

Current Situation for Spotted Lanternfly

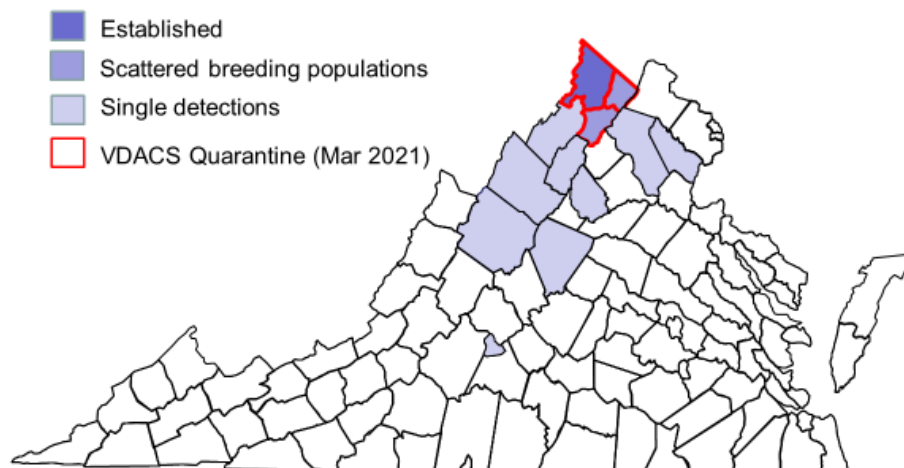
Spotted lanternfly (SLF) is an invasive planthopper that was introduced into Pennsylvania in 2014, and was first found in Winchester VA in January 2018 (reflecting an introduction at least in 2017). SLF feeds on more than 70 plant species, but as it develops, it restricts its feeding to just a few species, notably tree of heaven (TOH) and grape. Grape is by far the most vulnerable commercial crop. This insect poses a significant threat to our vineyards; SLF has been known to result in vine death in entire blocks.

This species overwinters in the egg stage, in masses of 30-50 eggs, covered in a brown-grey waxy covering. These hatch in late April or early May. The first three nymphal instars are black with white spots. The fourth and final instar is bright red with black and white markings. First adults were seen this season on July 9 – a mix of fourth instars and adults are now present. We followed the development of SLF in Virginia over two years, and have created a phenology chart showing seasonality of different growth stages (see handout).

TOH is an important host in SLF development. Fourth instars and adults move to TOH, where they acquire distasteful compounds that give them some protection from predators. Successful development is reduced if no TOH is accessible. It is helpful to remove TOH from a property, but it is critical that trees not be simply cut down. TOH sprouts from stumps, and if there is no supplemental herbicide treatment, a thick stand of young TOH will be the result. This will support the development of SLF.

Some of our vineyards in the infestation zone are now surrounded by SLF on surrounding TOH. Growers should be watchful for immigration into vineyard blocks. This is a critical period as SLF continues to expand its geographical range, and we enter a time of the year with potential invasion into vineyards. We now have SLF in 11 counties plus the City of Lynchburg. The heaviest infestations remain in Frederick, Clarke and Warren Counties. It will be helpful to use **iNaturalist**, a free app, to photograph and upload records; such SLF sightings are routed to our Insect ID lab.

Spotted lanternfly, *Lycorma delicatula* (White),
in Virginia – July 2021



Spotted Lanternfly Life Cycle in Virginia

The Spotted Lanternfly (SLF) overwinters in an egg mass (diagonal lines) that begins shiny gray but quickly turns to a dull brownish gray. The eggs hatch in early May and the nymphs (red bars) are present until late July when they become adults (yellow bars). Adults start to lay eggs in September. The life stages can overlap and, depending on the time of year, multiple stages can be found at the same time.



Multiple egg masses
Size- about 1.5 inch (33 mm) long

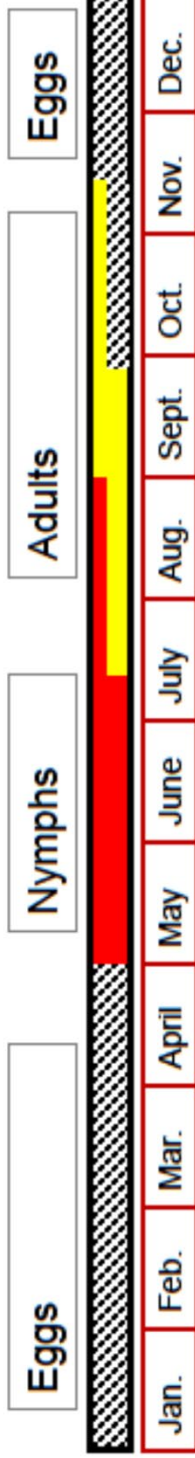


Young nymphs
Size- up to 3/8 inch (4 mm) long.

Mature nymphs
Size- 7/8 inch (12 mm) long



Adult
Size- about 1 inch (25 mm) long



Prepared by Eric Day, Doug Pfeiffer, Theresa Dellinger, Mark Sutphin and Beth Sastre. Photos left to right: Cluster of 5 egg masses; nymphs, showing black with white spots coloration for 1st-3rd stages; red 4th stage; and adult. (Photo of eggs by Mark Sutphin, photos of nymphs and adult by Eric Day)



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