

- Spotted Lanternfly

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Description

[Bureau of Plant Industry]

SPOTTED LANTERNFLY

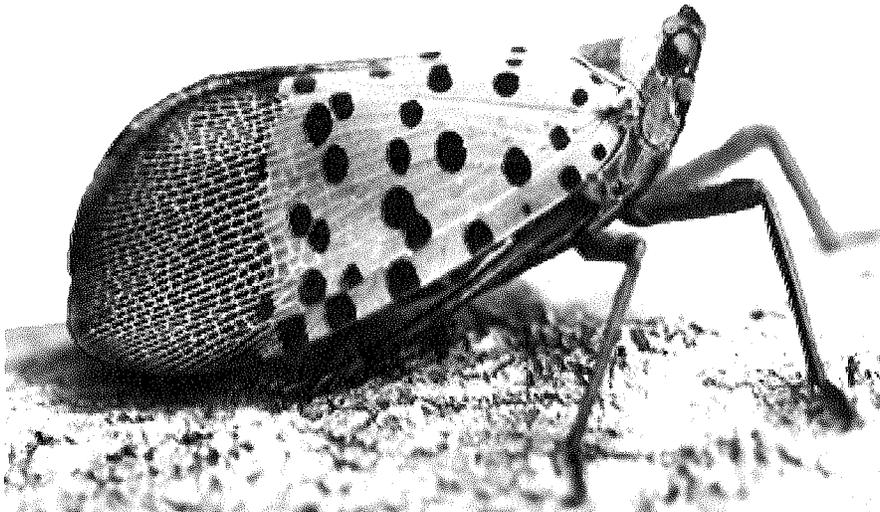


Figure 1 Lateral view of an adult *Lycorma delicatula*
Photograph by Lawrence Barringer, Pennsylvania Department of Agriculture

Description

On Sept. 22, 2014, the Pennsylvania Department of Agriculture, in cooperation with the Pennsylvania Game Commission, confirmed the presence the Spotted Lanternfly (*Lycorma delicatula*, (WHITE)) in Berks County, as part of its responsibility to identify plants/weeds, insects and mites, nematodes, fungi, bacteria and viruses that impact Pennsylvania's natural resources, flora and economy. . On Nov. 1, 2014, the Commonwealth announced a quarantine with the intent to restrict the movement of this pest. This is the first detection of Spotted Lanternfly in the United States. The Spotted Lanternfly is a planthopper from Asia, specifically found in China, Korea, India, Vietnam, and parts of eastern Asia. It is an invasive insect in Korea where it was introduced in 2006 and since has attacked 25 plant species which also grow in Pennsylvania.. In the U.S. it has the potential to greatly impact the grape, fruit tree and logging industries. This pest attacks many hosts including grapes, apples, pines, stone fruits and more than 70 additional species. Early detection is vital to the effective control of this pest and the protection of PA businesses and agriculture.

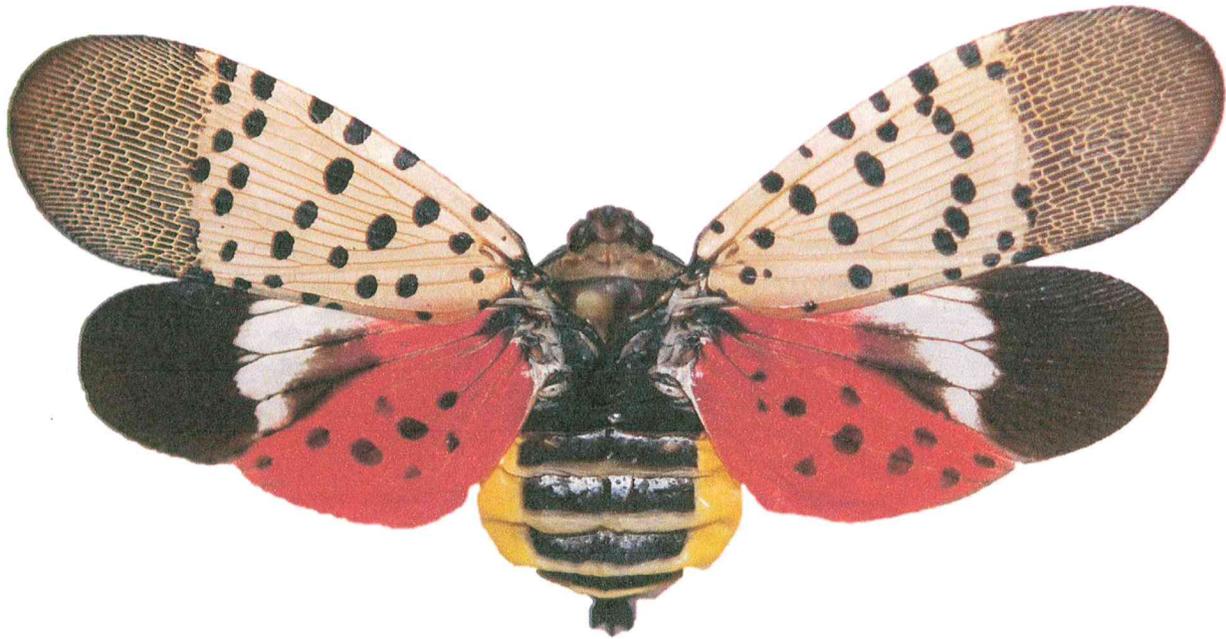


Figure 2 *Lycorma* adult with wings spread showing colorful hind wing
Photograph by Holly Ragusa, Pennsylvania Department of Agriculture

Beginning in late April to early May nymphs will hatch from egg masses laid on smooth bark, stone, and other vertical surfaces. Nymphs will complete four immature stages. The first stage (3) is black with white spots and wingless. As it grows, the Spotted Lanternfly will start to develop red patches (4) in addition to the white spots. Nymphs spread from the initial site by crawling and feeding on woody and non-woody plants.



Nymphal *Lycorma delicatula*
Taken from Park et al. 2009

Adults can be seen as early as July and take on a much different appearance. Adults at rest have a black head and grayish wings with black spots. The tips of the wings are a combination of black rectangular blocks with grey outlines. When startled or flying the Spotted Lanternfly will display hind wings that are red and black blocks with a white stripe dividing them. The red portion of the wing is also adorned with black spots. The abdomen is also a yellowish white with bands of black on the top and bottom. While a poor flyer, the Spotted Lanternfly is a strong jumper. In the fall, adults switch hosts to focus on Tree of Heaven (*Ailanthus altissima*). This introduced invasive tree is the preferred host that the adults feed on in the fall and is

used preferentially for egg laying. However, Tree of Heaven is not the only tree or surface the Spotted Lanternfly will lay eggs upon – any smooth trunked tree, stone or vertical smooth surface can provide a potential host for eggs masses. Manmade items like vehicles, campers, yard furniture, farm equipment or any other items stored outside are suitable sites for egg laying. Egg laying begins in late September and continues up through the onset of winter.

This pest poses a significant threat to the state's more than \$20.5 million grape, nearly \$134 million apple, and more than \$24 million stone fruit industries. Pine and hardwood logging in Pennsylvania also accounts for \$12 billion in sales.

Signs and Symptoms:

In the spring search for the nymphs on smaller plants and vines. Fruit trees and grapes can be especially susceptible to damage and mortality under larger populations. As the year progresses the Spotted Lanternfly host choice will transition to trees. Trees can be afflicted with weeping wounds of sap on the trunks. Heavy populations can cause honey dew secretions to build up at the base of the tree, blackening the soil around the base. The largest colonies can produce large fungal mats at the base of tree. Increased activity of wasps, hornets, bees, and ants can be seen feeding on honeydew secretions and at tree wounds.

Egg masses can also be found on trees, especially *Ailanthus altissima* (Tree of Heaven) and other smooth bark trees. Smooth surfaces outdoors such as lawn furniture, stone and brick work, and outdoor recreational vehicles can also harbor egg masses. These masses pose a great risk for the accidental transport of this pest to new areas. Egg masses are present in October and will hatch in the spring starting as early as April.



Two egg masses on tree bark

Photograph by Holly Raguza, Pennsylvania Department of Agriculture

Response:

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- ▶ Since the pest is new to the United States, the department is reviewing a variety of options including eradication. Currently a quarantine is in place to stop the movement of this pest to new areas and to slow its spread within the quarantine.
- ▶ The department is working with other state and federal agencies to develop a comprehensive action plan and find tools useful for control of this pest.
- ▶ The quarantine affects a variety of plant, wood and stone products.
- ▶ Surveys are currently underway to determine the complete spread of this pest in Berks County and the surrounding counties. Efforts are also underway to ensure the Spotted Lanternfly is not present in other parts of the commonwealth.

Who will be affected by the Spotted Lanternfly quarantine?

The quarantine is currently in place around the boroughs of Bally and Bechtelsville and the township of District, Earl, Hereford, Pike, Rockland and Washington. The quarantine may be expanded to new areas as further detections of the Spotted Lanternfly are detected and confirmed.

Intentional movement of the Spotted Lanternfly is expressly prohibited and is a serious offense. Violations could result in criminal or civil penalties and/or fines.

The quarantine restricts the movement of certain articles. If you are seeking to enter into a compliance agreement to be able to move these materials you can request a permit by contacting Dana Rhodes. Industries and regulated articles under the quarantine that are not to be removed/moved to a new area are:

- ▶ Any living stage of the Spotted Lanternfly, *Lycorma delicatula*. This includes egg masses, nymphs, and adults.
- ▶ Brush, debris, bark, or yard waste
- ▶ Landscaping, remodeling or construction waste
- ▶ Logs, stumps, or any tree parts
- ▶ Firewood of any species
- ▶ Grapevines for decorative purposes or as nursery stock
- ▶ Nursery stock
- ▶ Crated materials
- ▶ Outdoor household articles including recreational vehicles, lawn tractors and mowers, mower decks, grills, grill and furniture covers, tarps, mobile homes, tile, stone, deck boards, mobile fire pits, any associated equipment and trucks or vehicles not stored indoors.

What to do if you:

See eggs: Scrape them off the tree or smooth surface, double bag them and throw them in the garbage, or place the eggs in alcohol or hand sanitizer to kill them. Please also let us know of your efforts by clicking on the picture below and recording the number of eggs masses you scraped and/or destroyed.



Report Egg masses you have scraped here >>

Reporting Scraped Egg Masses Instructions >>

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For directions on how to report your scraped and destroyed eggs masses follow the instruction on this page "Reporting Scraped Egg Masses Instructions"

Current Death Count

The estimated number of Spotted Lanternfly killed by Egg Mass Scraping based off of reported efforts. This number comes from the "Reporting Scraped Egg Masses Instructions" page. This number will be periodically updated to reflect the efforts of PDA and the community.

Old Total: 17,340
(Feb 18,2015)

Change: 20,490
(May 06,2015)

Collect a specimen: Turn the adult specimen or egg mass in to the department's Entomology Lab for verification. First, place the sample in alcohol or hand sanitizer in a leak proof container. A Sample Submission Form can be found in the Publications section below.

Take a picture: Submit photographs to Badbug@pa.gov.

Report a site: Call the Bad Bug hotline at 1-866-253-7189 with details of the siting and your contact information.

Spotted Lanternfly Webinar: [View it here >>](#)

Volunteer Banding Program: [View it here >>](#)

For more information or to report possible populations of Spotted Lanternfly:

- ▶ Contact your [local Penn State Extension office](#)
- ▶ Email badbug@pa.gov
- ▶ Call the Invasive Species Hotline at 1-866-253-7189

Contacts

Dana Rhodes

Plant Inspection Program Specialist
(717) 772-5205
[\[Email a Question\]](#)

Sven Spichiger

Entomology Program Manager
Insect Identification
Beetles, Flies, Moths, Household Pests
Insect Survey
(717) 772-5229
[\[Email a Question\]](#)

This Item Also Applicable To

Publications

- ▶ [Egg Mass Identification Tips](#)
- ▶ [Lycorma Detection Map \(15 Dec 2014\)](#)

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- ▶ Lycorma Inspection Tips
- ▶ Lycorma Quarantine Map (15 Dec 2014)
- ▶ Quarantine Order
- ▶ Quarantine Plain Language
- ▶ Spotted Lanternfly Pest Alert
- ▶ Spotted Lanternfly Quarantine Checklist

Forms

- ▶ Sample Submission Form