

2018 Invasives on the Radar

Trilby Libhart

Botany & Weed Specialist

Pennsylvania Department of Agriculture





Poison Hemlock (*Conium maculatum*)



- Biennial, herbaceous plant
- Quickly colonizes disturbed habitats, roadsides, field edges, fencerows and ditches
- Native to Africa, Asia and Europe-brought to U.S. as an ornamental
- All parts of the plant are poisonous to mammals-especially the leaves in the spring and unripe seeds
- Contact with the plant's juices can cause dermatitis. Inhalation of debris may cause respiratory problems.

Identification of Poison Hemlock

- Leaves are shiny green and lace or fern like
- Stems are hollow, ridged with reddish to purple spotting
- Flowers are small, white and in umbels and begin to show in late spring
- Can reach a height of 8-10 in the second year of growth
- Seeds are in ridged, flattened capsules
- One plant can produce up to 40,000 seeds
- Seeds are viable up to 6 years





1st year growth
(rosette)



2nd year growth
(flowering)

Appearance in early summer



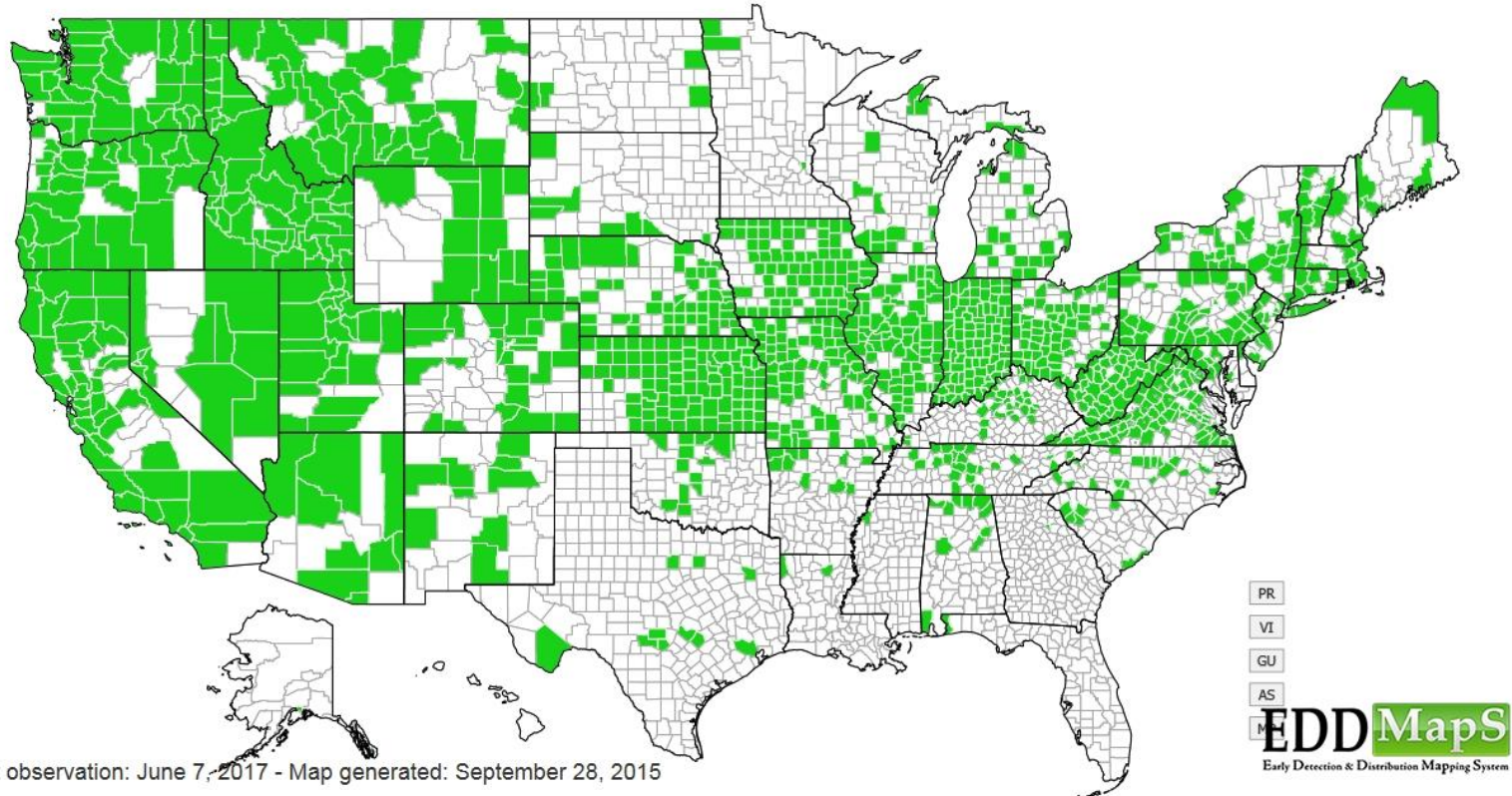
Appearance in mid summer



Always wear protective clothing and gloves, and/or masks (if mowing) to protect yourself from the effects of poison hemlock



Conium maculatum



Current Range of Poison Hemlock

Control of Poison Hemlock

Mechanical Control

- Young plants can be dug or pulled out of the ground
- Be sure to remove the root
- Wear appropriate protective clothing
- Throw in trash. Do not compost

Chemical Control

- Most effective when done in the mounding stage of growth and/or before flower
- Plants that are flowering when treated may still produce seed
- Monitor area for new growth
- The label is the law

Giant Hogweed

- PDA has had an active program since the late 1990's
- Originally over 550 sites throughout the state
- 2018-less than 40 sites present in the state
- Primarily in the top NW counties- Erie area



Spotted lanternfly (*Lycorma delicatula*)





The Pest:

- The spotted lanternfly is native to Asia and is found in China, India, Vietnam
- It was introduced to South Korea and Japan
- In South Korea, it is considered an invasive pest and impacts grapes and peaches
- Found in eastern Berks County in September of 2014

New Invasive Pest in Pennsylvania



- The spotted lanternfly is recorded on over 65 different plants including hardwoods, ornamental trees, fruit trees, vines
- In Pennsylvania feeding has been recorded on: Ailanthus, Salix, Vitis, Acer, Styrax, Populus, Prunus along with newer plants identified including hops, blueberry, horseradish, sweet basil, walnut, red oak, oregano, oriental bittersweet...(milkweed?)
- Spotted lanternfly narrows its host range before mating to the preferred host-Ailanthus altissima



Egg Laying:
Late September- early December



Eggs:
October- June



Hatch and First Instar:
Mid May- June



Adult:
Mid July-December

Life Cycle:
One
Generation
per Year



Second Instar:
Late May- July



Fourth Instar:
July - September



Third Instar:
Late June- Mid-July



Eggs- overwinter in a foam covered mass

Egg masses are laid on trees and many other surfaces and are often hidden.

Egg masses have on average between 30-50 eggs and can be laid on trees or any smooth surface





There are four instars, with the early instars appearing black with white spots and turning red as later instar nymphs.

Immature stages hatch out in May

Immature Lanternfly travel up
and down trees and other plants
every day.

They are also very active hoppers.





Adults begin to appear in late summer to feed, mate, and lay eggs

In South Korea, females lay eggs twice before dying.

Adults strongly prefer Tree-of-Heaven in the fall



Impacts of spotted lanternfly include adults clustering, swarming and honeydew accumulation



Impacts also include damage to grapes, hops, orchards, and the hardwood and nursery industries



Damage comes from feeding waste (honeydew) which turns into sooty mold





In 2017 damage reported on
basil, blueberry, cucumber and
horseradish





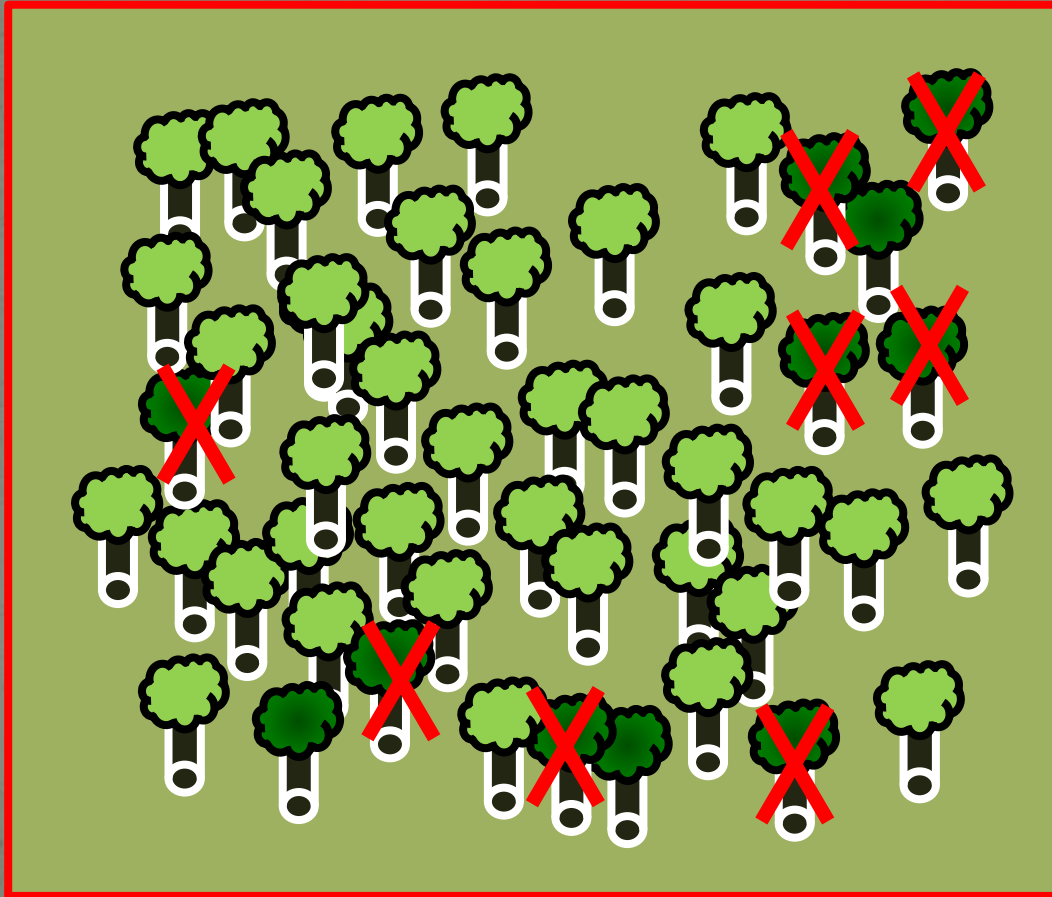
Removal-Trap Tree Method

Most *Ailanthus* are removed or killed with herbicide

Remaining trees are treated with insecticide



Trap Tree Method of Control

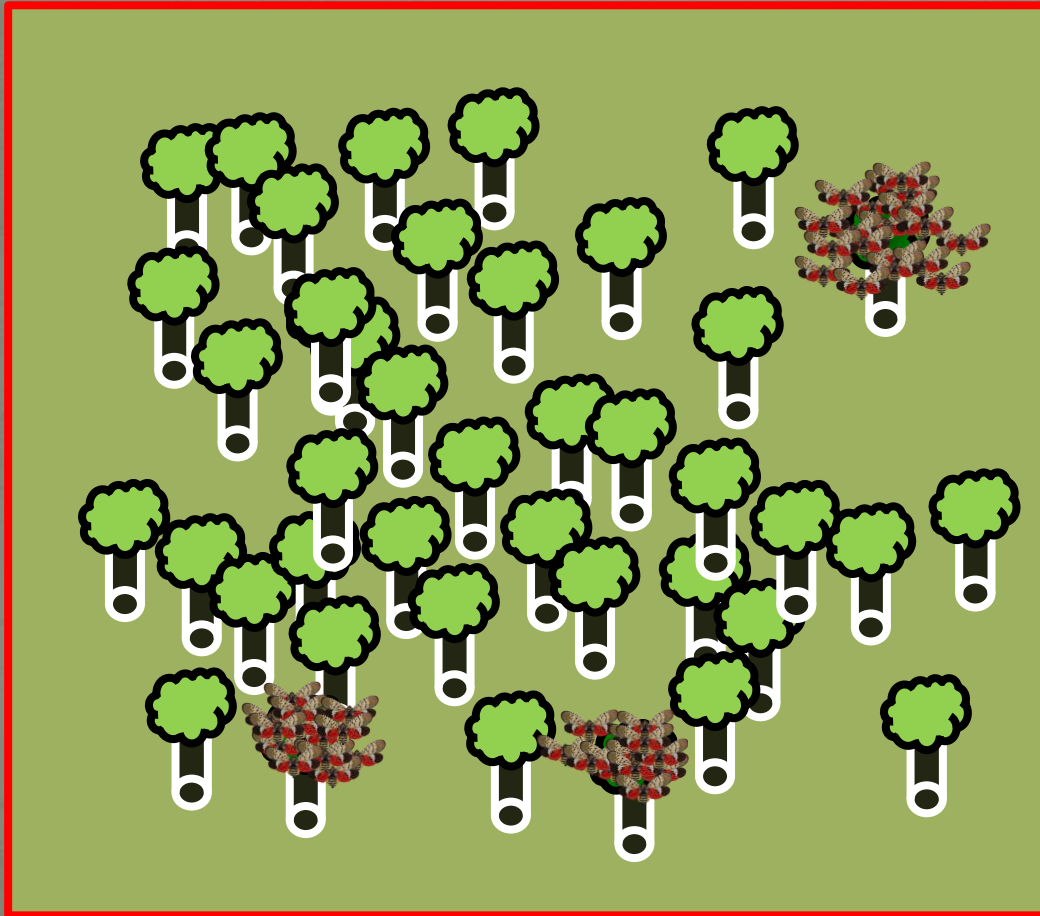


Host
Reduction

Remove most
Ailanthus

Leave a few
male trees and
treat with
systemic
insecticide

Trap Tree Method of Control



July-September
4th Instar and
Adults

SLF
concentrates to
feed on Tree of
Heaven with
insecticide and
die

Impact on Adults is Dramatic



CURRENT SPOTTED LANTERNFLY NUMBERS 2018

10,589 Trees Banded, Killing 2,008,695 Lycorma

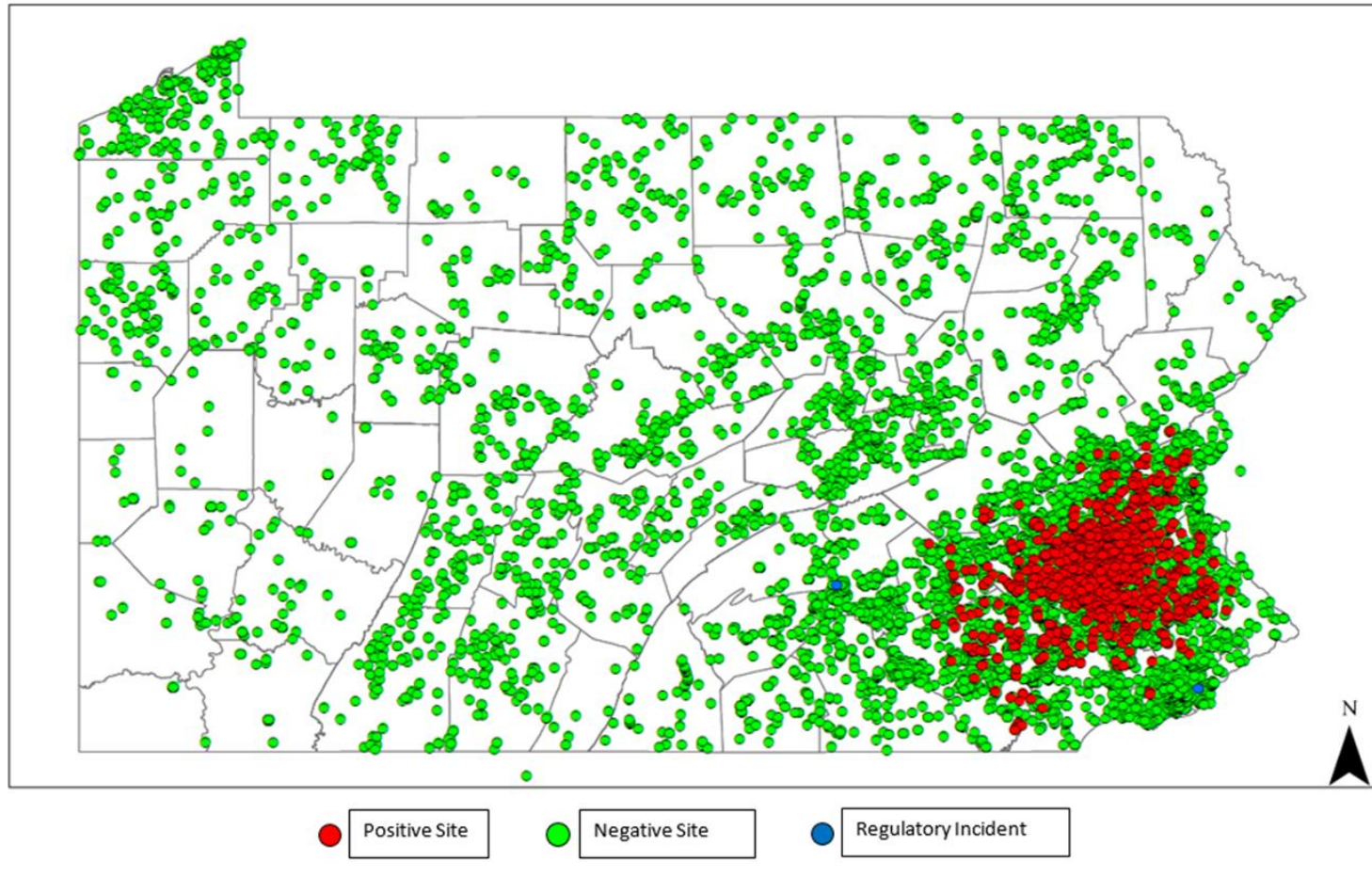
Egg mass scraping killed 1,824,640 Lycorma

53,683 Ailanthus killed / 682 Trap trees
established



So where are they now?

2014 -- 2017 Lycorma Detection Survey Results through 14 December 2017

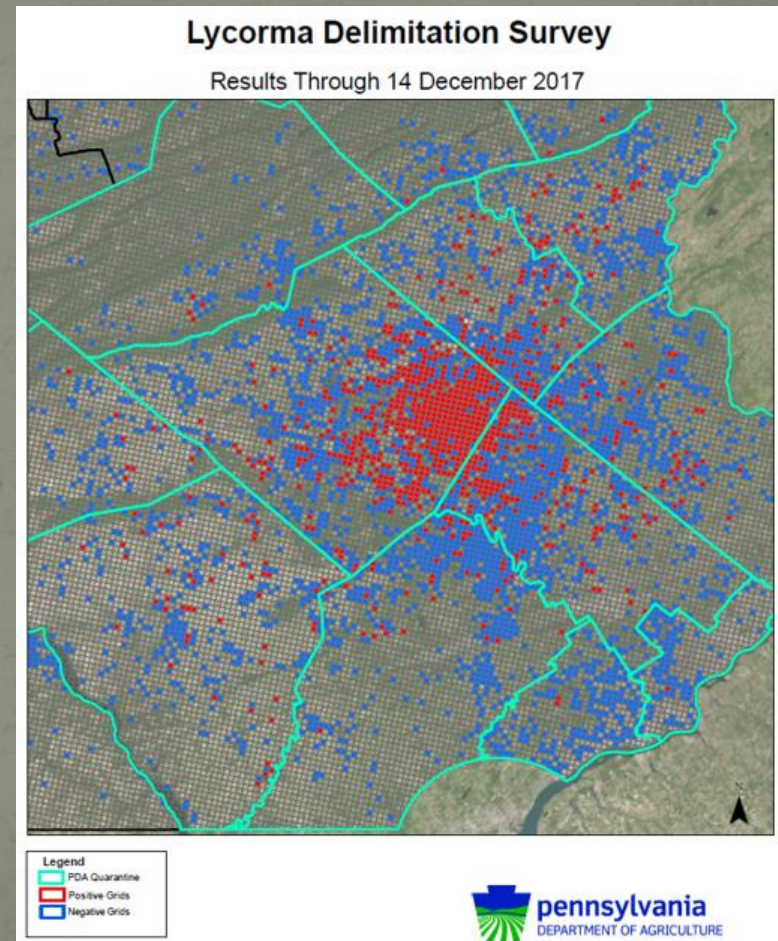


So where are they now?

1,742 properties known to be Infested

Public reports aid new detections, many are single specimens

Spread seems linked to hitchhiking specimens



Spotted Lanternfly are Excellent Hitchhikers...



SPOTTED LANTERNFLY: EXPERT HITCHHIKER
always check your vehicle before leaving the quarantine area!



Look before you leave!

For More Information on Spotted Lanternfly

Pennsylvania Department of Agriculture

Animals Business & Industry Consumer Protection Food Plants, Land & Water

About Blog Online Services Workforce Development Newsletter Sign-Up

HOT TOPICS



[Agriculture Education Report](#)
[Milk Marketing Board Petition](#)
[Dairy Resources](#)
[Economic Impact Analysis](#)
[Pollinator Protection Plan](#) 
[Spotted Lanternfly](#)
[Restaurant Inspection Database](#)
[Chesapeake Bay Watershed Improvement Plan](#)
[Amusement Ride Inspection](#)

PRESS RELEASES



[Visitors Get Farm-to-Cone Experience on First-Ever Ice Cream Trail](#)
[Agriculture Secretary Reminds Pennsylvanians High Temperatures Can Cause Heat Stress in Livestock, Pets](#)
[Pennsylvania Prioritizes Critical Investments in PA's Agriculture Industry](#)
[Planting The Seed Tour Pitches](#)

AVIAN INFLUENZA



[Backyard Flock Plan \(PDF\)](#)
[Commercial Flock Plan \(PDF\)](#)
[Biosecurity Plan Principles \(PDF\)](#)
[Premises Registration Form](#)
[Poultry Biosecurity Poster \(PDF\)](#)

For more information on Avian Influenza prevention and information on the current situation go [Here](#) 

<http://www.agriculture.pa.gov>

What to do if you find Spotted Lanternfly?

If you see egg masses, scrape them off, double bag them and throw them away. You can also place the eggs into alcohol or hand sanitizer to kill them. Please report all destroyed egg masses on our website.

Collect a specimen: Specimens of any life stage can be turned in to the Pennsylvania Department of Agriculture's Entomology lab for verification. Submit samples with the Entomology Program Sample Submission Form.

Take a picture: A photograph of any life stage (including egg masses) can be submitted to Badbug@pa.gov.

Report a site: If you can't take a specimen or photograph, call the Automated Invasive Species Report Line at 1-888-4BAD-FLY (1-888-422-3359) and leave a message detailing your sighting and contact information.



Be the first to know. Sign up for spotted lanternfly news, updates, and alerts.

Email Address

SIGN UP!

Lycorma delicatula, commonly known as the Spotted Lanternfly (SLF), is a new invasive insect that has spread throughout southeastern Pennsylvania since its discovery in Berks County in 2014. SLF presents a significant threat to Pennsylvania agriculture, including the grape, tree-fruit, hardwood and nursery industries, which collectively are worth nearly \$18 billion to the state's economy.

How to Identify Spotted Lanternfly

To manage a spotted lanternfly infestation, it's important to accurately identify the pest, and that means knowing what it looks like during its life stages — including the eggs.

Spotted lanternfly **adults** are about 1 inch long and a half inch wide with wings folded. When at rest, they have grayish wings with black spots, and the tips are black with a dense series of lighter gray crossveins. When startled or flying, the insect will display hind wings that have contrasting patches of red and black, partially separated by a white band. The legs and head are black, and the abdomen is yellow with broad black bands. One of a group of insects known as planthoppers, the lanternfly is a weak flyer but a strong and quick jumper.

Nymphs develop through four stages called instars, all of which are wingless and incapable of flight. The first three nymphal stages are black with white spots. Fourth instars develop red patches on the body and are over 1/2 inch long.

Newly laid spotted lanternfly **egg masses** have a gray, mud-like covering, which can become dry and cracked over time. Older egg masses may lose their covering and appear as four to seven columns of seed-like eggs, 30-50 eggs in total, approximately one inch long.

Did you find
spotted lanternfly?

Report a sighting

<https://extension.psu.edu/spotted-lanternfly>

Have you seen a Spotted Lanternfly? Let's check!

Egg Masses: September – May



Egg Mass Description >

Yes, this is it!

Thank you.....

Trilby Libhart

tlibhart@pa.gov

717.787.7204

