



CAES

The Connecticut Agricultural Experiment Station
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SPOTTED LANTERNFLY

QUICK FACTS



What is the Spotted Lanternfly?

The Spotted Lanternfly (AKA SLF) is a type of leaf-hopper bug. It's invasive in the U.S.

How did it get here?

SLFs were accidentally brought into the U.S around 2014. Adult lanternflies were first spotted in PA in 2014, where they quickly became established as an invasive species.

In 2020, two SLF populations were found in Fairfield County. In 2025, SLF populations were found in every county in CT except for Windham.



Adult SLF in a hand, for scale (via Wikimedia Commons user Mostbittern)

What does it do?

SLF is mainly a nuisance. It cannot bite or sting.

However, SLF can cause damage to plants by feeding on them. Their favorite plant is the Tree of Heaven, which is an invasive plant. Sometimes, though, they feed on food crops, such as grapes and hops. They may also feed on important hardwood trees, like Black Walnut.



A Tree of Heaven by a roadside

Will it go away?

We may not be able to fully eliminate the SLF from the U.S, but their spreading can be slowed.



An adult spotted lanternfly (via PA Dept. of Agriculture)

How can I help control them?

First, learn to identify the SLF. Learn about its life cycle and habits. Then, identify whether you have an infestation. After that, you can choose what will work best to control it.



Different SLF life stages with a quarter for scale



Spotted Lanternflies covering the base of a tree (via Lawrence Barringer, PDA, Bugwood.org)

State regulators are collecting data on the SLF to understand its life cycle and the way it spreads. You can contribute data by reporting SLF sightings at this link:

<https://arcr.is/4rWfL0>

Lifecycle and Identification

Unlike many other insects, SLFs have one generation per year. This means that it takes 1 whole year to hatch from their eggs, grow to adulthood, reproduce, and die.



A covered egg mass

Eggs: September - May

Eggs are laid in the Fall and hatch in the Spring.

The eggs are always in groups, called egg masses. The egg masses are usually, but not always, covered with a mud-like coating. They are grey-brown in color. This helps them blend into trees and rocks. Adults can lay them on almost any hard surface. Besides trees and rocks, you can find them on decks, houses, outdoor tools, and even cars.



A fresh egg mass, partially covered



An old egg mass (via Lawrence Barringer, PDA, Bugwood.org)



early nymph



late nymph

Nymphs: April - September

The infant bugs that hatch out of the eggs are called nymphs. When they are born, they are black with white spots. They have no wings, and will crawl around using their front four legs. The newborns can be as small as $\frac{1}{8}$ of an inch in length and may be hard to see.

Over the next several months, they will grow up to $\frac{1}{2}$ inch long, and their colors will change. These “late nymphs” are bright red with white spots and black stripes.

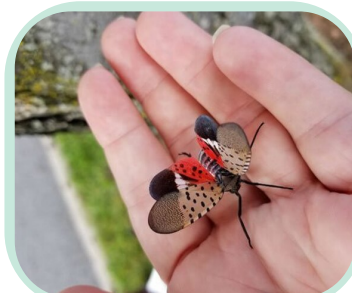
Both the black-and-white “early nymphs” and late nymphs will cluster together in large groups. After they hatch, they quickly make their way to plants to feed. You will see them covering branches, vines, or tree trunks.



Adults: July - November

SLFs grow from late nymphs into adults. Adults are about 1 inch long and have two sets of wings. When they are not in flight, you can see their forewings (top wings). They are tan with black spots.

When SLFs are in flight, their hindwings are visible. They are slightly smaller than the forewings, and are bright red, with black tips, and a white stripe. In the fall, adults will start laying eggs. Once it reaches freezing temperatures, they will die. In CT, only the eggs survive over the winter.



via Djwayer on iNaturalist



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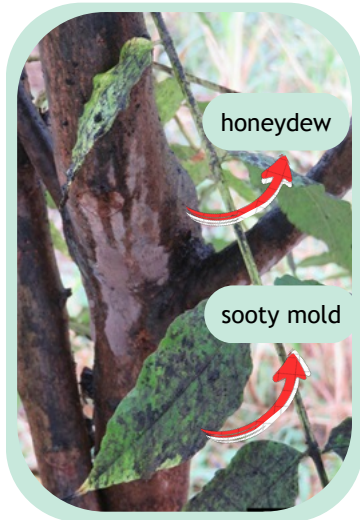
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MANAGEMENT

an overview of SLF damage and how to control it



SLFs damage plants by feeding on them. They have straw-like mouths that they use to suck the sap out of plants. This causes the plant to become weak, and leaves it vulnerable to other causes of death. Just like humans, plants have an immune system that becomes weak when they are hurt. This makes it harder for the tree to fight off diseases, or to survive during extreme weather. The only plants reported to have died because of SLFs are the Tree of Heaven, grape vines, and Black Walnut saplings.



Via donald_mcmunn on iNaturalist

After feeding, SLFs excrete liquid waste called “honeydew”. It looks like small dewdrops, and is full of sugar from the tree sap. In large amounts, it can be slippery, sticky, and visible on the surface of plants. It can also grow a black mold called “sooty mold”. Sooty mold can weaken plants by blocking their leaves from the sunlight. You may also notice dead branches or wilting leaves on a tree affected by SLF.



Tree of Heaven

The SLF’s favorite tree to feed on is the Tree of Heaven. This is their preferred host plant in their native environment, but is an invasive plant in the U.S. The Tree of Heaven has smooth leaf margins, and four small bumps, called “lobes”, toward the base of the leaf. The leaves have a very distinct smell. Some compare it to burnt peanuts.



Via Annemarie Smith,
ODNR Division of Forestry

You can identify the Tree of Heaven without its leaves by looking at its bark. On larger “mature” trees, the bark will have a similar texture to the skin of a cantaloupe. On younger trees, you may see large “leaf scars” that are shaped like a shield.



Other Host Plants

SLFs can feed on trees besides Tree of Heaven. They’ve been recorded feeding on over 65 different plant species. They may do this if there are not many Trees of Heaven around, or if nearby Trees of Heaven are unhealthy. They may also choose a different tree depending on the time of year, the size of the SLF population, and how long the population has been present in the area.

Below are other host plants you may see SLFs feeding on.

Rose



Black Walnut



Butternut



Sumac



Red Maple



Grape



River Birch



Willow



Silver Maple



Management Strategies

For Individual SLFs or Small Groups

In a non-infested area, you may see only one SLF at a time, or small groups of 10 or less.

You can stop the spread of SLF by checking to see if any are on your vehicle. SLFs are known to spread by “hitchhiking” on cars. Driving a vehicle at high speeds does not harm them or cause them to fall off.

Before driving out of an area with known SLF infestation, look over the body of your car to see if any adult or nymphal SLF are on it. Make sure to remove them before you begin driving. It’s also good practice to check the bottom of your car and your wheel wells for egg masses. Avoid parking under infested trees. You should check large outdoor items such as grills, outdoor furniture, landscaping supplies, and sports equipment as well.



Via PA Dept. of Agriculture

If you see an egg mass, use an object like a credit card or a metal file to scrape it off the surface it’s on. Cover it with a plastic bag or container as you do - individual eggs may spring off. Douse the scraped eggs with rubbing alcohol or hand sanitizer.



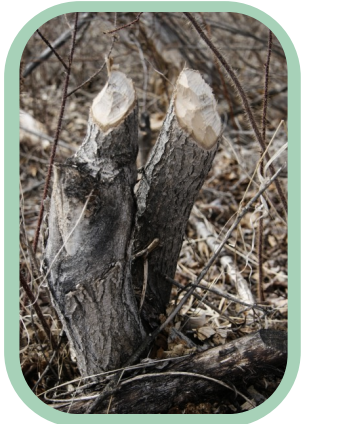
PA Dept. of Agriculture

For Large Infestations

If there are hundreds or thousands of SLFs on a tree, that tree is infested. There are a couple of different strategies to deal with infestations.

Host Removal

Removing the Tree of Heaven from your yard is one of the most important ways to control SLF populations. The SLF is attracted to the Tree of Heaven. They can sense it from a distance and will move toward it. If you remove it from your yard, they won’t be as likely to come there. This is good preventative maintenance, but it won’t remove SLF that are already in your yard.



via Appalachiabound on INaturalist



Tree Traps

There are a few different traps that can be used to capture and remove SLFs.

Sticky traps can be wrapped around tree trunks. They will catch SLF nymphs as they crawl up the tree.

It’s best to cut the trap into halves or thirds. If the trap is too big, it can catch unintended wildlife, such as birds. Surrounding the trap with chicken wire or mesh will also protect birds.

It’s important to know that beneficial insects may also get stuck in the trap. Spiders, ants, and any other insect that crawls up the tree will get stuck. It’s best to use this trap on a tree that is already covered in SLFs.

Funnel traps, like the one shown on the left, are a good option as well. The black mesh wrapping around the tree acts like a tunnel that leads the SLFs to a dead end (the plastic bag). SLFs have a hard time changing direction, so they cannot go back out of the funnel, and will die. This method avoids potentially trapping birds. You’re less likely to catch many beneficial insects as well. You can read about how to make your own funnel trap on [Penn State Extension’s website](#). There are SLF funnel traps available in some stores as well.

