

Spotted Lanternfly Update

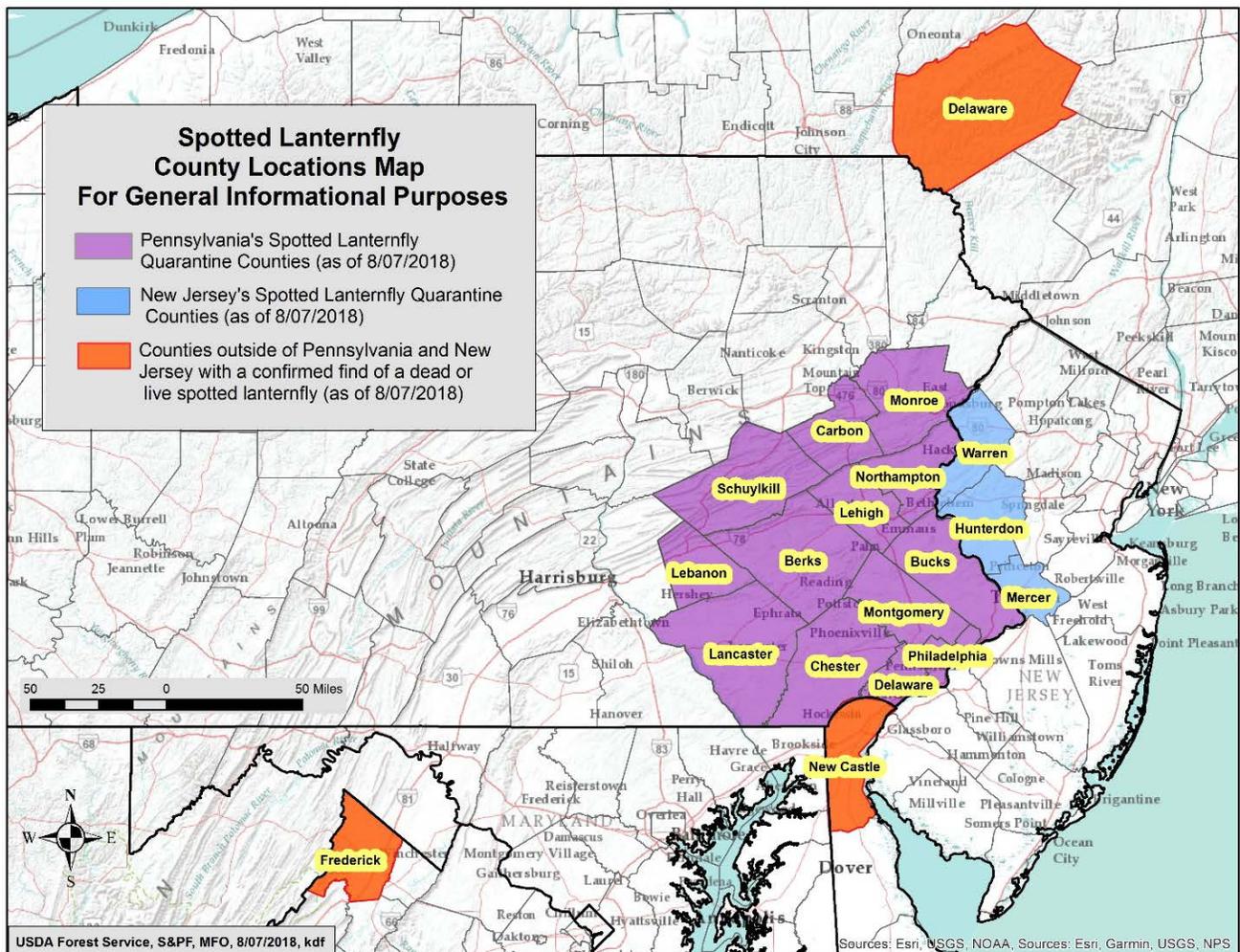
Karen Felton, U.S. Forest Service, Northeastern Area State and Private Forestry

The spotted lanternfly (*Lycorma delicatula*) is an invasive planthopper that was discovered in Berks County, Pennsylvania, in September 2014. The spotted lanternfly is native to China, India, Japan, and Vietnam and was introduced into Korea, where it has become a major pest.

Since 2014, it has spread to 13 counties in southeastern Pennsylvania, which are now under a Pennsylvania quarantine. The quarantine restricts the movement of any material or object that can spread the spotted lanternfly. This includes wood materials and products, grapevines, nursery stock, and outdoor household articles, such as recreational vehicles, mowers, grills, and tiles, among others. Spotted lanternfly has recently been found in New Jersey, New York, Delaware, and Virginia. New Jersey just recently placed three counties under quarantine.



Adult spotted lanternfly.



Spotted lanternfly State quarantines and county locations as of August 7, 2018. (U.S. Forest Service graphic by Karen Felton, State and Private Forestry, Morgantown Field Office)

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Spotted lanternfly feeds on a wide range of fruit, ornamental, and woody trees. The invasive tree-of-heaven (*Ailanthus altissima*) is one of its preferred hosts. The spotted lanternfly has been recorded utilizing 67 host plants species in Korea, many of which occur in the United States. In Pennsylvania, it has been observed feeding on more than 30 species of host plants. Some species affected by spotted lanternfly include almonds, apples, blueberries, cherries, grapes, hickories, hops, maples, nectarines, oaks, peaches, pines, plums, sycamores, walnuts, and willows. The spotted lanternfly poses an economic threat to multiple industries, such as those involving grapes, fruit trees, ornamental products, and timber.

Spotted lanternfly nymphs and adults feed on plants by sucking fluids from the stems or leaves. This can cause localized damage, stunted growth, reduced yields, or in some cases even death of the plant. As spotted lanternfly feeds, it also excretes a sugary substance called honeydew. The honeydew attracts ants, wasps, and other insects. Honeydew is also readily colonized by sooty mold, which can blacken parts of the plant, which reduces photosynthesis, affects the quality and fruit yield of the plant, and possibly reduces understory tree regeneration.

The spotted lanternfly adult is about 1 inch long. Its forewings are greyish-brown with black spots, with wing tips that have a darker, brick-and-mortar pattern. The hind wings are mainly red with black spots, followed by a white band and a black tip. When the spotted lanternfly is at rest, a hint of red color can be observed through the forewings, but the color is especially noticeable when it is in flight. The body is mainly black, but the abdomen is yellow with black horizontal bands across the center. Adults can be found as early as July, and they will remain active until the onset of winter. The adults are relatively weak flyers, but strong jumpers.

The adults mate in the fall, and the female lays eggs from late September through October. Females lay eggs on smooth-barked trees, such as tree-of-heaven, as well as on other smooth vertical surfaces, such as stones, vehicles, and outdoor furniture, among others. Newly laid egg masses have a grey, mud-like coating. Hatched eggs look like brownish, seed-like deposits (30-50 eggs) in four to seven columns about 1 inch long. Since egg masses are deposited on a wide variety of surfaces, this is the life stage that has the greatest potential to be spread accidentally to new areas.

Eggs hatch from late April to early May. The nymphs are small and black with white spots when they first hatch. As they mature, they start developing red patches on the body and grow to about ½-inch long. Although nymphs are strong jumpers, they are flightless and pose less of a threat for spread.



Sooty mold, a result of honeydew produced by feeding spotted lanternfly.



Adult spotted lanternfly.



Spotted lanternfly eggs. (Courtesy photo by Pennsylvania Department of Agriculture, Bugwood.org)

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Management efforts include scraping egg masses off surfaces; putting brown sticky bands on trees to catch nymphs; and for adults, using a combination of tree-of-heaven reduction and establishment of trap trees treated with systemic insecticide. For more information, see the Penn State Extension publication [Spotted Lanternfly Management for Homeowners](#). For those in the forest products industry, see the document [Recommended Best Management Practices for the Forest Products Industry Related to Spotted Lanternfly and Other Potential Forest Pests in Pennsylvania](#).



Spotted lanternfly nymphs turn red before becoming adults.

In February 2018, the USDA announced an allocation of \$17.5 million in emergency funds to stop the spread of spotted lanternfly. The new funds will allow the USDA Animal and Plant Health Inspection Service to expand its efforts to manage the outer perimeter of the infestation, while the Pennsylvania Department of Agriculture will focus on a 3-mile perimeter surrounding the core infested area.

Research continues to be conducted on chemical and biological controls, trap and lure development, and biology and population dynamics. The State and Private Forestry unit of the U.S. Forest Service out of Morgantown, WV, is working in cooperation with Virginia Tech and the USDA Agricultural Research Service to look at host suitability and the potential damage caused by the spotted lanternfly to several species of fruit and forest trees. They will also look at adult flight capacity at different times of the season to better predict the lanternfly's spread across landscapes.

If you find an insect you suspect is spotted lanternfly, take a picture or collect the insect and contact your local Extension Office or State Plant Regulatory Office. If you collect the insect, please place it into a container of alcohol to kill or preserve it, or place it in a Ziploc bag with hand sanitizer.

Spotted Lanternfly Web Resources

[USDA Animal and Plant Health Inspection Service \(APHIS\)](#)

[USDA APHIS Plant Protection and Quarantine Pest Alert](#)

[Penn State Extension](#)

[Pennsylvania Department of Agriculture](#)

All photos courtesy of Lawrence Barringer, Pennsylvania Department of Agriculture, Bugwood.org, unless otherwise indicated.