

Spotted Lantern Fly (*Lycorma delicatula*)

Pest Fact Sheet



Introduction: Spotted Lanternfly is significant threat to California agriculture, especially grapes. It has not been detected in California but is frequently intercepted in all life stages on equipment and vehicles coming into the state from eastern states where it is present.

Distribution: Native to China and other subtropical regions of south-east Asia. In the USA, it was originally detected in Pennsylvania and has subsequently recorded in over 15 eastern states as far west as Illinois and south to Georgia.

Description: Egg masses (1-inch long, 30-50 eggs) resemble wet, gray dough and once dry becomes dull and brown, resembling dried mud. Nymphs are black with white spots initially, but turn red with white spots and black marks as they develop. Adults are about 1-inch long. The abdomen is yellow with black marks on the tergites. The forewings are brown with black spots at the basal 2/3 and a speckled apical band. The hind wings are scarlet with black spots at the base, have white bars at the middle and are black at the apical half.

Biology: One generation per year, overwintering in the egg stage. In Pennsylvania, eggs hatch in April or May, and the very mobile nymphs disperse to feed on young stems and leaves of plants. Adults emerge in summer and are active fliers. While nymphs have broad host choices adults concentrate on the preferred host, tree-of-heaven (*Ailanthus altissima*). Females lay egg masses on tree bark in late summer. They can use almost any surface for oviposition, including vehicles, rocks and outdoor equipment. Late in the season, the adults also tend to feed on other hosts such as grape, silver maple, willows, etc. (Baker et al., 2029; CABI, 2020)

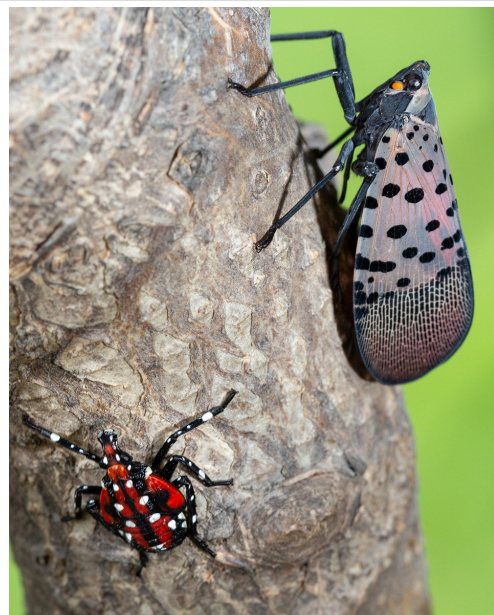
Economic importance: Nymphs and adults are sap feeders that produce abundant honeydew, promoting sooty mold outbreaks. This pest threatens California agriculture by reducing yields—especially in grapes, fruit, and nut crops—and by damaging forest and urban trees, increasing their vulnerability to drought and fire. It may also increase costs for monitoring, management, and research, and lead to trade restrictions. A 2019 Penn State study estimated \$324 million in annual losses for Pennsylvania if uncontrolled; California could face losses exceeding \$1 billion annually due to its larger, more diverse agricultural sector. Adults disperse readily and can be transported in vehicles easily, including aircraft. Egg masses laid on vehicles and equipment represent a significant pathway risk for introduction as they are weather resistant and difficult to detect.

References:

Baker, T. C., et al. 2019. *Journal of Asia-Pacific Entomology*, 22(3) 705-713.

[CABI] CAB International. 2020. *Lycorma delicatula* (spotted lanternfly). CABI Invasive Species Compendium. Wallingford, United Kingdom: CAB International. Available: <https://doi.org/10.1079/cabicompendium.110524> (March 2020).

Prepared by Alessandra Rung (August 2025); Plant Pest Diagnostic Laboratory (<https://www.cdfa.ca.gov/plant/PPD/>). Images by USDA-ARS (Stephen Ausmus).



Adult and nymph Spotted Lanternflies.



Adult Spotted Lanternfly.



Spotted lanternfly egg mass on bark.