

SPOTTED LANTERNFLY

A serious threat to vineyards, orchards, and urban forests



What is it?

Spotted lanternfly (SLF; *Lycorma delicatula*) is an invasive planthopper from China. This insect feeds on plant sugars, which disrupts normal nutrient circulation in the plant. SLF feed in swarms and large infestations can damage grapevines and other tender fruits – posing a serious threat to Ontario’s multi-billion wine (viticulture) and fruit industries.

Where is it?

SLF has not been detected in Canada. Its first North American establishment was in Berk’s County, Pennsylvania (2014). Interceptions of the pest have occurred in Maryland, Connecticut, Massachusetts, West Virginia, Virginia, and in two New York counties across the border from Ontario’s Niagara region. SLF is currently present in Pennsylvania, New Jersey, Delaware, and northern Virginia, prompting quarantine zones in these states.

Trees and plants at risk

An important host of SLF is the tree of heaven (*Ailanthus altissima*), which is also invasive to North America. Though no tree mortality is associated with SLF, it is known to feed on more than 70 species of trees and plants, including cultivated grapes, fruit trees, and hardwoods. Host trees often include urban trees such as apple (*Malus* spp.), black walnut (*Juglans nigra*), and red maple (*Acer rubrum*). To minimize the spread of SLF, avoid planting tree of heaven.

Signs

- Accumulation of a sweet, sticky substance called “honeydew” at the base of trees
 - Creates dark streaks of sap on trees that attract bees and wasps
 - “Rains” from trees during active feeding in spring and summer
 - Causes the growth of sooty mould at the base of trees and on the ground nearby
- SLF swarm on or at the base of host trees and vines
- SLF will lay muddy-grey egg masses on any available hard surface including trees, vines, stones, vehicles, and patio furniture
 - Dry and cracked egg masses in the cold months



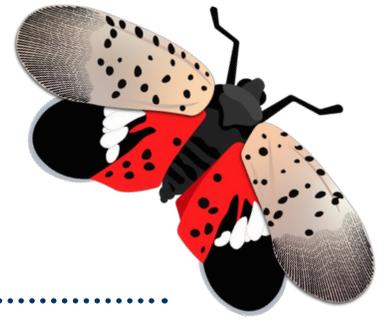
Impacts

- Increased costs for insecticide applications in agriculture and for homeowners
- Degradation of tourism and recreation opportunities related to wineries, agriculture, and hiking
- Swarm feeding will further harm trees already stressed by several factors such as climate and other pests and pathogens
- Honeydew build up attracts wasps and encourages mould growth
- Health hazards to other organisms from sooty mould and bacteria
- Quarantine restrictions resulting from SLF can impact transportation corridors and local economies



How is spotted lanternfly spread?

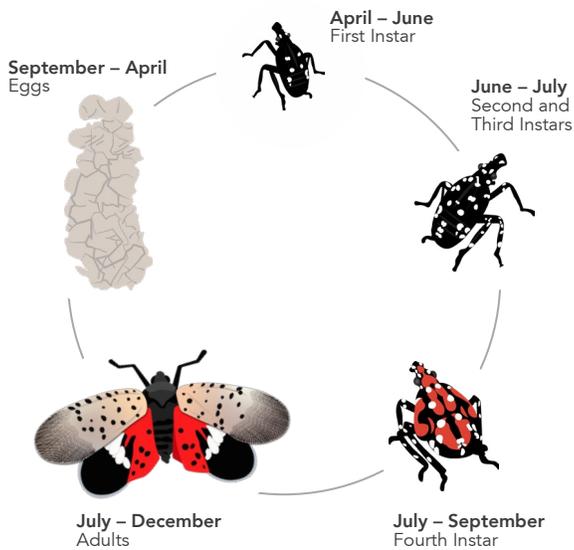
- SLF will lay egg masses on any hard surface, including vehicles (cars, boats, trailers, etc.), stones, metal, yard waste/brush, landscaping materials/waste, packing materials, and patio furniture. Pay especially close attention if you are moving any of these objects from affected areas. Movement of these objects can spread SLF to new areas.
- The feet of adult and nymph SLF are very sticky. They can grasp vehicles and people and hold on even while in transit.



Detecting spotted lanternfly

Life cycle features	What to look for
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SLF undergoes a series of life stages called "instars" over the course of one year. In Pennsylvania, the life cycle has been observed as follows:



- Watch for SLF life stages throughout the year.
- Eggs are laid in groupings of straight lines with 30-50 eggs per mass. They are covered in a shiny, putty-like grey secretion that dulls and cracks over the winter. Eggs are laid on many surfaces including tree trunks, bricks, stones, metal (e.g. BBQs), and lawn furniture.
- Keep watch for tree of heaven, the preferred host of SLF (leaves and flowers pictured on the right). Tree of heaven leaves smell like burnt peanut butter when crushed.

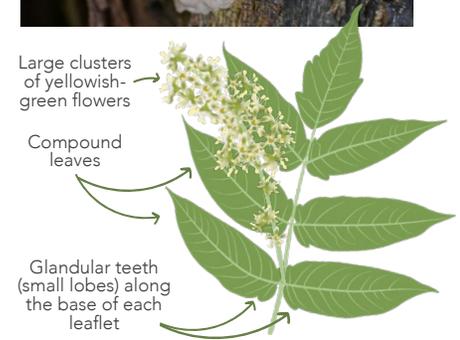


Photo: Erica Smyers

What can you do?

- Check any vehicles for egg masses and nymphs when travelling in/through affected areas.
- Check for egg masses from late fall to early spring (September – May) on hard surfaces such as trees, stones, and patio furniture.
- Scrape egg masses into a plastic bag filled with alcohol to ensure egg mortality.
- Learn to identify SLF and its preferred host, tree of heaven.
- Avoid planting tree of heaven.

If you see signs and symptoms of spotted lanternfly, report your sighting to:

- Canadian Food Inspection Agency (CFIA): www.inspection.gc.ca/pests
- EDDMapS Ontario: 1-800-563-7711 or www.eddmaps.org/ontario

For more information on spotted lanternfly visit:

- Invasive Species Centre: www.invasivespeciescentre.ca
- Canadian Food Inspection Agency (CFIA): <https://www.inspection.gc.ca/plants/plant-pests-invasive-species/insects/spotted-lanternfly/eng/1433365581428/1433365581959>

