

## Spotted Lanternfly

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The Spotted Lanternfly, *Lycorma delicatula* (White), is an invasive insect that was discovered in the U.S. in Berks County, PA in 2014. Since that time, it has been detected in other locations in the middle Atlantic states. This pest is native to parts of Asia including China, India, and Vietnam. It has also been introduced to South Korea where it has become a major pest on grapes and peaches. If not controlled in the United States, this insect has the potential to greatly impact the grape, hops, orchard and lumber industries.

### Host Plants

While *Ailanthus altissima* (Tree of Heaven) is the preferred host for the adult to both feed and lay her eggs on, there are over 65 other potential host species that have been recorded including hickory, maple, pine, poplar, red oak, walnut, willow, *Prunus* spp. (plums, cherries, peaches, nectarines, apricots, almonds), apple, hops and grape vines. Both adult and nymph stages feed on their host plants.

### Description

The spotted lanternfly is actually a planthopper not a fly. The adult (Figure 1) is approximately 1" long and 1/2" wide. The front wing is grey with black spots and the wing tips have small black blocks outlined in grey. The hind wings are eye-catching with patches of red and black and a single band of white. The abdomen is yellow with black bands; the head and legs are black. When the wings are folded, they camouflage well but when their wings are extended, a flash of vibrant red is visible. Immature nymphal stages are black with white spots but develop showy red patches in the fourth and final stage of development.

### Life Cycle

The spotted lanternfly has one generation per year. In spring and early summer, eggs hatch and the

Figure 1: Adult spotted lanternflies



nymphs feed on trees, crops and vines by puncturing the stalks and trunks to feed on the sugary sap from the phloem. The insects' excrement, called honeydew, is like that of aphids, but far more plentiful; it facilitates sooty mold growth and attracts other insects.

Adults mature as early as July. They continue feeding and are commonly seen congregating at the base of host trees late in the day (Figure 2). The females lay

**Figure 2: Adult spotted lanternflies congregating at base of host plant**



eggs from late September through the onset of winter. They lay their eggs preferably on the *Ailanthus altissima* (Tree of Heaven). This host choice is thought to have evolved as a mechanism of protection from natural enemies but the lanternfly will readily lay eggs upon any smooth-trunked tree, stone or vertical smooth surface, including man-made items like vehicles, campers, yard furniture, farm equipment or other items stored outside. The egg masses have different

**Figure 3: Egg mass with covering**

appearances depending on their age. Soon after being laid, they are covered with a grayish-tan, protective layer. As they



age, this material often cracks and exposes neatly laid columns of eggs (Figure 3).

Though the spotted lanternfly is capable of flying short distances, its primary means of moving is through hopping. People moving material infested with adults or egg masses is the primary threat for long distance spread.

## Control

There are no known biological controls for this pest in the United States. Birds do not seem to feed on them and there is no evidence that native predatory or parasitic insects help manage lanternfly populations.

In areas where this pest is present or suspected, management often involves removal of Tree of Heaven from the area. As this tree species is also an invasive, it is beneficial to remove all female trees to reduce reseeding. However, by leaving a small number of male trees, these can act as a trap to concentrate the pest so that they may be controlled with an appropriate systemic or contact insecticide.

If trees are removed, the wood or woodchips should not be moved to another location due to potential spreading of the pest through relocation of both adults and eggs. Treating cut stumps with a basal herbicide and oil application will prevent vigorous resprouting of Tree of Heaven.

Egg masses are easily scrapped off when detected and should be double bagged and thrown away. Sticky bands have also been used in spring and early summer as eggs are hatching and immatures are migrating up the stems of trees to feed.

If you find spotted lanternfly in an area where it has not yet been reported, please report it immediately to aid in the control of this invasive pest.



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