

INVASIVE SPECIES & EXOTIC PESTS

Spotted Lanternfly

Lycorma delicatula

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The spotted lanternfly is a planthopper native to China and Southeastern Asia. Discovered in Pennsylvania in 2014, the spotted lanternfly presents a threat throughout much of the United States. While its list of hosts is large, the greatest agricultural concern falls on grapes, hops, apples, blueberries, and stone fruits.

Concern

There is great concern about its effect on vineyards, orchards, and hardwood trees. Its presence has led to crop loss, exporting issues, and increased management costs. Spotted lanternfly eggs are laid on practically any hard surface, including tree trunks, stones and metal. Because of this, egg masses may be transported unknowingly. Spotted lanternfly nymphs are able to feed on many hosts, while adults prefer certain trees such as Tree of Heaven (*Ailanthus altissima*), Black Walnut (*Juglans nigra*), Maples (*Acer spp.*), and Grapevines (*Vitis spp.*). Furthermore, abundant excretions of sticky honeydew by swarms feeding on shade trees, and the associated growth of sooty mold, can restrict people's enjoyment of parks and their own backyards.

Description

Spotted lanternfly adults are very colorful when their interior hind wings are displayed. The hind wings are red with black spots. They have a black head, and a yellow abdomen with black bands. Their beige-gray forewings have also black spots and a distinctive black brick-like pattern on the tips. There is one generation per year, with adults developing in the summer, laying eggs in the late summer through fall, and overwintering as eggs. Each egg mass normally contains 30-50 eggs which are laid in rows and usually covered in a waxy substance. The first nymphs to hatch from the eggs in the spring are wingless, black, and have white spots, while the final nymph stage turns red before becoming winged adults. Adult males are slightly smaller than the inch-long females, but are almost identical in appearance. Adults and nymphs commonly gather in large numbers on host plants to feed, and are easiest to see at dusk or at night.



Spotted lanternfly egg mass. Photo: Holly Raguza, Bugwood.org.



The black and white nymphs as they appear after hatching in the spring until their third molt in mid-summer. Photo: Richard Gardner, Bugwood.org.



The final nymph stage of the spotted lanternfly, shown on a branch, is distinctively colored. Photo: Lawrence Barringer, PA Dept. of Agriculture, Bugwood.org.

Damage

This planthopper is able to feed using specialized mouthparts that can pierce the plant and suck up sap. Both nymphs and adults feed this way, on leaves, stems, and trunks. Spotted lanternflies also excrete honeydew while feeding, which, over time, may encourage the growth of sooty mold. Piercing the plant's tissues and feeding on the sap weakens the plant, sometimes causing it to ooze and weep, which may result in a fermenting odor and a gray/black trail on the bark. The presence of the fermenting odor and honeydew may also attract other insects. Spotted lanternfly feeding can cause wilting, defoliation, flagging, yield loss, reduction in crop quality and cold hardiness, dieback and plant death.

Found a Spotted Lanternfly in New York?

1. Take pictures of the insect, egg masses, or infestation you see and, if possible, include something for size, such as a coin or ruler.
2. If possible, collect the insect. Place in a bag and freeze, or in a jar with rubbing alcohol or hand sanitizer.
3. Note the location (street address and zip code, intersecting roads, landmarks, or GPS coordinates).
4. Email pictures and location: spottedlanternfly@agriculture.ny.gov

For More Information

New York State Integrated Pest Management Program: Spotted Lanternfly nysipm.cornell.edu/environment/invasive-species-exotic-pests/spotted-lanternfly

New York State Department of Agriculture and Markets: Spotted Lanternfly agriculture.ny.gov/plant-industry/spotted-lanternfly

United State Department of Agriculture, Animal and Plant Health Inspection Service Pest Alert: Spotted Lanternfly aphis.usda.gov/aphis/resources/pests-diseases/hungry-pests/the-threat/spotted-lanternfly/spotted-lanternfly

PennState Extension: Spotted Lanternfly extension.psu.edu/spotted-lanternfly



Spotted lanternfly adult at rest on a branch. Photo: Lawrence Barringer, Pennsylvania Department of Agriculture, Bugwood.org.



Collected spotted lanternfly adult with wings spread. The yellow sides of the abdomen are visible because this is a mated female, full of eggs. Photo: Lawrence Barringer, Pennsylvania Department of Agriculture, Bugwood.org.



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Produced by the New York State Integrated Pest Management Program, which is funded through Cornell University, Cornell Cooperative Extension, the NYS Department of Agriculture and Markets, the NYS Department of Environmental Conservation, and USDA-NIFA. Special funding for this project was provided by New York State Department of Agriculture and Markets Division of Plant Industry. Design by Karen English, text review by Ryan Parker, New York State IPM Program. Cornell Cooperative Extension provides equal program and employment opportunities. © 2020 Cornell University and the New York State IPM Program. Updated January 2020; search for this title at the NYSIPM Publications collection: hdl.handle.net/1813/41246



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