New and Unusual

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Grower sent this picture on May 1, ‘13 Fuji/Pajam 2 in 4th leaf.
Frass coming from 1 mm holes
100’s of trees infested
Shot hole borers – 5 sites
Which came first? Fire blight or Shot hole borers?
Eggs/larvae in brood chamber
Jun 26, ‘13

Liz Tee 2013
Xylosandrus germanus – black stem borer


Keyed out by Dan Gilrein
An Ambrosia beetle

- Taxonomy - Coleoptera: Scolytidae: Scolytinae: Scolytini: Xyleborina
- First introduced from Asia into Long Island in 1932, reported in NY, CT, MD, NJ, RI, AL, OK, GA, MS, TN, TX, OR, BC.
- Reputation for attacking apparently healthy plants
- Attacks 1-50 cm diameter stems
- Toothpick like frass tubes
- [http://oregonstate.edu/Dept/nurspest/Xylosandrusgermanus.htm](http://oregonstate.edu/Dept/nurspest/Xylosandrusgermanus.htm) - Jul 12, 2006
- Can fly 2 km, and spread 10’s of Km per year
Life cycle – 2 generations/year

- Adults overwinter in galleries at base of trees
- Emerging adults in the spring fly low to the ground – trap at 1 m off the ground.
- Each female can produce 1-53 eggs, and the sex ratio was 10 females:1 male. Eggs stage is 6 days.
- Female enter bark, 1 mm hole, extended horizontally into the wood 2-3 mm more, then widen the tunnel for the brood chamber which goes vertically 7-12 mm long.
- Larvae continue to develop in brood chamber and branch channels feeding on the Ambrosia fungus lining the galleries. Larval stage is 18 days; pupal stage for 25 days.
- Larvae go through 3 instars.
Control Recommendations?

• Prevent stress
• Removed and destroy infested wood
• Monitor flight
• Ambrosia beetles are difficult to control with insecticides - insecticides must either be closely timed with beetle attacks, be applied repeatedly, or have long residual activity (Oliver and Mannion, 2001).
• Insecticides appropriately labeled as bark treatments may be used against new attacks, but systemic insecticides are not effective.
Summary for 2013

• Growers complained of trees dying.
• Found *X. germanus* in 6 sites in WNY.
• Collected samples and tested for FB – 4 of 6 sites have SmREa ?
• 2014 - Ethanol-baited traps used to detect and monitor the presence of *X. germanus* in Europe, Asia and North America
• Traps are significantly less attractive to *X. germanus* than to other ambrosia beetles, and are only suited to monitor the presence of the species, not its abundance.
Fire blight or ?
Leopard moth - *Zeuzera pyrina* (L.)
Leopard moth
Leopard moth larva responsible for a few trees deaths in young plantings near woods edges.
Internal lep in WNY

- 67 loads to date
- 78 apples
- 85 worms, 10 OFM/LAW and 75 CM
- Compared to over 500 loads in 2012 and 1200 worms

- SUCCESS!!!
Fire blight – Strep resistant survey

• 2013 – 8 new farms with 18 samples resistant to strep
• 2012 – 9 farms
• 2011 – 5 farms
Streptomycin resistant strains of Ea
Fruit Russett?