

# Spotted Lanternfly

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## Invasion Archive





## About The Spotted Lantern Fly

- **Origins-** native to China, Vietnam, and India. They first arrived in America in a cargo shipment found in Berks county PA during 2014.
- **Plant hoppers-** These types of bugs are noted by their powerful ability to jump. They use plants as resting places during migration.
- **Habits-** Spotted Lantern Flies tend to gather in large numbers when feeding. During the day, the most often cluster around their host plant. They are most easily spotted during dusk or the night.



Lycorma  
Delicatula



<https://www.chicagotribune.com/2023/09/26/lakeview-resident-reports-invasive-spotted-lanternfly-a-threat-to-fruit-trees-other-plants-state-confirms-pest-has-reached-illinois/>



# Identification



## First Instar Nymphs

- First instar nymphs measure about 1/4 inch in length and are noted by their black color with white spots.
- These can sometimes be mistaken for ticks.
- The appearance of the second and third instar phases are similar with the main difference being a change in length as the lantern fly grows.



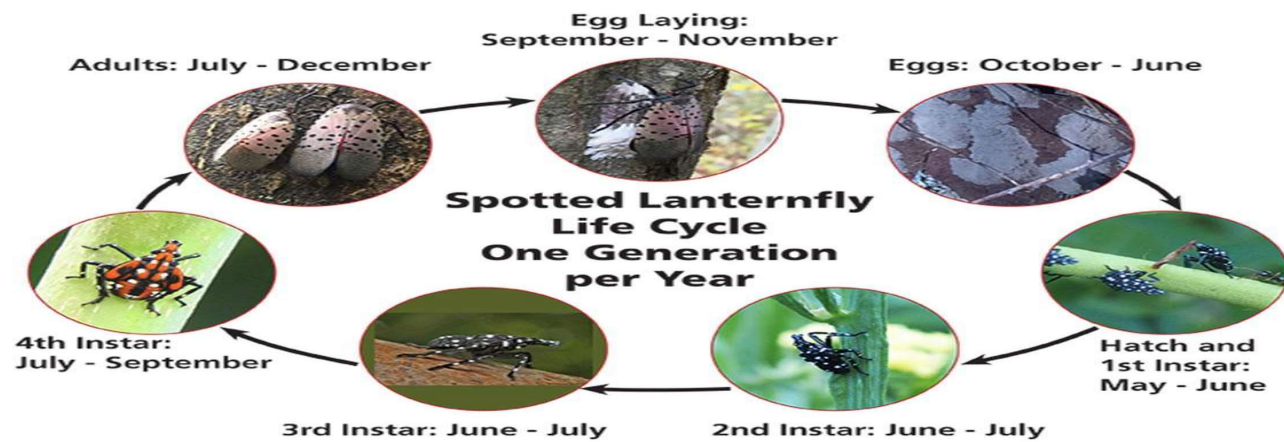
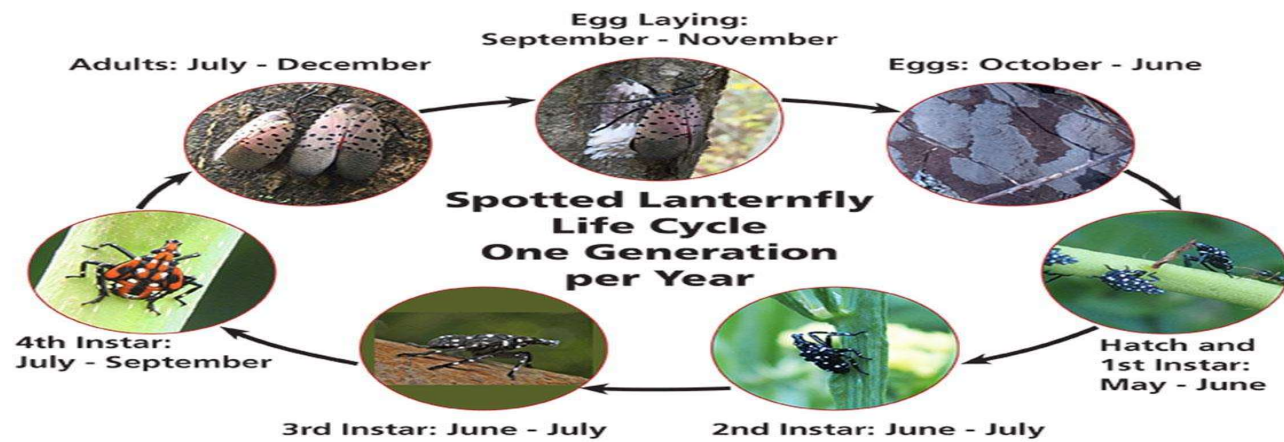
## Fourth Instar Nymphs

- Fourth instar Spotted Lantern Flies measure about 3/4 inch in length.
- They adorn a red color with patches of black and white spots.
- They sometimes are mistaken for spiders. This is the phase before adulthood.



## Adults

- Adults are about 1 inch long with black spots. They have a pinkish-tan color to their wings.
- Adults have yellow and black striped abdomens.
- Females are larger than males and have a red spot at the end of their abdomen (shown above).





# Life of a Spotted Lantern Fly

May-June
<b>Hatching stage</b>
First instar Nymphs become active around this time.
July-December
<b>Adults</b>
Adults are active around this time.

May-July
<b>Aging</b>
The First, Second, and third stage nymphs are active.
September-November
<b>Egg-laying</b>
Egg-laying takes place during these months.

July-September
<b>Fourth Instar</b>
Fourth instar Nymphs become active. They begin to molt from July to mid August.
October-June
<b>Eggs</b>
Eggs are found on tree and other outdoor surfaces during this time.

# Eggs.

Spotted Lantern Flies lay eggs in one-inch-long rows. Females typically lay 1-2 egg masses per year. These egg masses contain anywhere from 30-60 eggs.

The female covers her eggs in a cream-colored putty substance that will harden and dry to a tan color. This acts as camouflage for the eggs and protects them against the winter.

Eggs are laid on trees as well as other outdoor surfaces such as rusty metal and old camp chairs.

Uncovered egg mass



Partially covered egg mass



Covered egg mass



Old hatched egg mass







# Host Plants

## Early Nymphs

The beaks of first, second, and third instar nymphs are not strong enough to penetrate wood, so they often feed on plants of the season. This includes fruits and flowers.

## Fourth Instar and Adults

Trees become the primary host for fourth instar nymphs and adults. The Tree of Heaven (seen to the left) specifically is a preferred host if found. However, late-stage adults for unknown reasons appear to move away from trees as preferred hosts.

## Tree of Heaven

The Tree of Heaven is an invasive species from China and Taiwan. This is often mistaken for the Sumac tree. Egg-laying appears to begin sooner, and more eggs are laid on this tree.

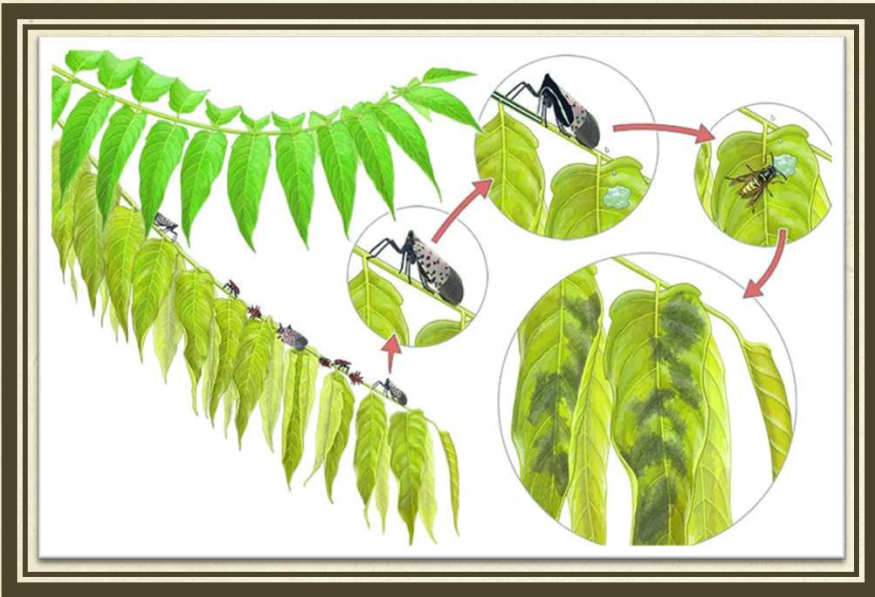
<https://vtinvasives.org/invasive/tree-of-heaven>

<https://columbiagorgecwma.org/weed-listing/best-management-practices/tree-of-heaven/>

<https://www.montana.edu/extension/invasiveplants/extension/monthly-weed-posts/201910mwp-tree-of-heaven.html>



# Honeydew



Honeydew is produced by spotted lantern flies as they feed.

- Sugar water that comes from plant sap is eaten
- Lantern flies do not receive nutrients from the honeydew, so they release it onto trees and plants
- This causes mold to grow on the plants and attracts bugs such as wasps and ants.
- Over time the combination of pests and mold will kill the plants these spotted lantern flies rely on for nutrients.

So, lantern flies do not directly kill plants, but honeydew in large amounts can impact plant health leading them to be under increasing stress.



<https://www.dominionpestcontrol.com/exterminators-winning-the-race-to-eradicate-spotted-lanternflies/>  
<https://cals.comell.edu/new-york-state-integrated-pest-management/outreach-education/whats-bugging-you/spotted-lanternfly/spotted-lanternfly-damage>  
<https://www.dreamstime.com/photos-images/honeydew-excretions.html>





# So, what are we doing?

We will be collecting Spotted Lantern  
Flies to be taken back to the lab!

