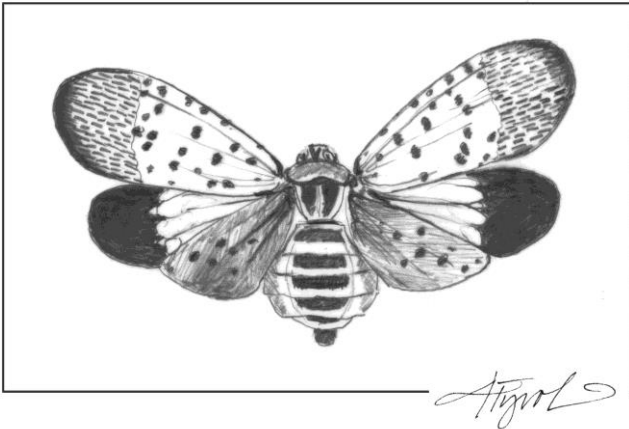


The Outside Story



Yet Another Exotic Pest By: Joe Rankin

Have you seen a spotted lanternfly? If you live in New England, and answered “no,” that’s good. But we’ll have to check back with you next year.

The lanternfly is one of the latest foreign invasive insect pests to become established in North America. And it isn’t a picky eater. Dozens of crops and native trees are go-to foods for this destructive bug.

While it apparently hasn’t made it to this region yet, it is entrenched farther south. Entomologists are watching nervously. “For landowners and orchards they’re a nightmare . . . a total menace to society,” said Judy Rosovsky, the Vermont state entomologist.

The lanternfly, *Lycorma delicatula*, was found in 2014 in Berks County, Pennsylvania, northwest of Philadelphia. Berks and 13 other Pennsylvania counties are now under quarantine, as are three in New Jersey. And it has been found in New York and Virginia.

Despite its name, the lanternfly isn’t a fly. It’s a planthopper. It flies poorly, but jumps well. It attacks some 70 types of crops and trees in North America. It really likes stone fruits — peaches, plums, cherries. It

likes hops and grapes. And hardwood trees like maple, oak, poplar, walnut, birch, and willow. Its preferred host, the tree of heaven, *Alianthus altissima*, is itself an invasive species from Asia now naturalized in the U.S.

Unlike some other imported pests, the lanternfly doesn’t kill trees directly. It just sort of beats them down. “They have piercing, sucking mouthparts. They stick them in the plant and suck its sap,” causing weeping wounds that serve as portals for debilitating molds and fungi, said Rosovsky. Lanternflies also excrete massive amounts of sticky honeydew. Since they tend to congregate in huge numbers, the result is less than appetizing.

“[The lanternfly] can get into an environment and just wreak havoc,” said Stephen Lavalley, the state plant health director for Vermont and New Hampshire for the federal Animal and Plant Health Inspection Service (APHIS). The honeydew can coat entire surfaces. “It’s got that added ‘yuck’ factor to it. It just kind of makes it difficult to be out in your backyard at times.”

In other words, this inch-long, half inch-wide insect can really take the fun out of a barbecue and cost you a fortune at the car wash.

While the lanternfly can fly and jump, that’s not the primary way it expands its range. Stowing away is. Adults hop into anything, and lay yellow-brown masses of 30 to 50 eggs on virtually any smooth surface — cars, trucks, planes, ships, rail cars. “They are really good hitchhikers,” said Rosovsky.

APHIS and state plant inspection agencies, especially in Pennsylvania, are investing a lot in outreach and education. While some invasive insect pests are hard for people to identify with any accuracy, the lanternfly is so distinctive that people get it right 99 percent of the time, Lavalley said.

“It’s a unique-looking insect,” he said. “That kind of works in our favor a little bit.” At the next-to-last stage in its life cycle it is bright red and black with white spots. The colors and its elongated head make it look like a

miniature version of something you'd meet in an alien bar on a remote, battered planet in a galaxy far, far away. Adults sport grayish wings draped tent-like over the body, with the red hindwings underneath giving it a kind of glow, hence, lanternfly.

There are still a lot of questions about the lanternfly. One big one is how much cold it can stand. While initial projections are that it is "cold intolerant," there's no definitive consensus on that. Rosovsky said she compared minimum temperatures in Berks County the year the lanternfly was believed to have arrived in Pennsylvania and found that they were pretty close to the minimum in Bennington, Vermont. There is also unpublished research that "suggests that they could be quite cold tolerant," she added. If that's true, southern Vermont counties could be vulnerable.

Another question: how dependent is it on tree of heaven, a stinky, suckering tree native to China, to complete its life cycle? If even one of its instars, or life stages, depends on compounds it gets from the tree, then going after the host might be one way to get rid of the pest. Rosovsky said there isn't much tree of heaven in Vermont, but when New Hampshire officials surveyed for it they found more than they anticipated.

Meanwhile, education helps curb its spread. Pesticides do kill the bugs, and sticky traps have been used. Manually removing and disposing of egg masses is recommended.

In the end it might come down to finding a predator. A wasp that parasitizes lanternfly eggs in China is one candidate. But research on biological controls takes time. A study published recently in the Proceedings of the National Academy of Sciences found that two native fungi killed lanternflies in Pennsylvania, leading to a localized collapse of populations. Researchers say it's too early to tell how the fungi will affect the lanternfly long term.

Meanwhile, keep a sharp eye out for a bug that looks like it's holding a red flashlight under a blanket.

Joe Rankin writes on forestry, nature and sustainability. He lives in Maine. The illustration for this column was drawn by Adelaide Tyrol. The Outside Story is assigned and edited by Northern Woodlands magazine (www.northernwoodlands.org) and sponsored by the Wellborn Ecology Fund of the New Hampshire Charitable Foundation (wellborn@nhcf.org).

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