VIRGINIA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

Spotted Lanternfly

WHAT DOES THIS MEAN FOR FREDERICK COUNTY AND THE CITY OF WINCHESTER

History

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

It was introduced to Japan, South Korea and Pennsylvania and Virginia

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

Spotted Lanternfly in Pennsylvania

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History

- September 22, 2014 found in Berks County in SE Pennsylvania. First US record.
- In PA, found at a rock yard that received stone products from China.
- PA business sent rock to 2 sites in Virginia. One was in Frederick County.

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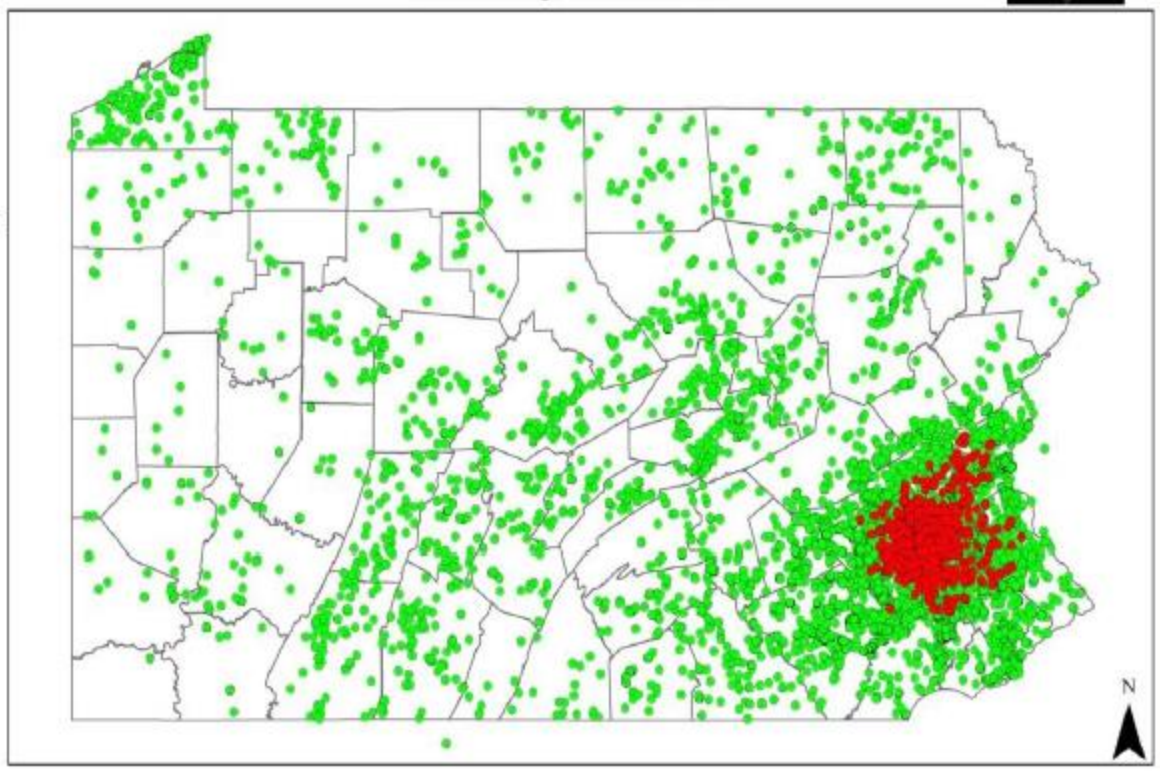
Current Status

- PA Quarantine now covers 13 Counties. Check their website for more information.
- VDACS has been surveying the 2 sites in VA since 2015 with no finds until Jan. 9, 2018.
- There has also been a detection in Delaware, Maryland, New Jersey and New York and one other site in Virginia.



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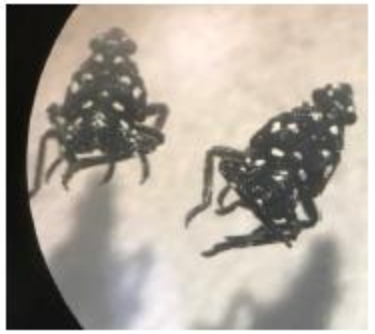


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What Is At Risk for Pennsylvania?

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Current Values of Some Commodities Affected

- Forest Products: $16.7 billion
- Grapes: $28 million
- Apples: $87 million
- Peaches: $19 million
- Nursery and Landscape: $944 million

Unable to Estimate Value of Losses

- Property Values
- Tourism at PA parks and Game Lands
- PA Ecosystems
- New Business Initiatives
  - Port of Philadelphia
  - PA Preferred Brew

Hosts

New host in the US; SLF prefers hops, *Humulus lupulus,* over all other hosts.

Sorry beer drinkers

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Impact:

Damage reported on basil, blueberry, cucumber and horseradish in 2017

Target Species

Trees (30 species)

- *Acer* – 4 spp.
- *Ailanthus altissima***
- *Amelanchier canadensis*
- *Betula lenta*
- *Betula papyrifera*
- *Carya glabra*
- *Carya ovata*
- *Catalpa*
- *Cornus florida*
- *Fagus grandifolia*
- *Fraxinus americana*
- *Juglans nigra*
- *Liriodendron tulipifera*
- *Malus**
- *Nyssa sylvatica*
- *Platanus occidentalis*
- *Populus grandidentata*
- *Prunus* sp.*
- *Prunus serotina*
- *Quercus* – 3 spp.
- *Robinia pseudoacacia*
- *Salix* spp.
- *Sassafras albidum*
- *Tilia americana*
- *Ulmus rubra*

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What is at Risk

- Virginia's Grape and wine industry contributes $1,4 billion to the state economy
- The apple and peach industry contributes another $242 million
- 200 breweries in VA with gross receipts over $9 billion, driving growth in the local hops business
- Unknown impact on lost trade that could result from this pest

Human Impact

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Impacts

- Lanternfly have piercing sucking mouth parts.
- Produce lots of honeydew.
- Sooty mold grows on honeydew making fruit unsellable and affects the flavor of beer or wine when heavily coated hops or grapes are used.
- Productivity is reduced.

Damage

Grape harvest can be decreased by 75-90%. Sooty mold makes the fruit unmarketable.

SLF may be toxic to domestic animals such as horses because of Cantharidin (the same toxic chemical in blister beetles) and toxic metabolites from Tree of Heaven.

Chemical analysis is being done in PA; Cantharidin toxicity is cited in Chinese literature but that needs to be fully translated.

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Impacts

- Small plants can be overwhelmed by feeding injury and die.
- In larger trees there can be flagging and dead branch tips.

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Impacts

Spotted Lanternfly can be a nuisance to homeowners when they are found in high numbers.

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Damage

Sooty mold stunts plants, can kill understory

Tiffany Mauro, USDA APHIS PPQ

Lawrence Barringer, Pennsylvania Department of Agriculture, Bugwood.org
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Damage

- Weeping wounds
- Black trail of sap down trunk
- Increased activity from hymenopteran such as wasps, hornets, ants, bees etc.

USDA United States Department of Agriculture

Impacts are unknown for ornamental plants in the US

As the population of spotted lanternfly grows, and the insect adapts, new threats to multiple industries emerge.

Everyone needs to work to control the insect.

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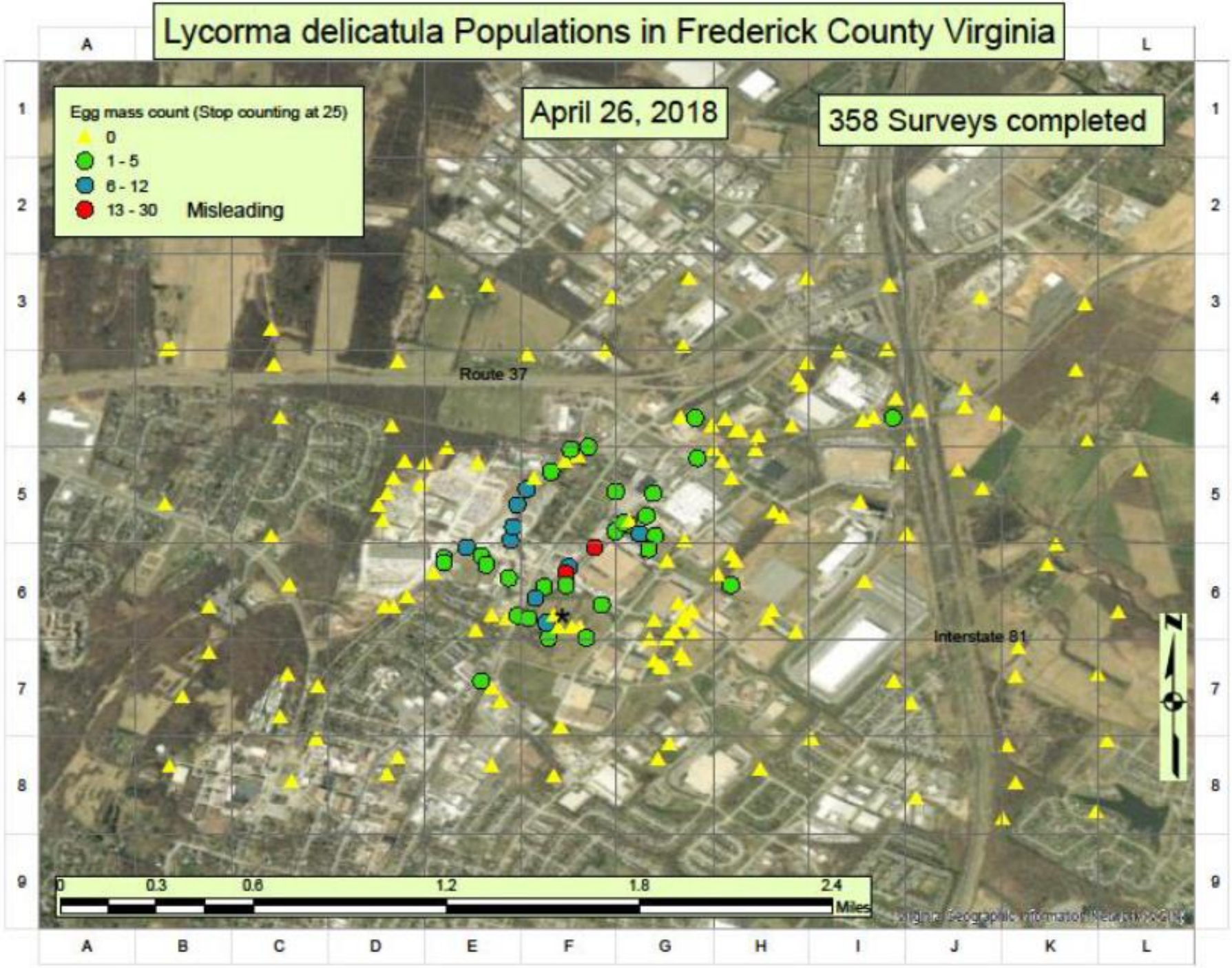
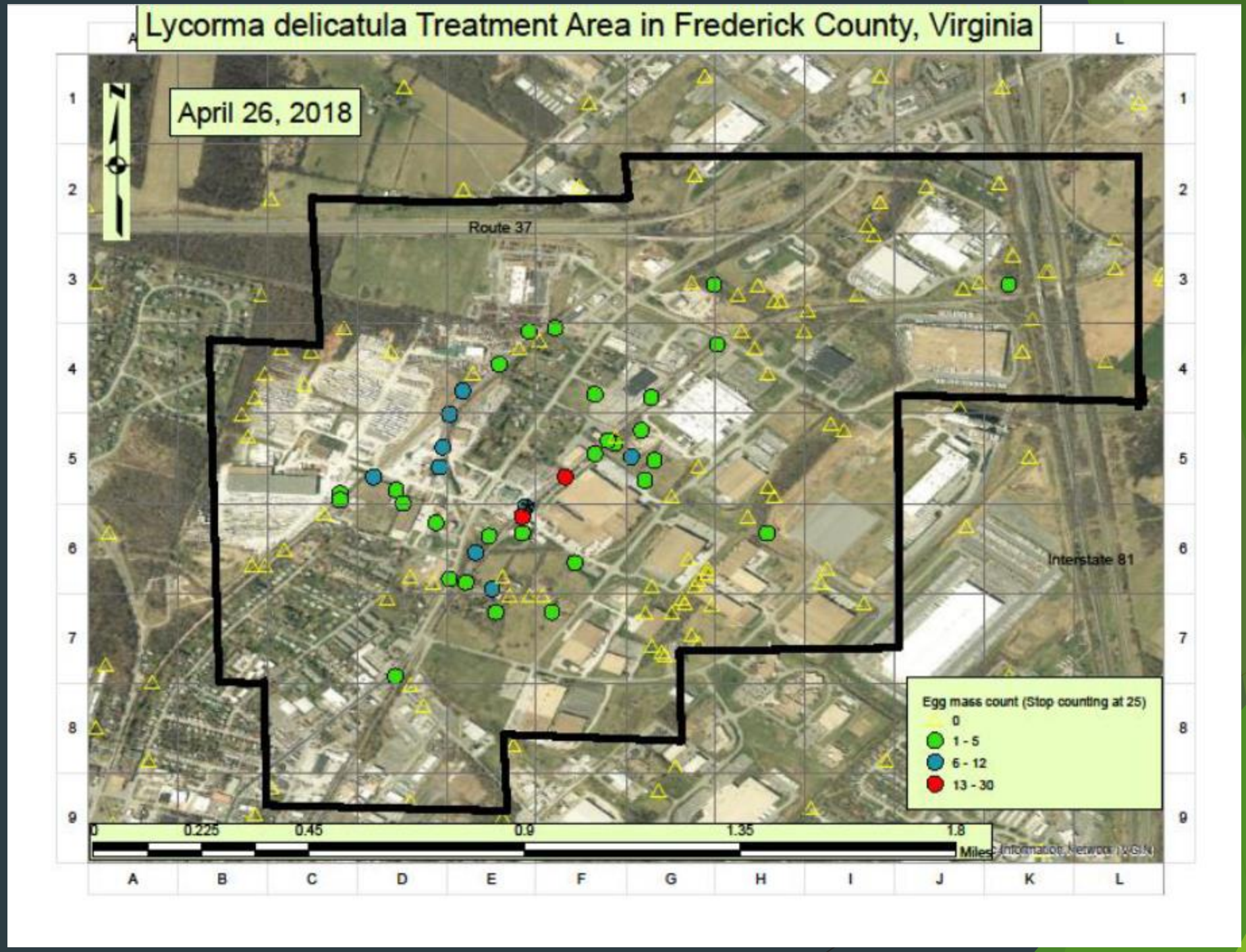
Businesses may be affected by Spotted Lanternfly regulations in other states


Lycorma delicatula Populations in Frederick County Virginia
Egg mass count (Stop counting at 25)
0
1 - 5
6 - 12
13 - 30
Misleading
April 26, 2018
358 Surveys completed
Route 37
Interstate 81
N
0
0.3
0.6
1.2
1.8
2.4
Miles
A
B
C
D
E
F
G
H
I
J
K
L
1
2
3
4
5
6
7
8
9


Lycorma delicatula Treatment Area in Frederick County, Virginia
April 26, 2018
Route 37
Interstate 81
Egg mass count (Stop counting at 25)
0
1 - 5
6 - 12
13 - 30
0
0.225
0.45
0.9
1.35
1.8
Miles
A
B
C
D
E
F
G
H
I
J
K
L
1
2
3
4
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6
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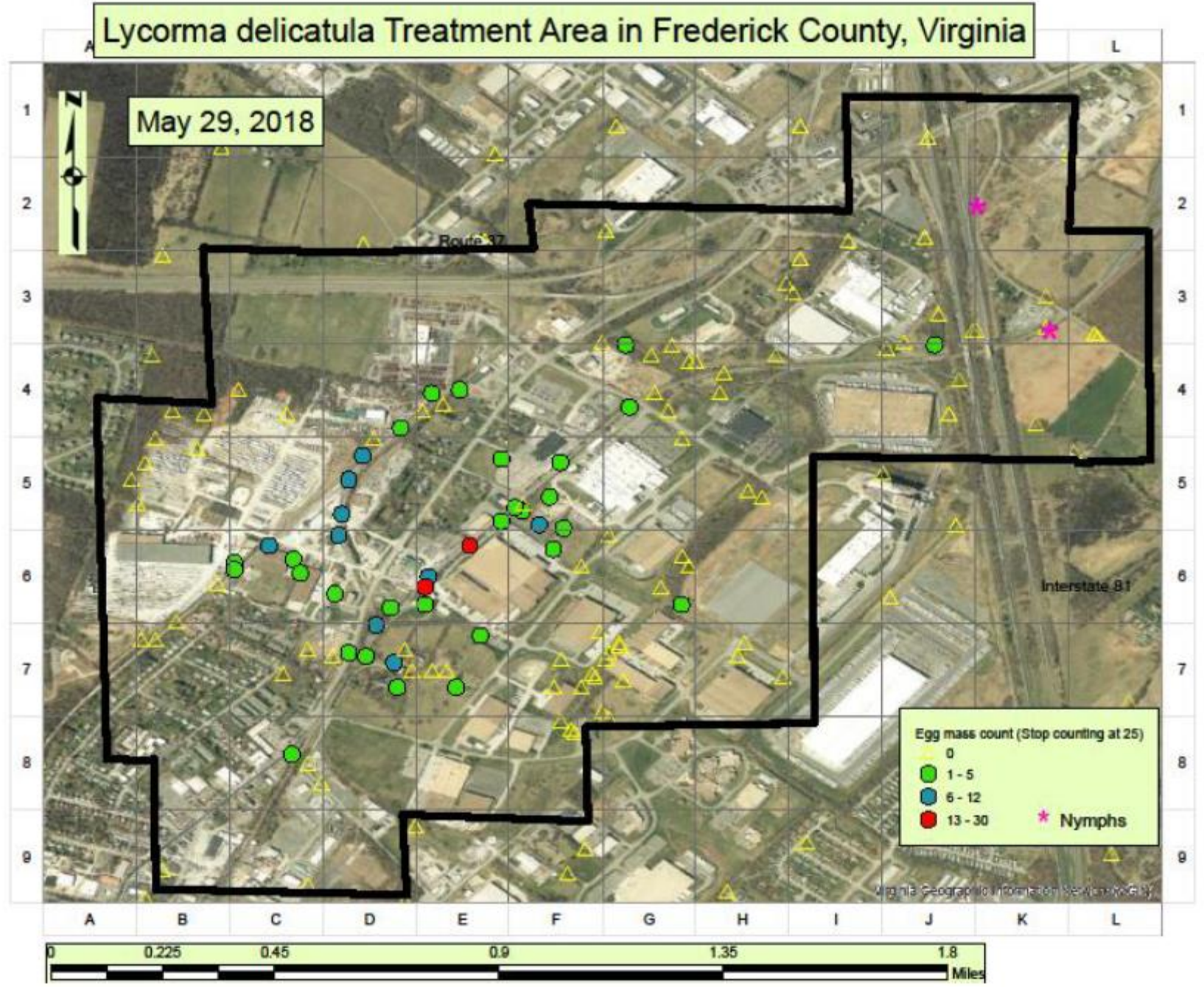
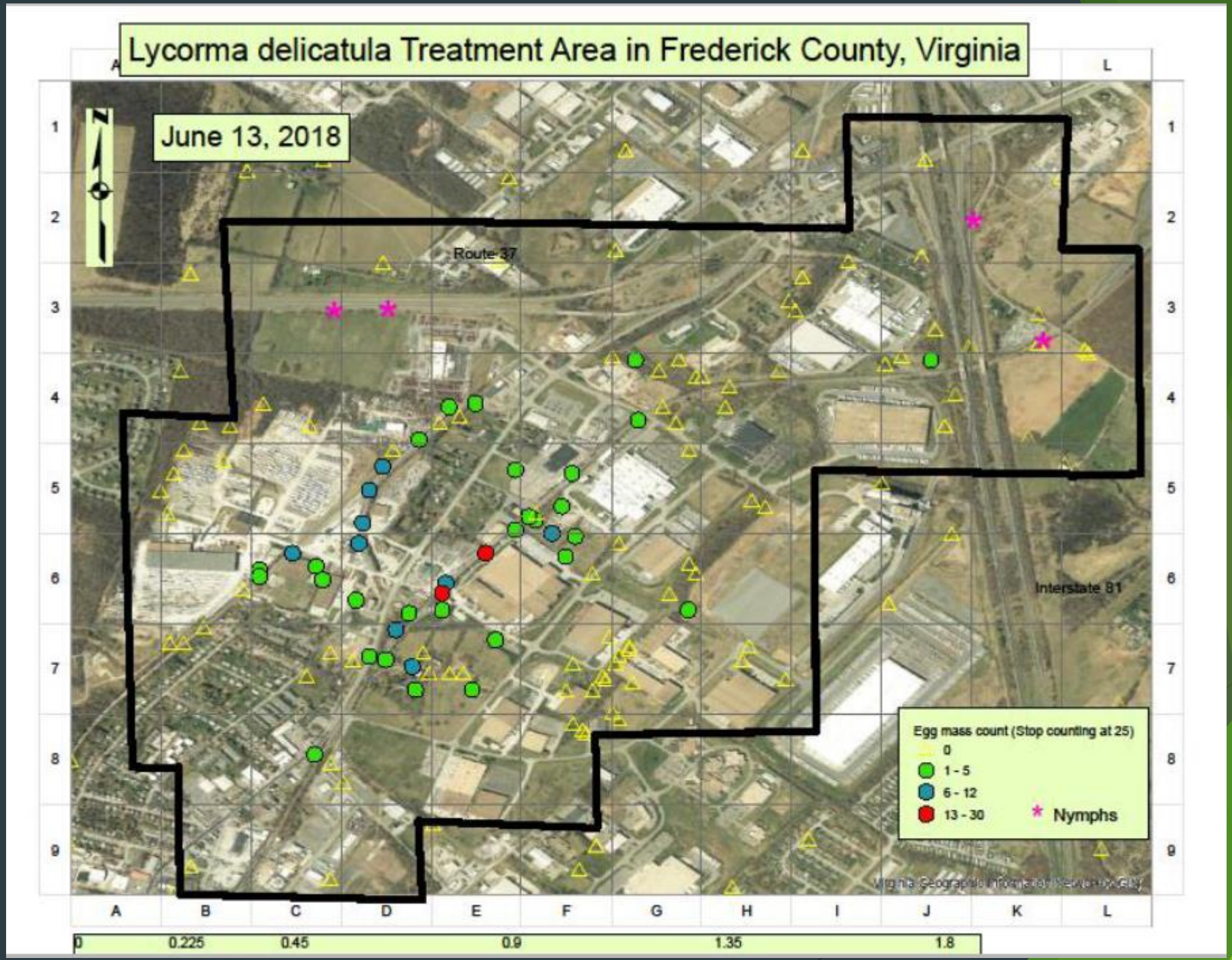
8
9


Lycorma delicatula Treatment Area in Frederick County, Virginia
May 29, 2018
Route 37
Interstate 81
Egg mass count (Stop counting at 25)
0
1 - 5
6 - 12
13 - 30
Nymphs
A B C D E F G H I J K L
1 2 3 4 5 6 7 8 9
0 0.225 0.45 0.9 1.35 1.8
Miles


Lycorma delicatula Treatment Area in Frederick County, Virginia
June 13, 2018
Route 37
Interstate 81
Egg mass count (Stop counting at 25)
0
1 - 5
6 - 12
13 - 30
Nymphs
A B C D E F G H I J K L
1 2 3 4 5 6 7 8 9
0 0.225 0.45 0.9 1.35 1.8

Frederick County and Winchester, Virginia

VDACS has conducted 358 egg mass surveys to delimit the generally infested area.

We started to remove egg masses and conducted outreach visits in the generally infested area.

We have developed a work plan for a Cooperative Agreement with USDA/APHIS for $263,069.