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United States Department of Agriculture
Animal Plant Health Inspection Service
Plant Protection and Quarantine
USDA APHIS PPQ

Safeguarding American Agriculture



Kate Aitkenhead
State Plant Health Director
CT/MA/RI




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PPQ Programs and Response

Responses and Program Highlights in 2020

- Ralstonia race 3 biovar 2
- Asian Giant Hornet (not in New England, but a popular inquiry topic in 2020)
- Unsolicited Seeds from China
- Spotted Lanternfly
- Emerald Ash Borer Deregulation

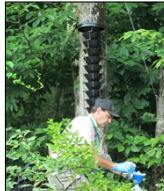

Asian Giant Hornet, photos courtesy Washington State Department of Agriculture

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Overview:

- PPQ Programs and Response
- PPQ Pest Detection Efforts Overview
- PPQ 2020 Survey Results
- PPQ 2021 Survey Plans
- Spotted Lantern Fly
- Pest Reporting & Outreach

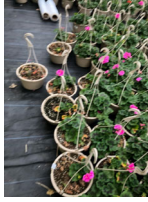
Credit: PA Dept. of Ag

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Ralstonia race 3 biovar 2

- ❖ Introduced into greenhouses in April 2020 through infected geraniums
- ❖ 3 phases in CT, MA, and RI
 - ❖ Pink Flare- 21 locations
 - ❖ Pink Salmon- 8 locations
 - ❖ Final phase- 19 locations
- ❖ Declared eradicated in June 2020



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PPQ Pest Detection Continuum

Port Inspections
Domestic Partnerships

PPQ CAPS PPA 7721

Emergency Programs

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Unsolicited Seeds from China

- ❖ eCommerce brushing scam
- ❖ Over 2000 reports in MA, CT, and RI
- ❖ Mostly common flower and vegetables seeds
- ❖ Did find some pests, federal noxious weed seed, and diseases
- ❖ PPQ is working with eCommerce and partners to close the pathway









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Emerald Ash Borer

- ❖ Deregulated on 01/14/2021
- ❖ 2002-2020: 35 states with infestations
- ❖ 2021- Shift to focus on biocontrol
- ❖ MA, CT, RI all have active biocontrol release programs

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PPQ Pest Detection Efforts

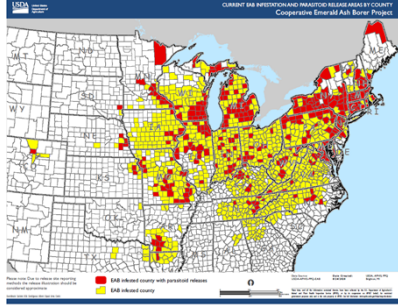
Early Pest Detection Surveys (PPQ, CAPS, PPA 7721)

- Multi-pronged strategy to accomplish goals:
 - ❖ Have a structured, transparent assessment process to identify pest threats.
 - ❖ Develop scientifically sound pest diagnostics and survey protocols.
 - ❖ Provide standardized survey materials (traps, lures, etc.)
 - ❖ Ensure that data collected is valid and of high quality.
 - ❖ Provide notification of significant pest detections through established protocols.

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Emerald Ash Borer- Biocontrol releases



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PPQ 2020 Surveys (CT/MA/RI)

Forest Pest Survey

Sites: CT-30/ MA-30/ RI-14

3 traps per site:

- Lindgren Funnel Trap baited with UHR Ethanol
- Crossvane Panel Trap baited with *T. campestris* lure
- Crossvane Panel Trap baited with UHR Ethanol




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PPQ Pest Detection Efforts

Early Pest Detection Surveys (PPQ, CAPS, PPA 7721)

- Focus on the **early detection** of exotic plant pests
 - ❖ Pests not yet present in the United States or of very limited distribution, and
 - ❖ Likely to have a high impact if established in terms of environmental or economic consequences
- Focus on **exotic pests**
 - ❖ Not native, widely distributed, or established



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PPQ 2020 Surveys (CT/MA/RI)

Forest Pest Survey


Target Locations: Importers receiving SWPM, Industrial areas, Distribution centers, ports

Target Hosts: Oak, Maple, Mixed Decidous

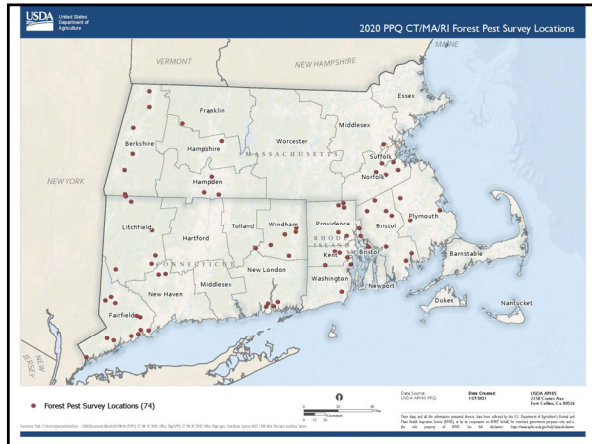
Target Pests:

- Miscellaneous bark beetles & Wood borers (Ethanol)
- *Trichoferus campestris*, Velvet Longhorned Beetle

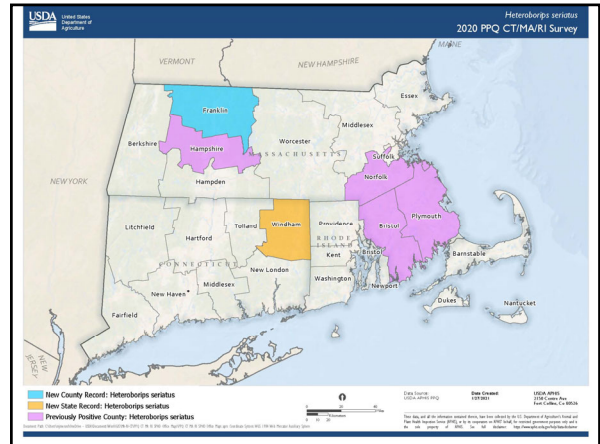
Survey Period: April 24 – September 30



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PPQ 2020 Surveys (CT/MA/RI) Detections

Heteroborrips seriatus: SE Asian Ambrosia Beetle

- ❖ Native to China, Russia, SE Asia
- ❖ Polyphagous
- ❖ 2.5-2.9mm long, dark brown/orange body
- ❖ 1st detected in MA in 2005 (1st US Record)



Rachel Osborn, Southeast Asian Ambrosia Beetle ID, USDAAPHIS PPQ, Bugwood.org


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PPQ 2020 Surveys (CT/MA/RI) Detections

Scolytus schevyrewi: Banded Elm Bark Beetle

- ❖ Native to China, Russia, SE Asia
- ❖ Ulmus, Prunus, Malus
- ❖ Vectors Dutch Elm Disease
- ❖ 3.2-4.2mm long, reddish brown body, banded
- ❖ 1st detected in CO & UT in 2003, widespread U.S.; previously detected in CT (2007, 2019) & RI (2014)



Joseph Benzel, Screening Aids, USDAAPHIS PPQ, Bugwood.org



Whitney Cranshaw, Colorado State University, Bugwood.org


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PPQ 2020 Surveys (CT/MA/RI) Detections

Heteroborrips seriatus: SE Asian Ambrosia Beetle

- ❖ CT- 1st State Record in Windham Co.
- ❖ MA- New County: Franklin Co.
- ❖ MA- Hampshire, Franklin, Norfolk, Plymouth, Bristol Co. also positive



Rachel Osborn, Southeast Asian Ambrosia Beetle ID, USDAAPHIS PPQ, Bugwood.org


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PPQ 2020 Surveys (CT/MA/RI) Detections

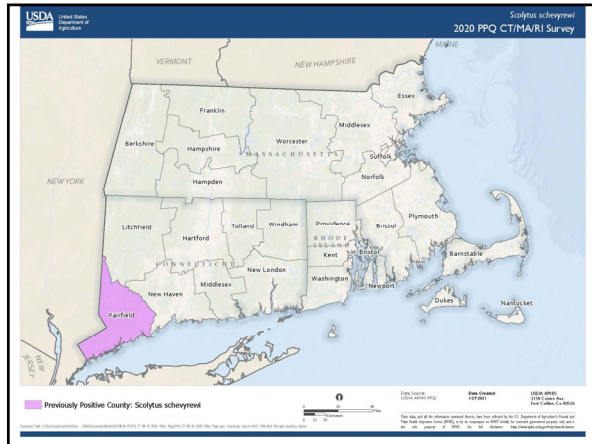
Scolytus schevyrewi: Banded Elm Bark Beetle

- ❖ CT- Fairfield Co. positive

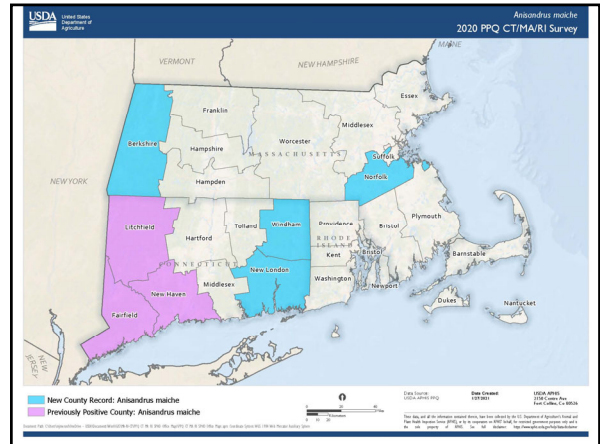


Joseph Benzel, Screening Aids, USDAAPHIS PPQ, Bugwood.org

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PPQ 2020 Surveys (CT/MA/RI) Detections

Anisandrus maiche: Ambrosia beetle

- ❖ Native to Asia
- ❖ Polyphagous
- ❖ Approx. 2mm long, dark brown body
- ❖ 1st detected in PA in 2005; limited distribution in U.S. 1st detected in CT in 2017; 1st detected in MA in 2019



Rachel Osborn, Southeast Asian Ambrosia Beetle ID, USDA APHIS PPQ, Bugwood.org


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PPQ 2020 Surveys (CT/MA/RI) Detections

Trichoferus campestris: Velvet Longhorned Beetle

- ❖ Native to Asia, Russia
- ❖ Polyphagous: Apple, Mulberry, Birch, Willow
- ❖ Feeds on both living and dry wood
- ❖ 11-20mm long, dark brown to brownish orange body
- ❖ 1st detected in UT in 2010; widespread distribution in U.S.



Hanna Royals, Screening Aids, USDA APHIS PPQ, Bugwood.org


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PPQ 2020 Surveys (CT/MA/RI) Detections

Anisandrus maiche: Ambrosia beetle

- ❖ MA- New Counties: Berkshire, Norfolk
- ❖ CT- New Counties: Windham, New London
- ❖ CT- Litchfield, New Haven, Fairfield Co. also positive



Rachel Osborn, Southeast Asian Ambrosia Beetle ID, USDA APHIS PPQ, Bugwood.org


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PPQ 2020 Surveys (CT/MA/RI) Detections

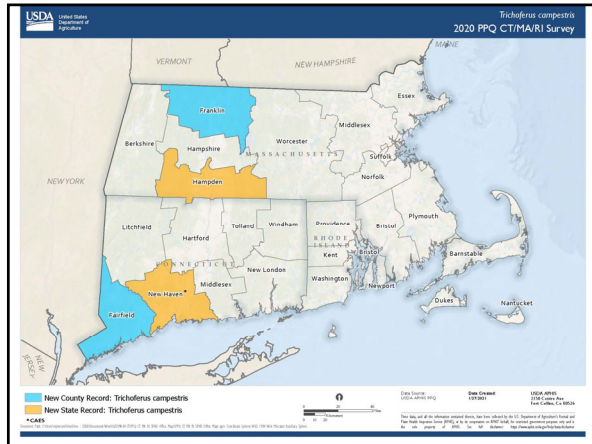
Trichoferus campestris: Velvet Longhorned Beetle

- ❖ CT- 1st State Record in New Haven Co. *CAES CAPS Trap.
- ❖ CT- New County: Fairfield
- ❖ MA- 1st State Record in Hampden Co.
- ❖ MA- New County: Franklin



Hanna Royals, Screening Aids, USDA APHIS PPQ, Bugwood.org

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Poll Question


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PPQ 2020 Surveys (CT/MA/RI) Detections

Xylotrechus pyrrhoderus: Grape Borer

- ❖ Native to China & Japan
- ❖ NPAG (New Pest Advisory Group) evaluating: hosts, life cycle, detection methods, pest potential and status in native range, etc.
- ❖ PPQ will delimit area of the find to determine if a population exists in 2021
- ❖ **New U.S. Record- Hampden Co. MA (determined 12/2020)**



Paul Langlois, Museum Collections, USDAAPHIS PPQ, Bugwood.org

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PPQ 2020 Surveys (CT/MA/RI)


Spotted Lanternfly Visual Survey
 Sites: CT-500/ MA-500/ RI-250

Target Locations: areas near transportation corridors, large railyards, distribution centers, areas within predicted spread

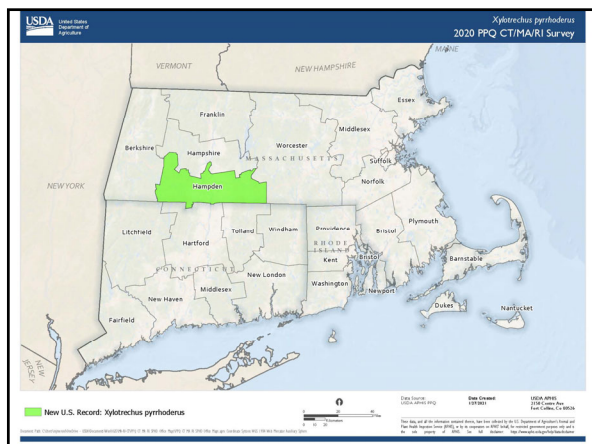
Target Host: *Ailanthus altissima*, Tree of Heaven

Method: Visually survey 1 or more trees at each location using binoculars.

Survey Period: Aug – October, when Adults would be present.



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PPQ 2020 Surveys (CT/MA/RI)

Spotted Lanternfly Visual Survey

🎵 Now this is a story all about how my life got flipped turned upside down and I'd like to take a minute, just sit right there.....(DJ Jazzy Jeff & The Fresh Prince) 🎵

- Surveys were delayed 2 weeks due to Covid-19 and didn't begin until late August, early September.
- PHSS, Eric Chamberlain visually detected an SLF population in Fairfield, Co on September 11, 2020.
- Concurrently, both CT & MA SPROs were dealing with multiple public reports and trace-forwards from shipments from known SLF-infested areas.


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PPQ 2020 Surveys (CT/MA/RI)

Spotted Lanternfly Response

- Set up visual delimitation survey around detection location to determine the extent of the population.
- Redistributed limited staff to assist in CT & MA report delimitations.
- Participated in multi-agency SLF Response Groups in CT & MA.
- Deployed SLF Circle Traps near SLF reports.
- Multi-agency operations hampered by Covid-19 protocols.




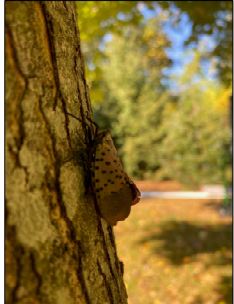
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PPQ 2020 Surveys (CT/MA/RI)

Spotted Lanternfly Response

- ❖ CT- 1st State Record in Fairfield County
- ❖ Detected in 3 towns

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PPQ 2020 Surveys (CT/MA/RI)

Spotted Lanternfly Response

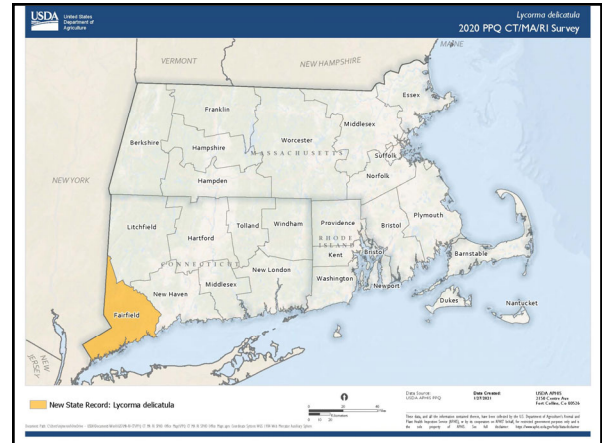
State	# of Visual Surveys	# of Positives	# of Negatives
CT	1175	19	1156
MA	576	0	576
RI	45	0	45

State	# of Circle Traps	# of Positives	# of Negatives
CT	29	1	28
MA*	1	0	1

*MDAR also deployed circle traps.



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PPQ 2020 Surveys (CT/MA/RI)

Spotted Lanternfly Response

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PPQ 2020 Surveys (CT/MA/RI)

Spotted Lanternfly Research Trapping

Behavioral Trapping (Joe Francese,CPHST)

Sites: CT-6/MA-4

- Comparison of 3 traps: Bug Barrier, Circle Trap-Jar, Circle Trap- bag
- All baited with Methyl Salicylate lures
- Collect trap contents every 2 weeks.

Survey period: June- October

- All traps were negative


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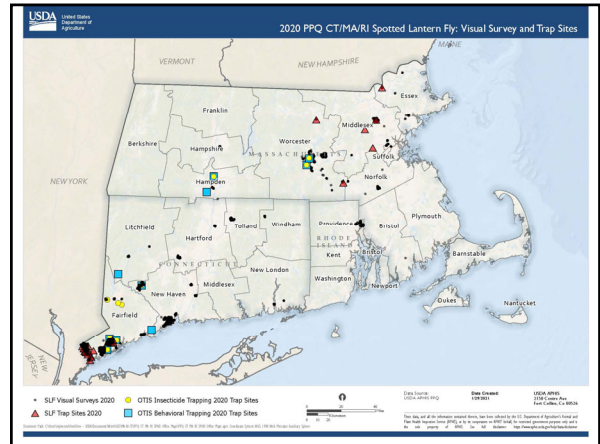
PPQ 2020 Surveys (CT/MA/RI)

Spotted Lanternfly Research Trapping

Behavioral Trapping (Joe Francese,CPHST)



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PPQ 2020 Surveys (CT/MA/RI)

Spotted Lanternfly Research Trapping

Insecticidal (Sentinel) Trees (Phil Lewis,CPHST)

Sites: CT-7/MA-3

- Applied Transect basal spray to single Ailanthus tree trunk up to 5ft.
- Placed a plastic tub around the base of the tree and monitored every 2-3 weeks.

Survey period: June- October

- All traps were negative

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Poll Question


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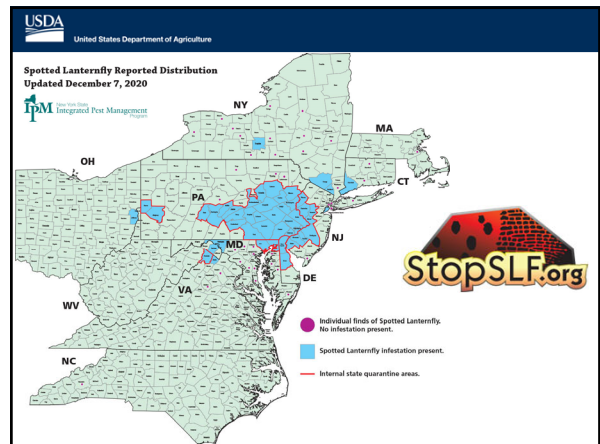
PPQ 2020 Surveys (CT/MA/RI)

Spotted Lanternfly Research Trapping

Insecticidal (Sentinel) Trees (Phil Lewis,CPHST)



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PPQ 2021 Surveys (CT/MA/RI)

Forest Pest Survey

Sites: CT-25/ MA-25/ RI-15

2-3 traps per site:

- Lindgren Funnel Trap baited with UHR Ethanol, UHR a-pinene, & monochamol
- Crossvane Panel Trap baited with UHR a-pinene, geranyl acetol, & spruce blend lure






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PPQ 2021 Surveys (CT/MA/RI)

Forest Pest Survey: Crossvane Panel Targets

Tetropium castaneum

Tetropium fuscum

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PPQ 2021 Surveys (CT/MA/RI)

Forest Pest Survey

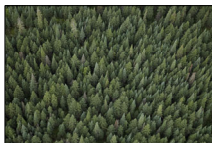
Target Locations: Importers receiving SWPM, Industrial areas, Distribution centers, ports

Target Hosts: Spruce, Pine, Fir, Mixed Conifers

Survey Period: April -Sept

Target Pests:

- *Hylobius abietis*, *Monochamus alternatus*, *Monochamus urussovii* (Lindgren Funnel Trap)
- *Tetropium fuscum*, *Tetropium castaneum* (Crossvane Panel Trap)



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PPQ 2021 Surveys (CT/MA/RI)


Xylotrechus Survey

Survey Area: Immediate vicinity of detection

Survey Methods:

- Crossvane Panel Trap with experimental lures.
- Visual survey around detection point.

Survey Period: May-Sept


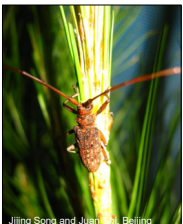



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PPQ 2021 Surveys (CT/MA/RI)

Forest Pest Survey: Lindgren Trap Targets

Monochamus urussovii

Hylobius abietis

Monochamus alternatus

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PPQ 2021 Surveys (CT/MA/RI)

Spotted Lanternfly Visual Survey

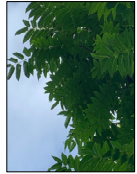

Sites: CT-undetermined/ MA-500/ 350

Target Locations: areas near transportation corridors, large railyards, distribution centers, areas within predicted spread, previous reports

Target Hosts: *Ailanthus altissima*, Tree of Heaven, Black Walnut, Cherry, Maple, Oak, Black Locust

Method: Visually survey 1 or more trees at each location using binoculars.

Survey Period: Primarily July – October, when late instar nymphs and Adults would be present

Credit: itchydogimages

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PPQ 2021 Surveys (CT/MA/RI)

Spotted Lanternfly Visual Survey

Life Cycle:

Photos: egg mass, late nymph, and adult courtesy of Penn. Dept. of Ag.; early nymph courtesy of Miriam Cooperband (USDA-APHIS-PPQ-CPHST).

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Reporting pests of concern

firstdetector.org

Report a pest:
<https://www.firstdetector.org/report-form>

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PPQ 2021 Surveys (CT/MA/RI)

Spotted Lanternfly Visual Survey

Ailanthus Identification: Fast growing, found in disturbed soils

- ❖ Bark smooth in young trees
- ❖ Mature trees have rough striated bark
- ❖ Leaves pinnately compound with 11-41 leaflets
- ❖ Leaflets alternate, 1-3 ft. long
- ❖ Large "bumps" on leaflet teeth near base

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Report a pest in MA

<https://massnrc.org/pests/pestreports.htm>

Need to report a pest sighting? Choose from the list below:

- Ailanthus (tree of heaven)
- Emerald ash borer
- Japanese knotweed
- Millipede
- Spotted lanternfly
- Winter moth
- Other insects, pathogens, and invasive plants

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Poll Question

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Report a pest in CT

<https://portal.ct.gov/CAES>

Most Popular

- Spotted Lanternfly - SLF
- WETU/US Plant Science Day 2020 Wednesday August 5th
- CAES Seminar Series
- Events
- Information on Submitting Ticks
- Inspections and Regulations
- Job Opportunities
- Podcasts and Videos
- Press Releases
- Soil Testing Offices Instructions
- State of Connecticut Mosquito Tagging and Arbovirus Testing Program
- Weather Data

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Report a pest in RI

<http://www.dem.ri.gov/programs/agriculture/pests.php>

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PPQ Pest Detection Efforts

Port Inspections Domestic Partnerships → **PPQ CAPS PPA 7721 Reporting** → Emergency Programs

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What can you do?

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Report Suspect Pests

USDA APHIS PPQ
866-702-9938
<http://hungrypests.com/what-you-can-do/>

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Early Detection, Outreach and Awareness

<https://www.aphis.usda.gov/aphis/resources/pests-diseases/hungry-pests>

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