

Beautiful but Destructive: The Invasive Spotted Lanternfly

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In the past few years, a brightly colored insect, the spotted lanternfly (*Lycorma delicatula*; SLF), has been appearing in seemingly disconnected counties across the country.



PHOTO: ELIZABETH BARNES


Spotted lanternflies feed on over 100 different types of plants including grape, tree-of-heaven, black walnut, and maple.

Once its population builds up, this bug harms grape, maple, and over 100 other plants, and leaves a sticky, smelly, and sugary mess in its wake. It's bad news for anyone who likes a relaxing morning

on their porch, runs a pick-your-own orchard, or anyone else who spends time outdoors. But where did spotted lanternflies come from? And how can we stop them?

How to Recognize Spotted Lanternflies


STOP THE SPREAD OF SPOTTED LANTERNFLY




Spotted lanternfly attacks over 70 different plants, including economically important crops (grapes, apples, hops), forest and shade trees (maple, willow, birch), and the invasive tree of heaven.

This pest has now been spotted in several parts of Massachusetts.


WE NEED YOUR HELP TO STOP IT BEFORE IT BECOMES ESTABLISHED




Egg masses
(Sept.-June)




Early nymphs
(April-July)



Late nymphs
(July-Sept.)




Adults
(July-Dec.)



HAVE YOU SEEN THIS INSECT? GET A PHOTO AND REPORT IT!

[MASSNRC.ORG/PESTS/SLF](https://massnrc.org/pests/slf)

Scan this QR Code, or call 617-626-1779



Spotted lanternfly's appearance changes a lot over the course of its life. Right now (July–November), they are in their adult stage. Adult lanternflies have two sets of wings. The ones on top are grey wings with black spots, and the ones underneath (“hindwings”) are marked with a red patch. Spotted lanternflies have yellow abdomens with black stripes.

Adult lanternflies mate in late summer, and females then lay two or more egg masses, each containing 30 to 50 eggs. These egg masses can be found on any flat surface kept outside and stay intact through the winter. In the spring (May–June), the egg masses hatch out into round, tiny black nymphs with white spots. The nymphs retain this appearance through their first three developmental stages, or “instars,” but their final nymphal stage (July–September) is bright red with black and white patches. All spotted lanternfly nymphs and adults are strong jumpers and may quickly leap away when startled.

If you think you've seen a spotted lanternfly, don't panic! There are many harmless, native look-alikes that are often confused with SLF. Take a picture and send in a report (<https://massnrc.org/pests/slf>). Insect experts at the Massachusetts Department of Agricultural Resources will review your report.

How Spotted Lanternflies Spread



PHOTO: ELIZABETH BARNES

Spotted lanternfly life stages can overlap. Here an adult and a nymph (juvenile stage) rest on the same plant stem.

Spotted lanternflies were accidentally introduced into the United States around 2014 on stone imported into Pennsylvania. Since then, it has proved to be an accomplished hitchhiker. SLF has been found in many states in the Northeast, Midwest, and South. While spotted lanternflies were accidentally transported into Massachusetts many times, most of these instances have involved dead adults.

Unfortunately, we now have three known populations of spotted lanternflies in our state (<https://bit.ly/MDARPestDashboard>): two satellite populations in Fitchburg and Shrewsbury, and a slightly

larger infestation in Springfield. Adults, juveniles, and egg masses can be transported on anything kept outside including cars, nursery stock, trucks, and firewood. Egg masses can be particularly difficult to find as they resemble a splash of mud or lichen. To slow its spread, great care must be taken to inspect for these insects before anything is transported out of an infested area, or to check any materials received from locations known to have spotted lanternflies.

How Spotted Lanternflies Impact Plants

Spotted lanternfly isn't picky about what it eats, but it does have some favorite plants and will shift food sources over the course of the summer. While SLF can be found on grape and tree-of-heaven throughout the year, young insects spend the spring focusing on thin-barked plants like roses, perennials, and small maples. As summer progresses and they grow larger, they switch to bigger trees like maples, birches, willows, and walnuts.

While the impact of spotted lanternflies on trees is still being



PHOTO: ELIZABETH BARNES

Spotted lanternflies cluster together on a tree-of-heaven trunk in Springfield, MA.

studied, initial results suggest that their effect depends on the number of lanternflies present, the species of plants under attack, and the health of those plants. Plant damage typically occurs once SLF populations hit high numbers. One or two lanternflies feeding on a plant aren't likely to harm it, but hundreds of them can cause problems. Unfortunately, large spotted lanternfly populations are common in states that have been dealing with this pest for several years. Spotted lanternflies feed on over 100 different plant species, but only kills or seriously weakens three: grape, tree-of-heaven (an invasive plant), and black walnut. Vineyard owners have reported die-off of healthy grape vines after a single season of spotted lanternfly feeding, and anecdotal information in Pennsylvania suggests wild grape is being impacted as well. Tree-of-heaven and black walnut can both also be killed by high levels of SLF feeding, but only when they are saplings. Most other species of plants are only stressed by spotted lanternfly feeding. This is unlikely to seriously harm the plant but can become an issue if it becomes stressed by another source like disease or drought. You can help keep your trees and plants healthy by checking them over a few times a year and learning what type of care is best for your trees (e.g., watering, pruning, etc.). Some signs that your tree is struggling include wilting,

branch die back, holes in the bark, and mushrooms growing out of the trunk.

How Spotted Lanternflies Impact Quality of Life

In addition to harming plants, spotted lanternflies are also considered a nuisance pest. Their swarming behavior can be unpleasant for people who don't like insects, but the honeydew they produce causes the biggest problems. Honeydew is essentially sticky, sugary insect "pee" — a waste product produced by the lanternflies as they feed on the sap of the plant. Most gardeners are already familiar with honeydew if they have ever dealt with an aphid outbreak. Honeydew attracts stinging insects like yellow jackets, and is extremely difficult to wash off. When infestation levels of SLF are high, honeydew drips from trees like a light rain, covering anything underneath with a sticky mess. It also promotes the growth of a fungus known as sooty mold that is not only unsightly but carries a strong odor.

For companies that do business outdoors, from pick-your-own orchards to event venues, a lanternfly infestation can make an otherwise peaceful day outside unpleasant for customers. Orchards may have to take extra steps to clean their fruit of honeydew and sooty mold and vineyards can lose their vines entirely. Honeybees often collect spotted lanternfly honeydew, and beekeepers may find that their honey takes on an unpleasant flavor. Homeowners may have to repeatedly wash their deck or car, deal with more stinging insects, and find that their yard is more stressful to spend time in.

How You Can Help Slow Spotted Lanternflies Down

We've just given you a lot of bad news about spotted lanternflies, but there are ways you can help! These three steps can prevent or slow their spread:

- Identify any host plants like grape, tree-of-heaven, maple, or walnut on your property.
- Check them for signs of spotted lanternfly a few times over the course of the year (eggs in the winter, nymphs in spring-midsummer, and adult from midsummer to first hard frost).
- If you see spotted lanternflies, take a picture and report them (<https://massnrc.org/pests/slf>). The earlier we know about an infestation, the more likely we are to be able to contain it. ♦