

Spotted Lanternfly: A New Invasive Insect



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Distribution: US

- Nov. 20th 2017 DE found one adult.
- Nov. 29th 2017, NY received apples from PA with adults in the box.
- Jan and Feb 2018 NJ had three regulatory incidents; 2 in Warren and 1 in Mercer Counties.
- Jan 2018 VA announces two active infestations around Winchester.

Host



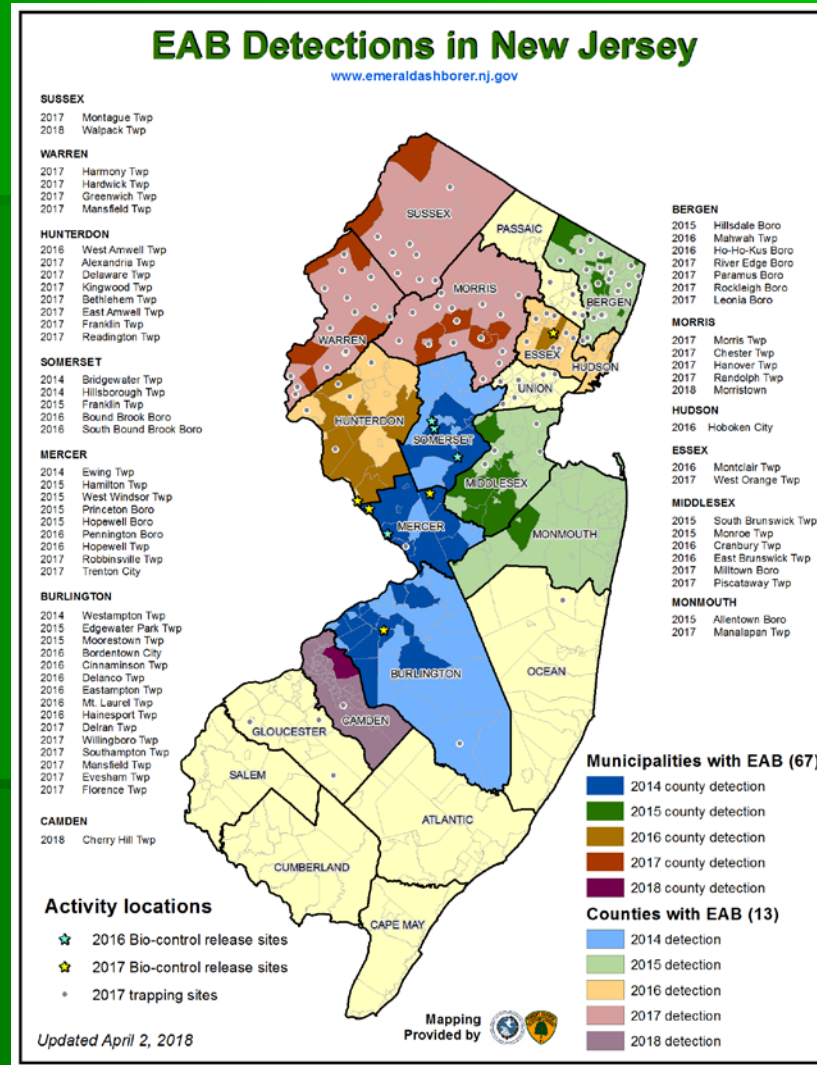
- Spotted lanternfly feeds on a variety of host plants including fruit trees, ornamental trees, woody trees, vegetables, herbs and vines.
- Apples, birch, cherry, dogwood, grapes, hops, lilac, maple, poplar, stone fruits, and tree-of-heaven are among more than 70 species of hosts attacked by this pest.



Emerald Ash Borer *Agrilus planipennis*



Slide: Paul Kurtz NJDA



Original US discovery in 2002 in Detroit, MI.

Native to Asia (China, Korea, Japan, Mongolia).

Map: Marie Cook NJFS

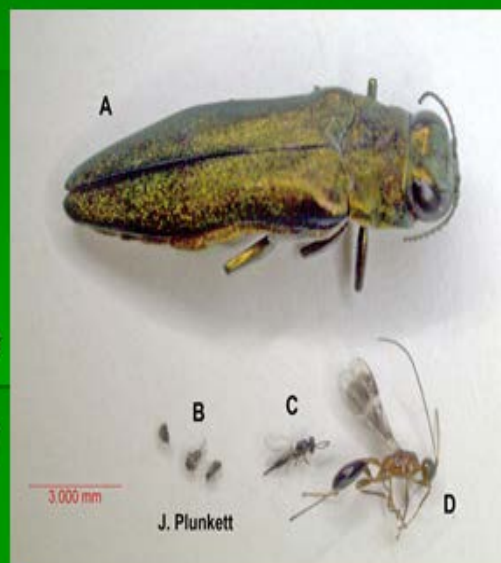
EAB Bio-Control

Natural Enemies

- The USDA APHIS PPQ Biological Control Production Facility in Brighton, MI
- Designed to produce EAB parasitoids
- Four non-native wasp species

Parasitoid wasps

- A= EAB
- B=*Oobius agrili*
- C=*T. plannipennis*
- D=*Spathius agrili*



O. agrili will parasitize 60% of the eggs laid in summer; *T. plannipennis* will parasitize 50% of the larvae (4 generations/year); *Spathius spp.* will parasitize up to 90% of the larvae and *S. galinae* has been released in NJ.

All released in MI in 2007; Data from Michigan show 90% reduction in EAB attacks on surviving trees since 2009 due to the biological controls. Takes 5-10 years. **FHAAS-2017-02**

NJ EAB Bio-Control



- 4 locations 2016
- 5 locations in 2017
- Will be 4-5 new sites in 2018
- *Oobius agrili*
- *Tetrastichus plannipennis*
 - *Spathius galinae* (released 2017)



Photo: Wikipedia

- **2015-2016** = 48,731 egg and larval paras rel.
- **2017** = 53,706 egg and larval parasitoids released.

- Evaluation of trap catches showed no recoveries but that is typical. Recoveries of parasitoids usually happens 3+ years after the first release.

New Biocontrols

Black Swallow-worts

- *Hypena opulenta*
- 2018



Photos: uri.edu

Japanese Knotweed

- *Aphalara itadori*
- 2019



Photo: britishbugs.org.uk

