Agrilus sp.

9895

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Overview of Survey Project

◊ Rearing barrels installed at two large, urban arboreta: Green-Wood Cemetery in Brooklyn, NY and Arnold Arboretum in Boston, MA

◊ Material from tree/shrub prunings and removals loaded into sealed barrels and allowed 2 years for insects to emerge

◊ Focus on stressed, diseased, or dying trees as well as uncommon or non-native tree species

◊ Goals are to
  ◊ 1. Make early detections of new exotic pests
  ◊ 2. Expand knowledge of distribution of native and non-native beetles
  ◊ 3. Make new host associations of native and non-native beetles
Green-Wood Cemetery

- Brooklyn, NY
- Founded in 1838
- 478 acres
- Arboretum accreditation in 2015
- 172 species in 72 genera
- <1km from several major terminals
Arnold Arboretum

- Boston, MA
- Founded in 1872
- 281 acres
- Oldest public arboretum in US
- 2,139 species in 367 genera
- <10km from the port of Boston
Results

◊ Over 8605 beetles comprising 223 species... and counting
◊ 16 New State Records
◊ Some Scolytinae that are rarely collected from traditional trapping methods
  ◊ Male xyleborini

◊ New host associations
  ◊ At least 110 new host associations for Cerambycidae, Buprestidae, Curculionidae, Scolytinae, Mordellidae, Ptinidae
  ◊ Astylopsis macula, Ambrosiophilus atratus, Dryoxylon onoharaense, Scolytus mali from Amelanchier sp.
  ◊ Xyleborinus saxesenii, Xyllosandrus germanus in Enkianthus chinensis (Chinese enkianthus)
  ◊ Anthaxia quercata in Picea asperata (Dragon Spruce)
And... 1 species new to science

- *Agrilus* sp. 9895, temporary name given pending revision of species-group
- Related to European *Agrilus rosclidus* species-group
- Discovered from a sample of European beech (*Fagus sylvatica*) pruned in June 2017
Identification

- Head large, strongly arcuate and without medial impression
- Pronotum strongly transverse (wider than long)
- Elytra with regular, white, sparse and recumbent pubescence
- Elytral apices rounded
- Color metallic olivaceous-brown with some reddish and greenish tinges
- Eyes smaller than half width of vertex (dorsal view)
- Prehumeral carina well developed
- Small size (3.7–3.9 mm)
Identification

Prosternal lobe shallowly emarginate

Metatarsomere 1 in male with row of long setae on lower side

Prosternal process slender, with erect white pubescence

Inner tarsal claws widely separated

1 mm
Identification

Female frons golden red

Male frons golden blue/green

Antennae obtusely serrate from antennomere 4

Truncate projection at tip

Medial lobe wider than parameres

Aedeagus robust, widest before apex
Host

Known Host: European Beech – *Fagus sylvatica* L.
Other Potential Hosts

- Other genera of Fagaceae –
  The Beech Family
  - Oak – *Quercus* spp.
  - Chestnut – *Castanea* spp.
  - Chinquapin – *Castanopsis* spp.
  - Stone Oak – *Lithocarpus* spp.
Signs & Symptoms

- Look for stressed host trees
  - Chlorotic foliage
  - Dead twigs
  - Dieback
  - Dead fallen branches
Signs & Symptoms

◊ Exit holes
  ◊ D-shaped and very small
  ◊ Branches 0.4 – 3 cm in diameter
  ◊ Check under the tree for dead fallen branches with exit holes
Signs & Symptoms

♢ Feeding Galleries

♢ Subcortical, longitudinal galleries engraved into the outer sapwood

♢ Travels from outer twigs inward, sometimes originating from terminal end of twigs at bud
**Dacne picta**

- New continental record
- Native to Asia where it is one of the most important pests of log-cultivated shiitake mushrooms.
- Collected in a funnel trap targeting nitidulid beetles baited with fermenting wort in Brooklyn, NY.

**Dendroctonus frontalis**

- First detection of southern pine beetle in New York City. First report on *Pinus thunbergii*.

**Bretziella fagacearum**

- First detection of oak wilt in New York City.
Questions?

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