



SPOTTED LANTERNFLY

# Grape Pest Alert

E. Smyers

## Identification

The spotted lanternfly (SLF) is an invasive sap-feeding plant-hopper found in southern Pennsylvania. It is native to China and was found in Pennsylvania in 2014. Tree-of-heaven, an invasive plant, is the preferred host for SLF, but SLF also feeds voraciously on grapevines (wild and cultivated), tree fruit, and various hardwoods. Eggs are laid in masses on any solid surface (trees, posts, stones, buildings, etc.) in the fall. They hatch in the spring and go through four nymphal instars. Adults emerge in mid- to late July and die with the onset of winter. Both nymphs and adults have been observed feeding on grapevine.

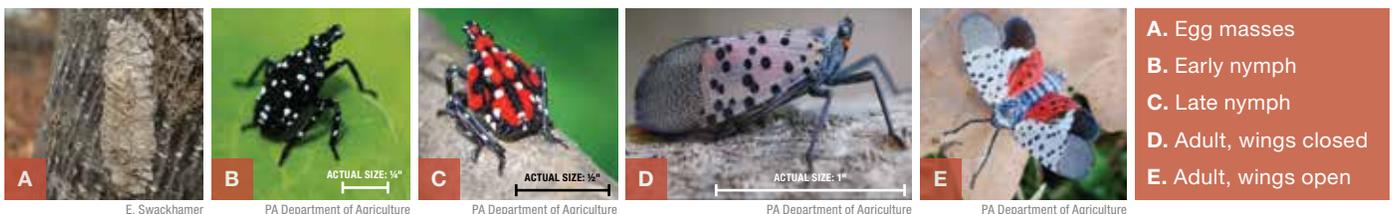
## Damage

SLF is a phloem feeder, similar to leafhoppers, aphids, and other pests with piercing-sucking mouthparts. SLF feeds on the vine trunk, shoots, and leaves and can feed through bird netting. SLF excretes large amounts of honeydew, which can cause sooty mold outbreaks on the leaves and fruit. This honeydew may also exacerbate yellow jacket problems. We are still learning about this new invasive pest and don't yet

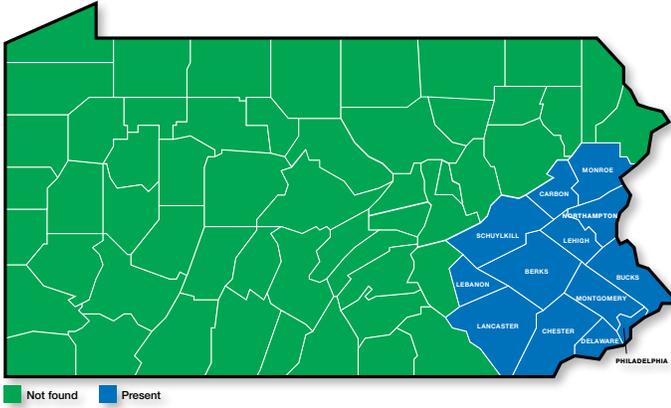
have economic loss estimates for grape. Research is ongoing to develop control measures for this pest and to determine implications for both juice and wine production.

## Quarantine

SLF is currently under quarantine in 13 counties in southeastern Pennsylvania (see map). Additional counties may be added to this map. Please check the Pennsylvania Department of Agriculture (PDA) website for the most up-to-date information. If your farm is not within the quarantine zone and you have found SLF, collect or photograph the specimen and report it immediately using our online reporting form at [extension.psu.edu/spotted-lanternfly](http://extension.psu.edu/spotted-lanternfly) or by calling 1-888-4BAD-FLY. Permits are required for businesses that transport materials within the quarantine area. The permits are designed to indicate that you are aware of SLF and are following procedures to prevent spreading the pest from one location to another. For more information on permitting, see the PDA spotted lanternfly webpage. If you are traveling to or from the quarantine zone, check your farm equipment or any other item that has been stored outside for egg masses, nymphs, and adults.



The life stages of SLF, including an egg mass on a tree, early nymphs, late nymphs, and the adults. Adults with both closed and open wings are shown, though adults with closed wings are more common.



The distribution as of June 20, 2018, of SLF in Pennsylvania, indicated in blue. Check the Pennsylvania Department of Agriculture's website for updated distribution information. A second population has also been found in Virginia.



E. Shryers



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SLF adults feeding on grapevine (top), and sooty mold from SLF (bottom).



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Multiple egg masses on a vineyard post. Each mass contains 30–50 eggs. These should be scraped off before they emerge in the spring.

## Management

Please be aware that SLF is highly mobile and you cannot prevent SLF from moving into your vineyard. Ongoing management throughout the year is critical to keep SLF from damaging your vines. We are currently conducting research to learn more about the behavior and biology of SLF. Stay up to date on these findings by visiting [extension.psu.edu/spotted-lanternfly](http://extension.psu.edu/spotted-lanternfly) or contacting your local extension educator.

1. Scout your vineyard thoroughly for SLF egg masses, nymphs, and adults. Current reports show more SLF on the edge of a vineyard, especially near woodlots. You should also look for sooty mold on your leaves or fruit, which may indicate the presence of SLF.
2. Scrape and kill eggs off vines, posts, and nearby trees in the surrounding wood edge in the winter and early spring, before hatch.
3. Band nearby trees or posts with sticky tape to trap crawling nymphs in the spring.
4. Consider removing and/or treating the preferred host, tree-of-heaven, if it is located near your vineyard.
5. Apply insecticides as needed. So far, most grape damage from SLF has been noted during the adult stage. Current data suggest that SLF is sensitive to most insecticides. This includes, but is not limited to, acetamiprid (Assail), malathion (Malathion), bifenthrin (Brigade), carbaryl (Sevin), thiamethoxam (Actara), and dinotefuran (Venom/Scorpion). **Always follow the label and rotate chemical classes appropriately.** Application of insecticides may kill SLF within the vineyard, but be aware that reinfestation of SLF from the surrounding woodlot is possible. We have no formal insecticide recommendations at this time, but we are currently evaluating insecticides and will make the newest information available to fruit growers as soon as possible.

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