

# SPOTTED LANTERNFLY IN PENNSYLVANIA

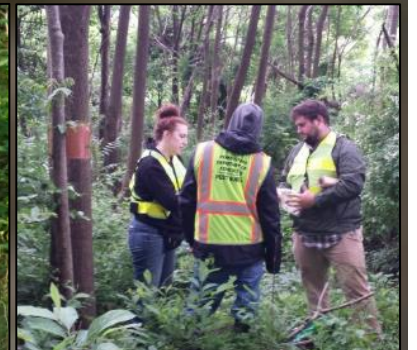
John Baker Spotted Lanternfly Program Coordinator



PennState



pennsylvania  
DEPARTMENT OF CONSERVATION  
AND NATURAL RESOURCES





# **SPOTTED LANTERNFLY IN PENNSYLVANIA**

John Baker Spotted Lanternfly Program Coordinator



**On September 22, 2014 the Entomology Program of the Pennsylvania Department of Agriculture received a report from an educator from the Pennsylvania Game Commission**

**The report detailed damage to *Ailanthus altissima* (Tree of Heaven) on private property in Eastern Berks County, PA being caused by an unknown insect**

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*Lycorma delicatula* (WHITE):

A Planthopper in the Family Fulgoridae

696 Species of Lanternflies in the world

Only 17 species in North America

Like most planthoppers, *Lycorma* pierce the stems of plants, trees, and vines and feed on phloem.



Christopher Marley Planthopper Formation

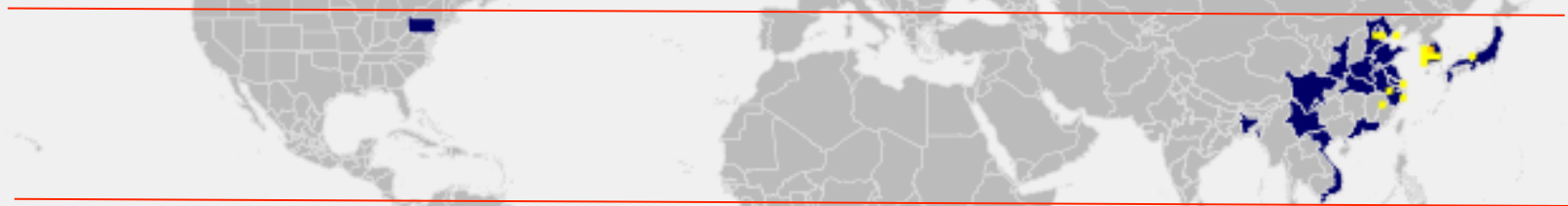
# SPOTTED LANTERNFLY IN PENNSYLVANIA

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The spotted lanternfly is native to Asia and is found in China, Bangladesh, Vietnam

It was introduced to Japan, South Korea and Pennsylvania



In South Korea, it is considered an invasive pest and impacts grapes and peaches



Follow FLOW:





# SPOTTED LANTERNFLY IN PENNSYLVANIA

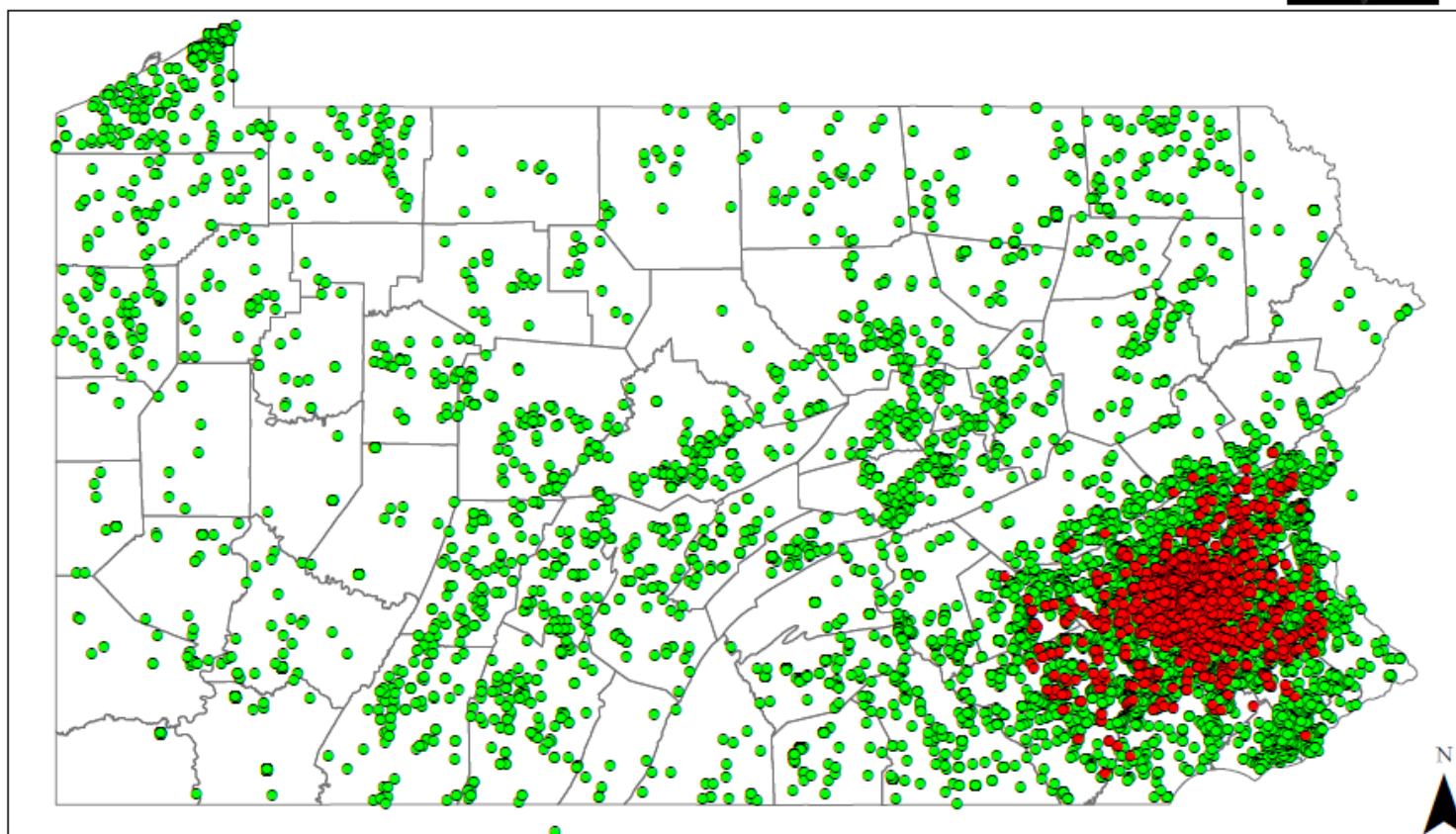
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2014 -- 2017 Lycorma Detection Survey  
Results through 31 October 2017



Current Distribution:



Spotted Lanternfly Presence

- Positive
- Negative

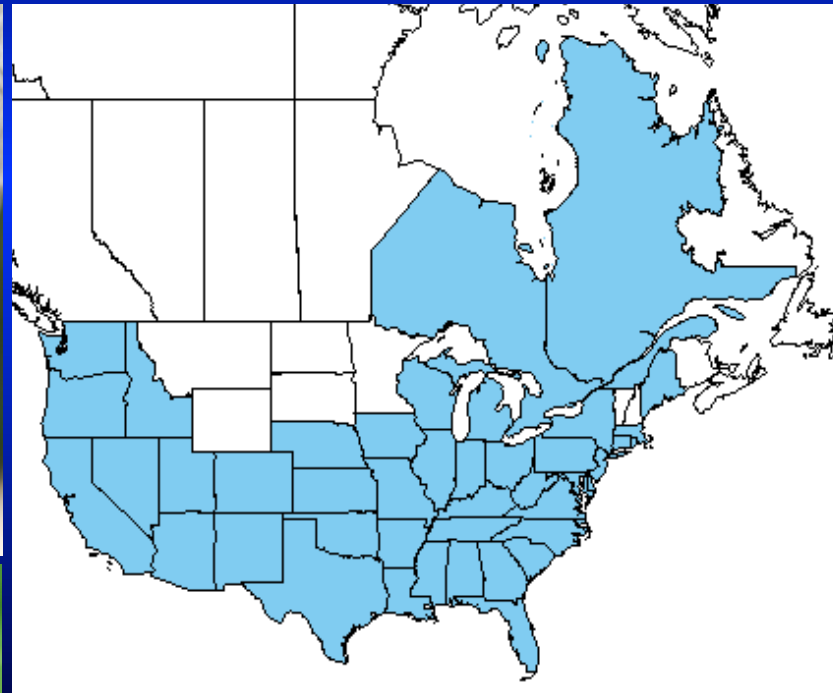


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Spotted  
Lanternfly Makes  
use of over 70  
different plant  
species but  
strongly prefers  
the invasive  
“Tree of Heaven”



Tree of Heaven Distribution-USDA PLANTS Database



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**Impact: Damage  
grape, hops,  
orchards,  
hardwood, and  
nursery industries**



**Damage comes  
from feeding  
waste (honeydew)  
Which turns into  
sooty mold**





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**Impact: Damage reported on basil, blueberry, cucumber and horseradish in 2017**





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**Impact: Heavy Feeding on Walnut, Red Oak, Maple, and Hickory resulted in flagging and dieback**





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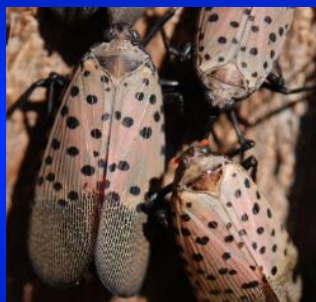
**Impact : Adult Clustering, swarming and Honeydew accumulation can impact quality of life**





# SPOTTED LANTERNFLY IN PENNSYLVANIA

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Adults: July - December



Egg Laying:  
September - November



Eggs: October - June



Fourth Instar:  
July - September

## One Generation Per Year



Third Instar: June - July



Second Instar: June - July



Hatch and 1st Instar:  
May - June



# SPOTTED LANTERNFLY IN PENNSYLVANIA

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Egg masses have on average between 30-50 eggs and can be laid on trees or any smooth surface





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Egg masses have been found on many different objects and often are well hidden





# SPOTTED LANTERNFLY IN PENNSYLVANIA

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Egg masses that can be seen or reached are easily controlled by scraping





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Immature stages migrate up trees/  
plants each day and are easily  
caught on sticky tree bands





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Adults begin to appear in late summer, feed preferentially on *Ailanthus*, mate, and lay eggs

Males and females mate multiple times





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All life stages can hitchhike to new areas, but egg and adults pose the greatest risk for movement





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**The Spotted lanternfly program relies on cooperation.**

**Local officials, state agencies, lead the organizational charge**

**Extension, Universities, and the USDA research new methods to deal with this pest**

**PDA crews, USDA Crews, volunteers, property owners, local municipalities, and businesses work in concert**





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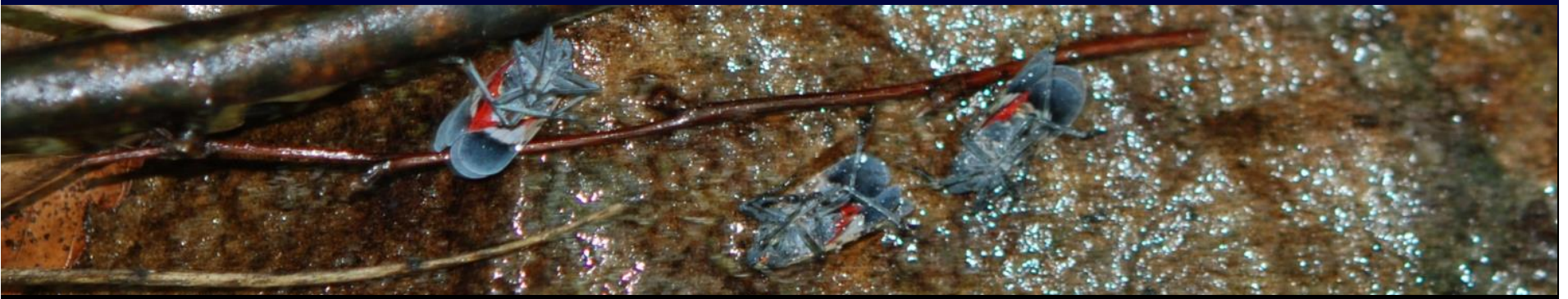
## SPOTTED LANTERNFLY NUMBERS THROUGH 2017

10,589 Trees Banded, Killing 1,065,258 Lycorma

Egg mass scraping killed 1,580,530 Lycorma

18,000 Public reports investigated, 98% accurate

Ailanthus removal/trap tree setup underway





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SLFVideoAdd2017.mp4



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## Removal-Trap Tree Method

Most Ailanthus are removed or killed with herbicide





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**Removal-Trap  
Tree Method**

**The trap trees  
attract**

**and the  
insecticide kills**



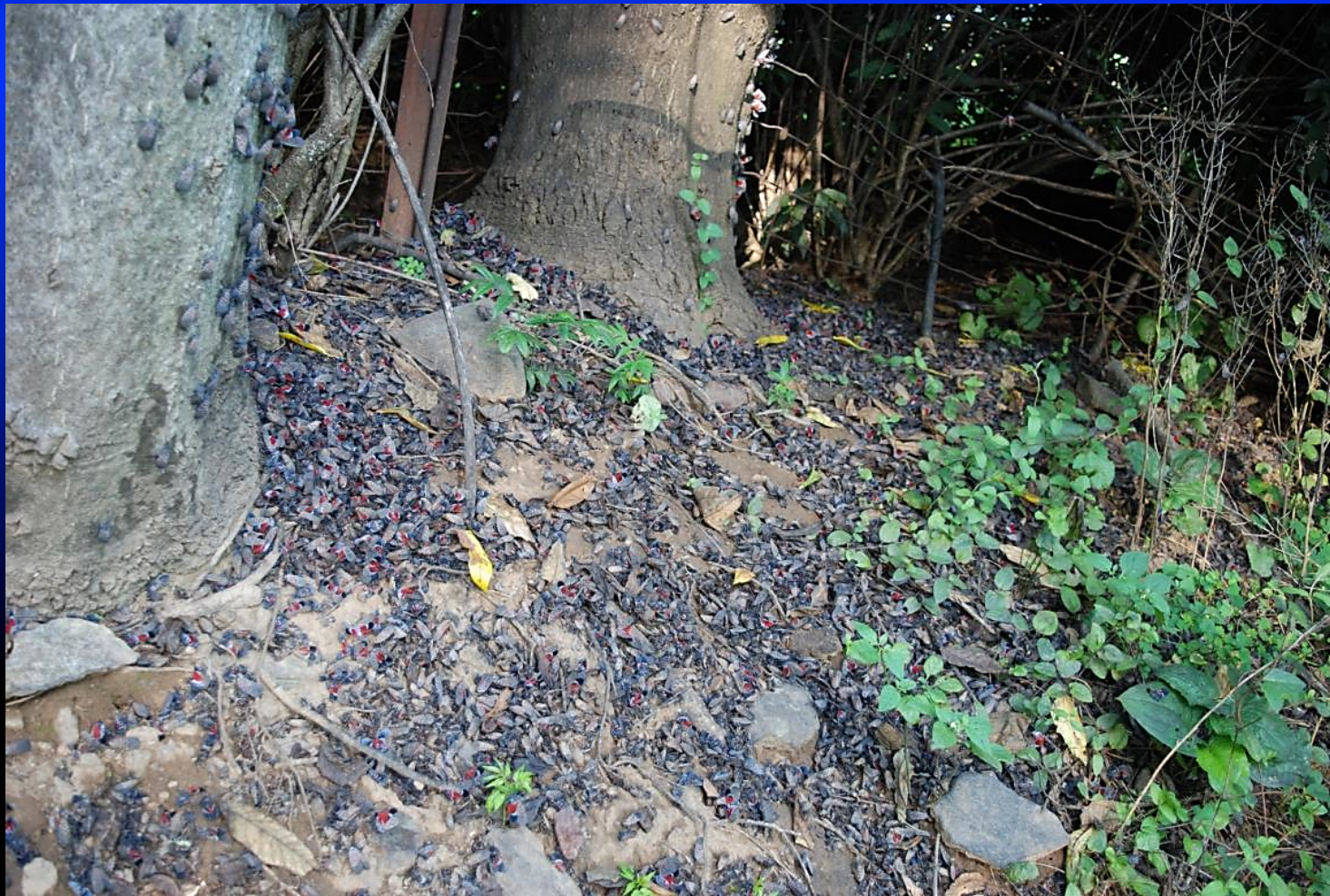


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## Impact on Adults is Dramatic





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## Impact on Adults is Dramatic





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## Impact on Adults is Dramatic





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Covers all life stages  
of Spotted Lanternfly

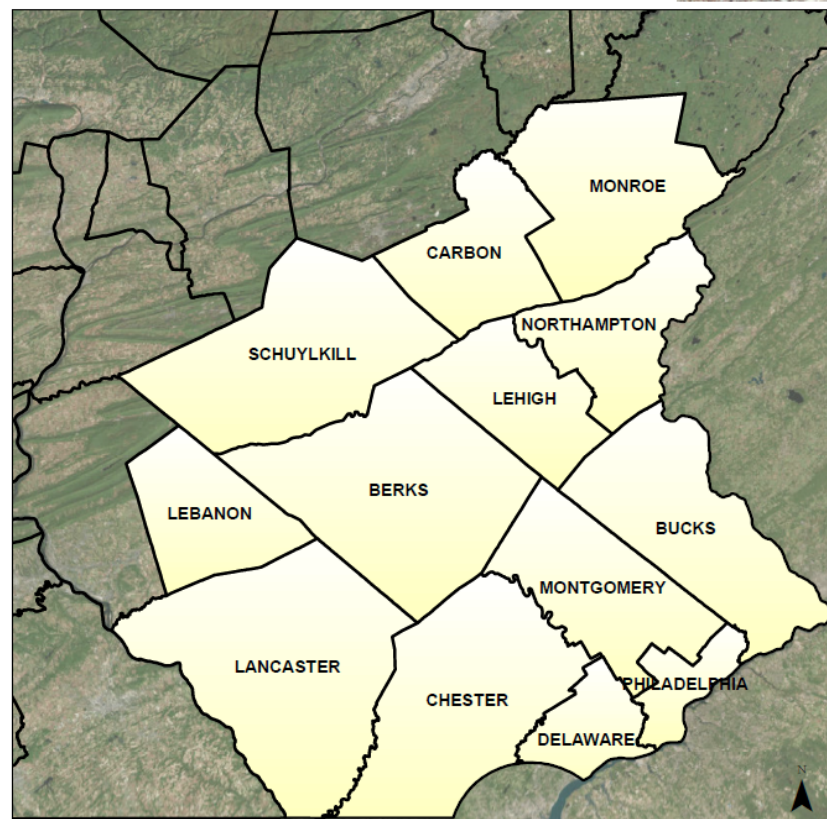
Meant to slow down  
but not stop business

Fines are possible

Business operating in  
the quarantine can  
get compliance  
agreements

## Spotted Lanternfly Quarantine Map

Counties Under Quarantine as of November 4, 2017





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## THANK YOU

[http://www.agriculture.pa.gov/Plants\\_Land\\_Water/PlantIndustry/Entomology/spotted\\_lanternfly/Pages/default.aspx](http://www.agriculture.pa.gov/Plants_Land_Water/PlantIndustry/Entomology/spotted_lanternfly/Pages/default.aspx)

