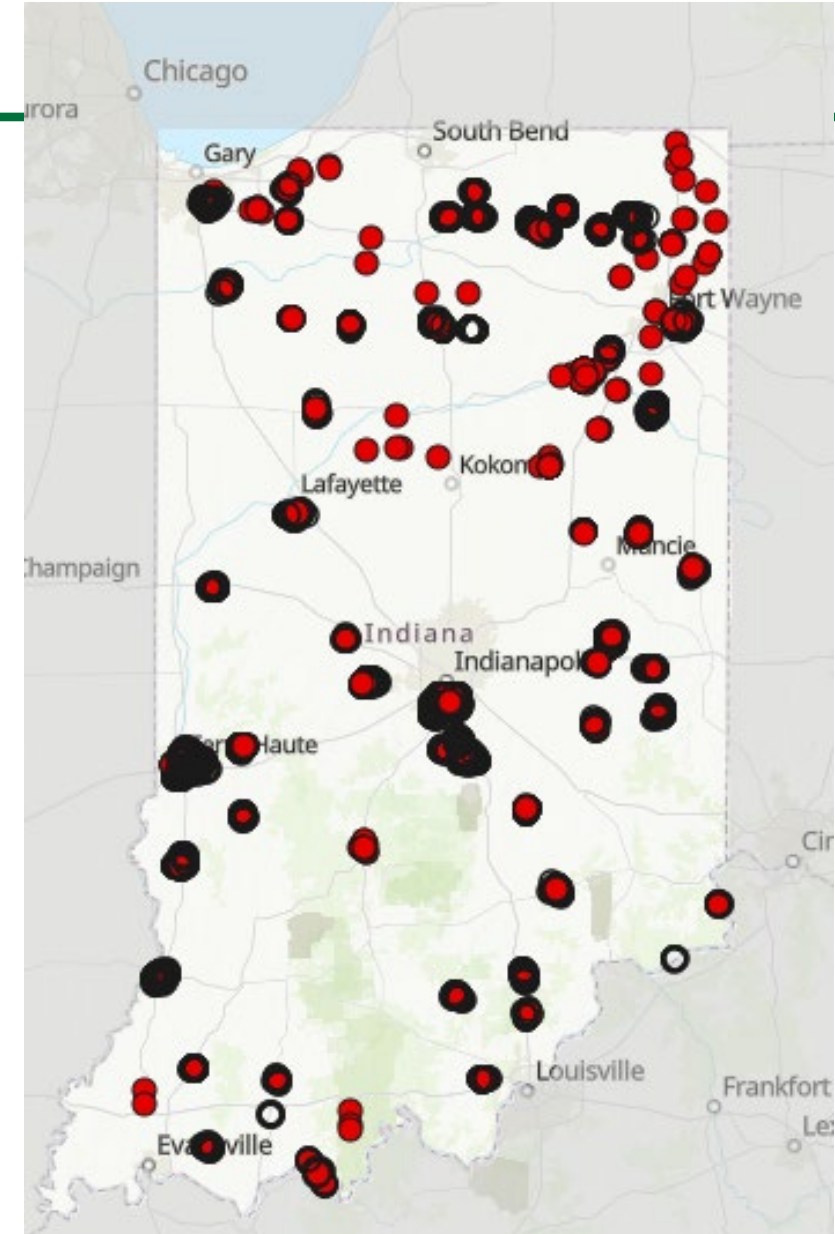
smash and  
scrape





# Tree of Heaven Survey

- Generally grows in urban and industrial areas, but can be found anywhere
- 414 locations of tree of heaven documented since 2019



**STOP  
SPOTTED LANTERNFLY**

**Call (866) NO EXOTIC**

or go to  
**ReportINvasive.com**

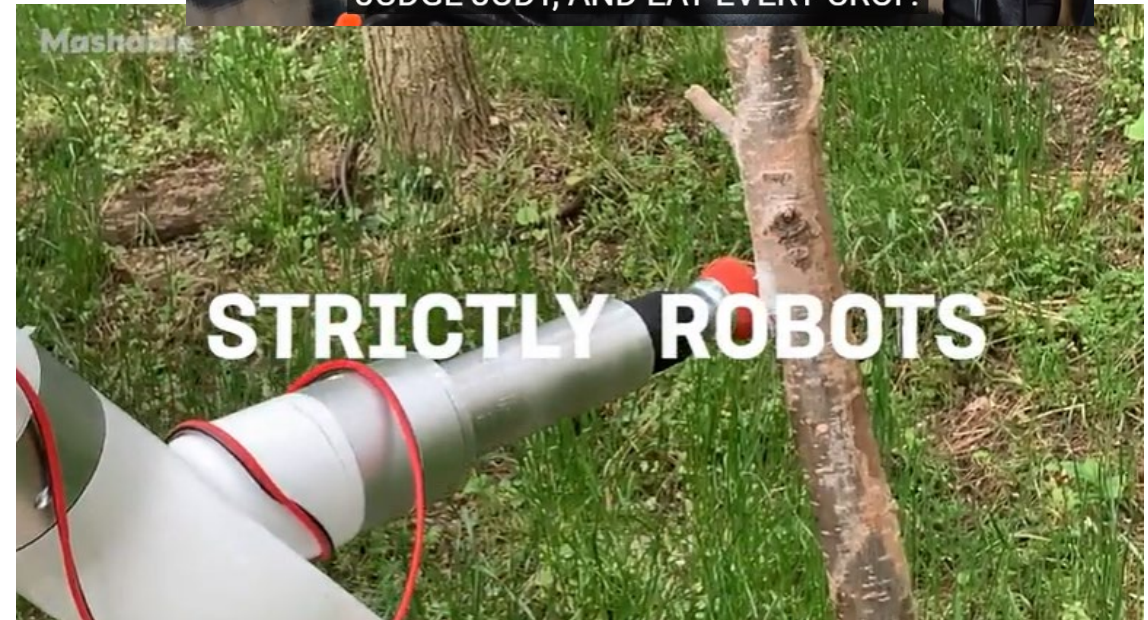




REPORTER MARCUS SOLIS.  
>> IT'S NOT THE PROTON PACK FROM

Public Outreach is key

- TV
- Radio
- Social Media
- YouTube
- The not TikTok





Indiana Department of Natural Resources compliance officer Vince Burkle talks in front of a tree of heaven infested with the spotted lanternfly in Huntington. **ANDY LAVALLEY/POST-TRIBUNE PHOTOS**



ular, which is spread  
another leafhopper  
n as a sharpshooter,  
s causing vineyard  
ems in states to the  
and west, is near the  
of that line, as is indis-  
timate use of broadleaf  
side that can drift from



remove it. It's an invasive  
pest success story.

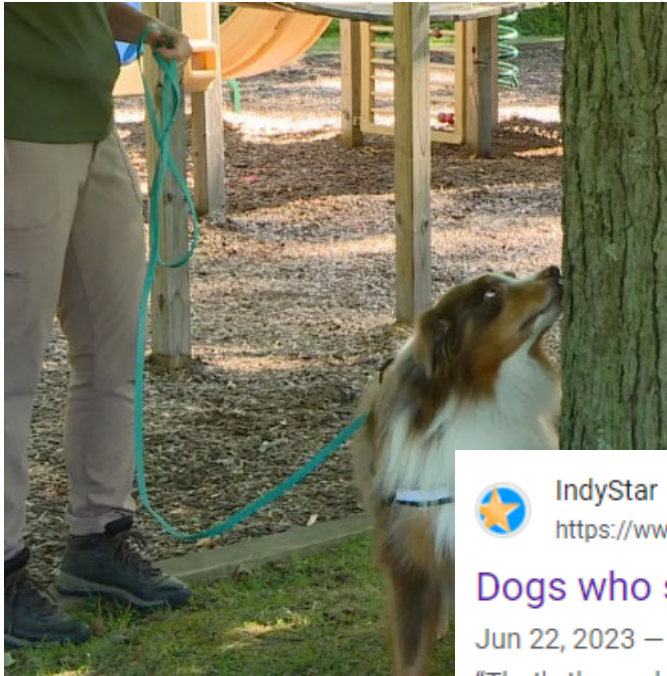
Will Kuiper, 24, orchard  
manager at Kuipers Family  
Farm in Maple Park, said  
traps are used to monitor  
insects on the Kane County  
farm. So far, the spot-  
ted lanternfly hasn't been

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# Canine survey

- Use dogs to “sniff out” SLF life stages



IndyStar

<https://www.indystar.com> › story › news › 2023/06/22

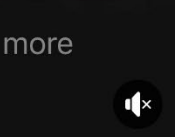
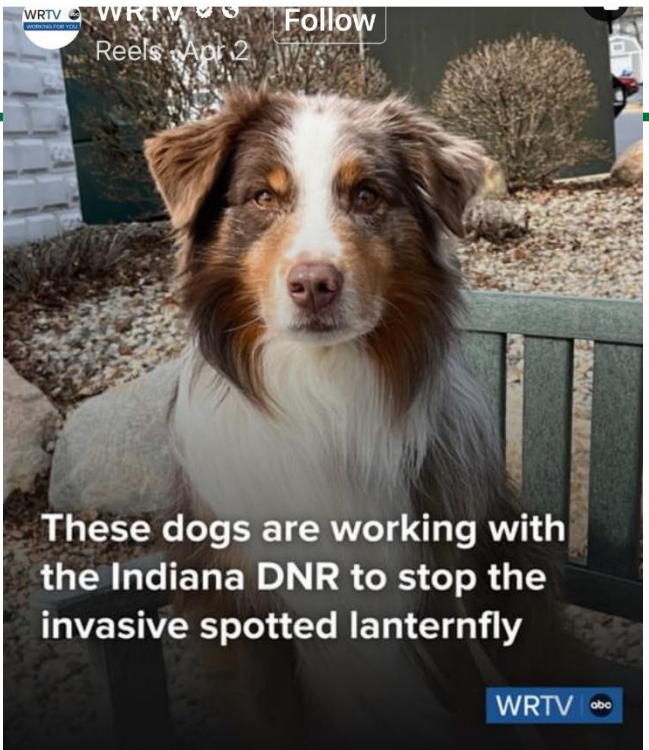
## Dogs who sniff out invasive pest in Indiana paid in treats ...

Jun 22, 2023 — Spotted lanternfly can lay eggs above eye level, so they can be tricky to find.

“That’s the problem we run into is trusting when they are ...



Posts Photos Reels



Share

9+

Notifications

Menu

Google indiana spotted lanternfly dog

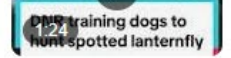
Jun 22, 2023 - The aim of the training is for the dogs eventually to be able to sniff out the Spotted Lanternfly egg masses. The invasive insect has been found ...

American Kennel Club  
<https://www.akc.org> > Expert Advice > News > **Dogs Are Using Their Noses to Detect Spotted Lanternfly ...**  
 Oct 3, 2023 - "This research found that **dogs can discriminate between spotted lanternfly egg masses and other potential** distractor odors and confirms that ...

nurserymag.com  
<https://www.nurserymag.com> > news > lovable-dogs-figh... > **Lovable dogs fight against a new invasive pest**  
 Jul 3, 2023 - A pair of **lovable dogs** are on the frontline of Indiana's fight against a new invasive pest, the spotted lanternfly. Posted by Katie ...

wildindiana.com  
<https://wildindiana.com> > these-dogs-are-soldiers-in-india... > **These dogs are soldiers in Indiana's war ... - WildIndiana.com**  
 Mar 30, 2024 - These **dogs** are soldiers in **Indiana's** war against the invasive **spotted lanternfly** ... **Indiana's** war against the invasive **spotted lanternfly**. Staff ...

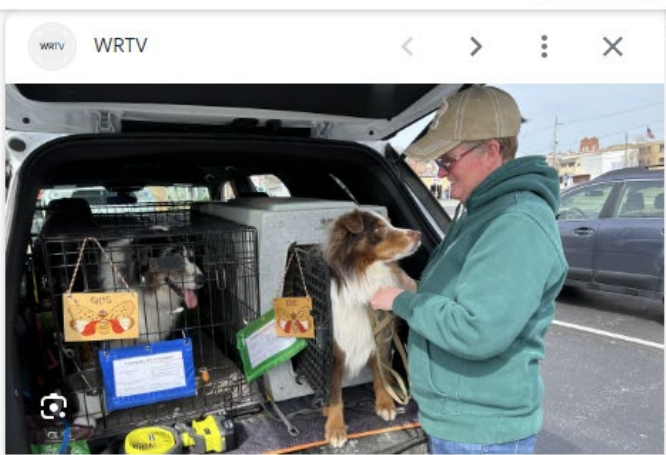
TikTok · WRTV News Indianapolis  
 710+ views · 2 weeks ago > **The Indiana Department of Natural Resources is training dogs ...**  
 ... **Indiana** Department of Natural Resources is training **dogs** to help locate and remove the eggs of the invasive **spotted lanternfly**. STORY LINK ...



IndyStar  
<https://www.indystar.com> > environment > 2023/06/22 > **Dogs are scent-trained to seek out invasive Spotted Lanternfly ...**  
 Watch Australian shepherds Epic and Que in action as they train to sniff out



WRTV Sign in



These dogs are soldiers in Indiana's war against the ...

Images may be subject to copyright. Learn More

Share



IndyStar  
 Invasive spotted lanternfly fou...

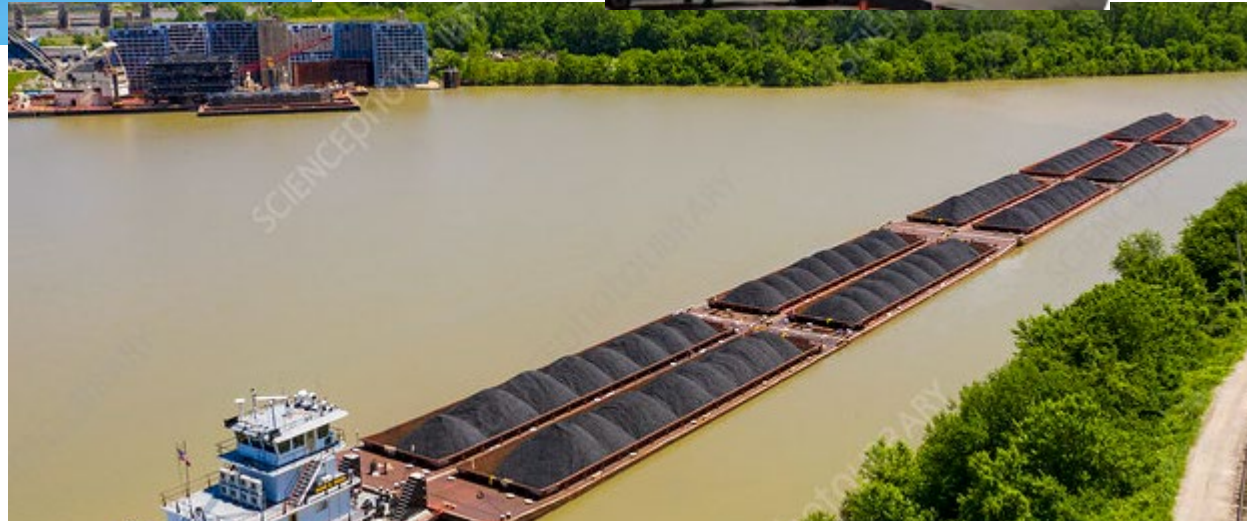
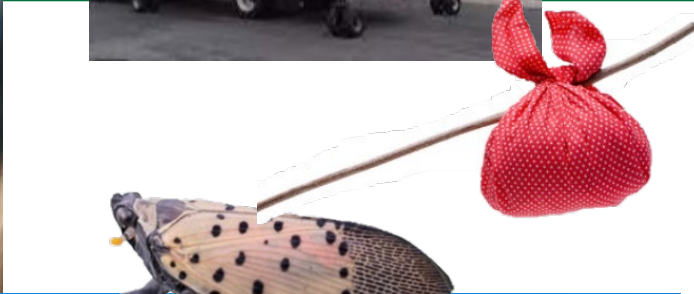
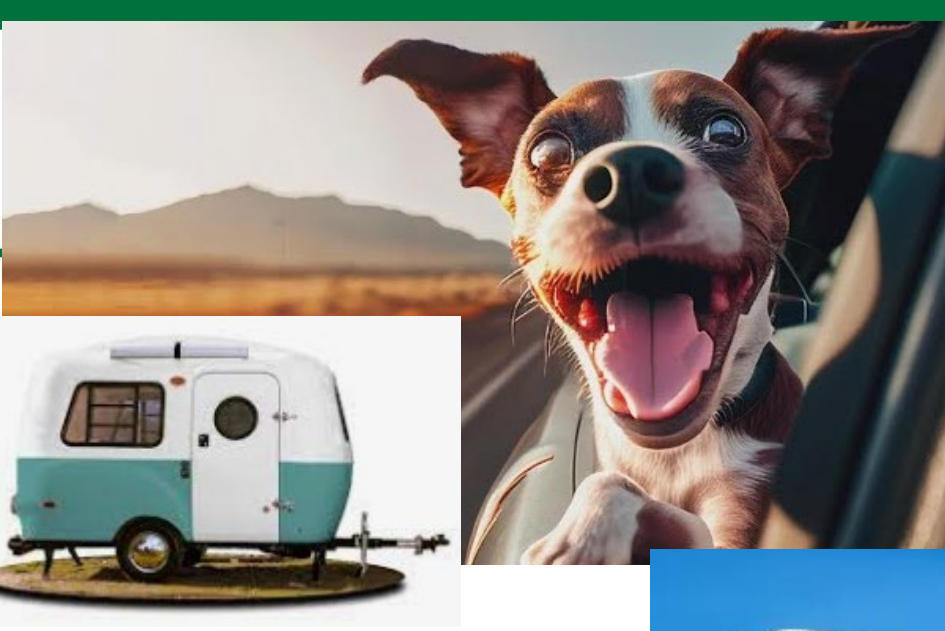


WRTV  
 These dogs are soldiers in Indi...



Daily Mail





- Continue egg mass scraping through hatch. 18,811 egg masses destroyed to date in Huntington
  - lots of egg masses on walnut, silver maple, boxelder, hackberry, sycamore, rocks, tires, other junk
- Contractor applied bifenthrin buffer treatments in Huntington and Switzerland County to suppress early instars
- Contractor applied dinotefuran basal bark treatments to ToH in Huntington and Switzerland counties in July and August to suppress 4<sup>th</sup> instar nymphs and adults prior to egg laying
- Evaluate new and old populations through trapping and visual surveys; prepare additional action plans for late 2024 and 2025.
- Visual surveys at high-risk sites and vineyards; Identify ToH locations statewide
- Continue refining the skills of our canine detection team
- Outreach and education (green industry meetings, YouTube, Facebook), and in cooperation with Purdue Univ. (billboards, EAB University)
- Working on SLF online reporting tool with the DNR GIS coordinator
- Purdue Dept of Entomology: Lamp shade trap study with Phil Lewis

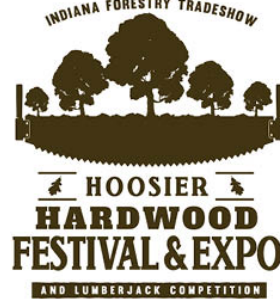
# Education/ Outreach



Emerald Ash Borer Network



INDIANA  
FLOWER  
+ PATIO  
SHOW



**IAA ANNUAL CONFERENCE**



**Weekly Review for July 5, 2017**

Indiana Department of Natural Resources  
Division of Entomology & Plant Pathology  
Phone: (317) 232-4120  
[Our Website](#)  
[Inspector Territories](#)

Informal report by the Division of Entomology and Plant Pathology is designed to update the industry and Greenhouse industry of insect and disease pests the Division has been encountering on a weekly basis and as a way to give a "heads up" of things to be on the lookout for.

Links can be found at the bottom of the page to manage your subscription to this list. Comments and questions about this report are welcome and can be sent to [Eric Biddinger](#) or to your respective inspector.



[Pests Early Detector Trainings](#) hosted by Purdue and the DNR are designed to recognize and report invasive forest pests at these two-hour meetings.

JA JobSpark



**Indiana Green Expo**



12:25 PM Thu Apr 18

**DNR** Indiana Department of Natural Resources

Invasive or Not - Round 3



Click on the **invasive** species



**DNR** Indiana Department of Natural Resources

**Invasive Quiz**

**Question 2**  
Basketball was invented in 1891. This bird was introduced to Central Park in NYC the same year.



A - Blue Jay      B - Cardinal

C - European Starling      D - American Robin

12:24 PM Thu Apr 18

**DNR** Indiana Department of Natural Resources

Welcome to the  
2023 Indiana  
State Fair!

Choose a Game

Invasive or Not

Find the Invasive

Invasive Quiz

DNR Trivia

Bee the Inspector


Contact Us

If you need assistance, please ask an attendant.

12:26 PM Thu Apr 18

**DNR** Indiana Department of Natural Resources

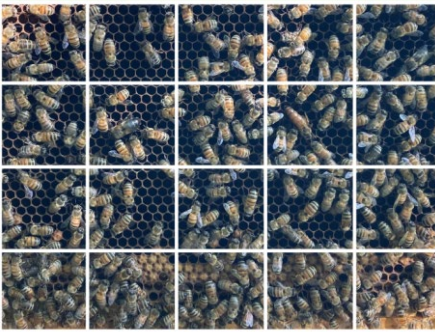
Find the Invasive  
Tap on the squares to find the Spotted Lanternfly egg masses.  
You have found 0 of 1.



Round Number 1

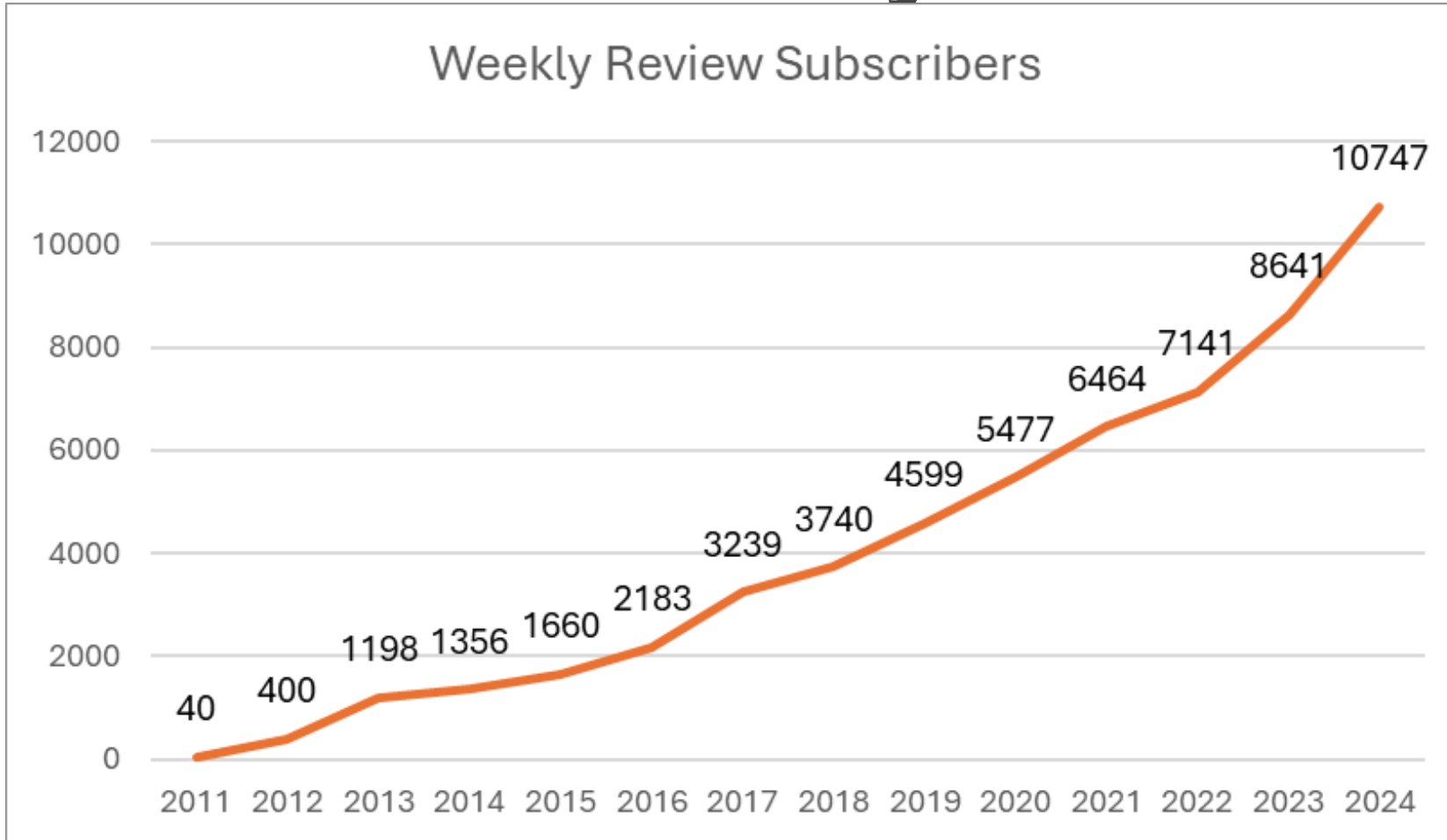
**DNR** Indiana Department of Natural Resources

**Bee the Inspector**  
Round Number 1



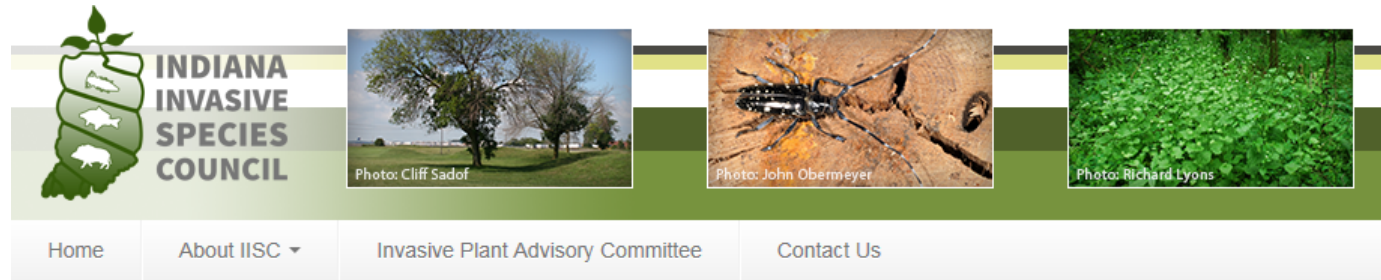
Click on the square containing the

# IDNR DEPP Weekly Review



Subscription link: <http://www.in.gov/dnr/entomolo>

# Forest Pest Outreach Survey Program (FPOSP)



## Invasive Species in Indiana

[Plants](#)

[Plant Pests & Diseases](#)

[Animal Diseases](#)

[Aquatics](#)

[BMP's](#)

Top Ten Best Management Practices for Invasive Species

## Forest Pest Outreach and Survey Project

Welcome to the Forest Pest Outreach and Survey Project (FPOSP) conducted in cooperation with the Indiana Department of Natural Resources and the USDA Animal Plant Health Inspection Service (APHIS).

Learn how to look for the top invasive forest insect pests of concern in Indiana with these powerpoints:

- [Emerald Ash borer \(EAB\)](#)
- [Asian Longhorned Beetle \(ALB\)](#)
- [Thousand Canker Disease of Black Walnut \(TCD\)](#)
- [Hemlock Wooley Adelgid \(HWA\)](#)

[Click to report suspected finds of invasive species](#)



## What's New

[Upcoming Meetings](#)

[Invasive Species Event Calendar](#)

[May 9 Agenda](#)

[Minutes from Past Meetings](#)

[Early Detection Rapid Response Conference PowerPoint](#)

[Click to report suspected finds of invasive species](#)



# Prohibited Species (312 IAC 18)

- (1) *Achyranthes japonica* (Japanese chaff flower).
- (2) *Ailanthus altissima* (tree of heaven).
- (3) *Alliaria petiolata* (garlic mustard).
- (4) *Alnus glutinosa* (black alder).
- (5) *Artemisia vulgaris* (mugwort).
- (6) *Arthraxon hispidus* (small carpgrass).
- (7) *Berberis thunbergii* (Japanese barberry).
- (8) *Carduus acanthoides* (spiny plumeless thistle).
- (9) *Carduus nutans* (musk thistle).
- (10) *Celastrus orbiculatus* (Asian bittersweet).
- (11) *Centaurea stoebe* (spotted knapweed).
- (12) *Cirsium vulgare* (bull thistle).
- (13) *Conium maculatum* (poison hemlock).
- (14) *Convolvulus arvensis* (field bindweed).
- (15) *Coronilla varia* (crown vetch).
- (16) *Dioscorea polystachya* (*oppositifolia*) (Chinese yam).
- (17) *Dipsacus fullonum* (common teasel).
- (18) *Dipsacus laciniatus* (cut-leaved teasel).
- (19) *Elaeagnus umbellata* (autumn olive).
- (20) *Euonymus fortunei* (wintercreeper).
- (21) *Euphorbia esula* (leafy spurge).
- (22) *Frangula alnus* (glossy buckthorn).
- (23) *Hesperis matronalis* (dame's rocket).
- (24) *Humulus japonicus* (Japanese hops).
- (25) *Lepidium latifolium* (pepperweed).
- (26) *Lespedeza cuneata* (*sericea* lespedeza).
- (27) *Ligustrum obtusifolium* (blunt leaved privet).
- (28) *Lonicera japonica* (Japanese honeysuckle).
- (29) *Lonicera maackii* (Amur honeysuckle).
- (30) *Lonicera morrowii* (Morrow's honeysuckle).
- (31) *Lonicera tatarica* (Tatarian honeysuckle).
- (32) *Lonicera x bella* (Bell's honeysuckle).
- (33) *Microstegium vimineum* (Japanese stiltgrass).
- (34) *Morus alba* (white mulberry).
- (35) *Phalaris arundinacea* (reed canarygrass).
- (36) *Phellodendron amurense* (Amur cork tree).
- (37) *Phragmites australis* subspecies *australis* (common reed).
- (38) *Polygonum perfoliatum* (mile-a-minute vine).
- (39) *Reynoutria japonica* (Japanese knotweed).
- (40) *Reynoutria sachalinensis* (giant knotweed).
- (41) *Reynoutria x bohemica* (Bohemian knotweed).
- (42) *Rhamnus cathartica* (common buckthorn).
- (43) *Vincetoxicum nigrum* (black swallow-wort).
- (44) *Vincetoxicum rossicum* (pale swallow-wort).



## Updates to List

- IPAC recently re-evaluated the list
- Some species changed from moderate to high level of invasiveness
- Data being evaluated and economic impact statement being developed
- DNR and NRC will determine when/what species should be added to list

## Evaluated as Highly Invasive

Burning bush ([Euonymus alatus](#))  
[Callery pear \(Pyrus calleryana\)](#)  
Chinese maiden grass ([Miscanthus sinensis](#))  
Highbush cranberry ([Viburnum opulus v. opulus](#))  
Wild parsnip ([Pastinaca sativa](#))  
Japanese hedge parsley ([Torilis japonica](#))  
Lesser celandine ([Ranunculus ficaria](#))  
Spreading hedge parsley ([Torilis arvensis](#))  
Moneywort ([Lysimachia nummularia](#))  
Sweet autumn clematis ([Clematis terniflora](#))  
Norway maple ([Acer platanoides](#))  
Fine Line Buckthorn ([Rhamnus fragula](#))

# Citizen participation

- Thousands of reports with exact locations reported by residents
- Spread Awareness and Education
- Options for assisting in the effort

**EDDMapS Report IN**  
Early Detection & Distribution Mapping System *and keep invasive species out!*

Home Report Sightings Distribution Maps Species Information Tools & Training My EDDMapS About

**What are Invasive Species?**  
Any species that is non-native to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health. These non-native species aggressively compete with and displace the associated flora and fauna communities.

BRING THE POWER OF EDDMAPS

**SICIM + NRCS =  
CISMA**  
(Cooperative Invasive Species  
Management Areas)

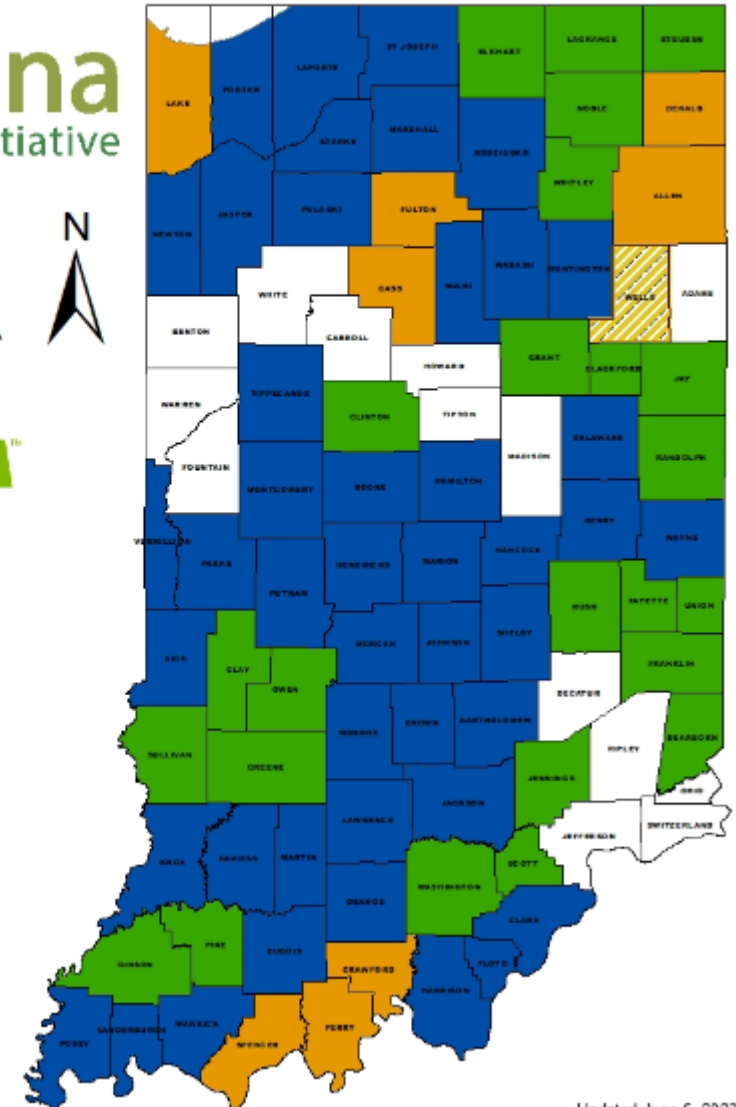
Current Indiana CISMAs (Cooperative Invasive Species Management Areas)

Counties Covered	CISMA Name	Contact Name	Contact Email	Website
1 Bartholomew	Blazing Star CISMA	Heather Shireman	<a href="mailto:heather.shireman@in.nacdn.net">heather.shireman@in.nacdn.net</a>	n/a
2 Brown	Brown County Native Woodlands Project (BCNWP)	n/a	<a href="mailto:info@bcnwp.org">info@bcnwp.org</a>	<a href="https://www.bcnwp.org/">https://www.bcnwp.org/</a>
3 Clark	Clark County Harmful Invasives Removal Project	Melanie Davis	<a href="mailto:melanie.davis@in.nacdn.net">melanie.davis@in.nacdn.net</a>	<a href="https://www.facebook.com/Clark-County-Harmful-Invasives-Removal-Project-108805070722400/">https://www.facebook.com/Clark-County-Harmful-Invasives-Removal-Project-108805070722400/</a>
4 Daviess & Martin	Daviess-Martin CISMA	Emily Finch	<a href="mailto:daviessmartin.cisma@gmail.com">daviessmartin.cisma@gmail.com</a>	<a href="https://www.facebook.com/Daviess-Martin-CISMA-262962797961644/">https://www.facebook.com/Daviess-Martin-CISMA-262962797961644/</a>
5 Dearborn	Dearborn Invasives Removal Team (DIRT)	Jennifer Hughes	<a href="mailto:jennifer.hughes@in.nacdn.net">jennifer.hughes@in.nacdn.net</a>	n/a
6 Delaware	Delaware County Invasive Plant Project (DIPP)	Laurynn Thieme, Becky Daugherty	<a href="mailto:lthieme@purdue.edu">lthieme@purdue.edu</a> , <a href="mailto:delcoswd@gmail.com">delcoswd@gmail.com</a>	<a href="https://www.facebook.com/groups/949884263">https://www.facebook.com/groups/949884263</a>
7 Dubois	Invasive Species Awareness Coalition of Dubois County (ISAC)	Emily Finch	<a href="mailto:emily.finch@in.nacdn.net">emily.finch@in.nacdn.net</a>	<a href="http://www.isacdc.org">http://www.isacdc.org</a>
8 Floyd	Floyd County Native Habitat Restoration Team	Gina Anderson	<a href="mailto:gmanders@purdue.edu">gmanders@purdue.edu</a>	<a href="https://www.facebook.com/Floyd-County-Native-Habitat-Restoration-Team-100632298104654/">https://www.facebook.com/Floyd-County-Native-Habitat-Restoration-Team-100632298104654/</a>
9 Greene	Greene County Invasive Management Alliance	Amber Slaughterbeck	<a href="mailto:amber@sicim.info">amber@sicim.info</a>	n/a
10 Hamilton	Hamilton County Invasives Partnership (HIP)	Claire Lane	<a href="mailto:claire.lane@hamiltoncounty.in.gov">claire.lane@hamiltoncounty.in.gov</a>	<a href="http://hcinvasives.org/">http://hcinvasives.org/</a>
11 Harrison	Harrison County Native Habitat Alliance (HCNHA)	Miranda Edge	<a href="mailto:medge@purdue.edu">medge@purdue.edu</a>	<a href="https://www.facebook.com/HCNativeHabitatAlliance/">https://www.facebook.com/HCNativeHabitatAlliance/</a>
12 Hendricks	Hendricks County - Invasive Management Cooperative (HC-IMC)	Bree Ollier	<a href="mailto:brianna.ollier@in.nacdn.net">brianna.ollier@in.nacdn.net</a>	<a href="https://hendrickscountyimc.wordpress.com/">https://hendrickscountyimc.wordpress.com/</a>
13 Henry	Henry County Removes Invasive Plant Species (HC-RIPS)	Helen Steussy	<a href="mailto:hsteussy@comcast.net">hsteussy@comcast.net</a>	<a href="https://www.facebook.com/HCRIPS/">facebook.com/HCRIPS/</a>
14 Jackson	Jackson County Invasive Partnership (JCIP)	Terry Ault	<a href="mailto:terry.ault@in.nacdn.net">terry.ault@in.nacdn.net</a>	<a href="https://www.facebook.com/groups/1424743453/">https://www.facebook.com/groups/1424743453/</a>
15 Jasper	Jasper County Invasives Initiative	Mandi Glanz	<a href="mailto:mandi@sicim.info">mandi@sicim.info</a>	<a href="https://www.facebook.com/jasper.cour.invasives/">https://www.facebook.com/jasper.cour.invasives/</a>
16 Johnson	Johnson County Native Plant Partnership	Blair Beavers	<a href="mailto:blair-beavers@iaswd.org">blair-beavers@iaswd.org</a>	<a href="https://www.facebook.com/JoCoNPP/">https://www.facebook.com/JoCoNPP/</a>
17 Knox	Knox County Cooperative Invasive Species Management Area	Will Drews	<a href="mailto:willem.drews@in.nacdn.net">willem.drews@in.nacdn.net</a>	<a href="http://knoxcountyswd.com/kccisma/">http://knoxcountyswd.com/kccisma/</a>
18 Kosciusko	Kosciusko Water & Woodland	Betsy Mihelbrink	<a href="mailto:rwihelbrink@hotmail.com">rwihelbrink@hotmail.com</a>	n/a

Indiana  
Invasives Initiative

Legend

- Formed and Active
- Organizing
- Limited Territory CISMA
- Future



# weed:wrangle® Indiana

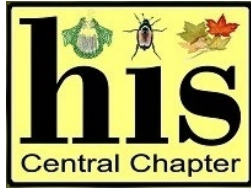
42,000 acres walked with landowners. over 1100 landowners working with us. 43 CISMAs representing 56 counties.  
178 Weed Wrangles in 2023. Over 400 since we started.





# DIVISION OF Entomology and Plant Pathology

## Indiana Invasives Initiative



# Spot anything new/ different contact the IDNR

- (866) NO EXOTIC ((866) 663-9684)
- Email [DEPP@DNR.IN.GOV](mailto:DEPP@DNR.IN.GOV)
- EDRR/ REPORT IN website or App

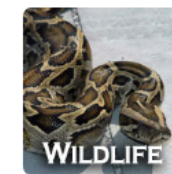
The screenshot shows the DNR website interface. The top navigation bar includes 'IN.gov', 'DNR Indiana Department of Natural Resources', and various service links like 'Calendar', 'Inn Reservations', 'State Park Permits', and 'Hunting/Fishing License'. The main content area features a large image of a green beetle with the text 'Division of Entomology & Plant Pathology' and a call to action: 'Help us combat the Emerald Ash Borer'. Below this are three columns of links: 'Quarantines & Regulated Materials' (listing Firewood, Emerald Ash Borer, Gypsy Moth), 'Apiary & Beekeeping' (listing Apiary News and Information, Swarm Lists), and 'Permits, Licenses, & Certificates' (listing Nursery Program, Phytosanitary, Firewood Compliance).

## EDDMapS **Report IN**

Early Detection & Distribution Mapping System *and keep invasive species out!*

- Home
- Report Sightings**
- Distribution Maps
- Species Information
- Tools & Training
- My EDDMapS

Click on the type of species you would like to report.



**Report Invasive  
Plants and Animals  
in Indiana**

**Report IN**

Report Invasive at  
**EDDMaps.org/Indiana**

Report Invasive at  
Great Lakes Early Detection System

# What's next?

