



Agrilus sp.
9895



Marc DiGirolomo

Michael Bohne

Kevin Dodds

USFS – Durham, NH

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

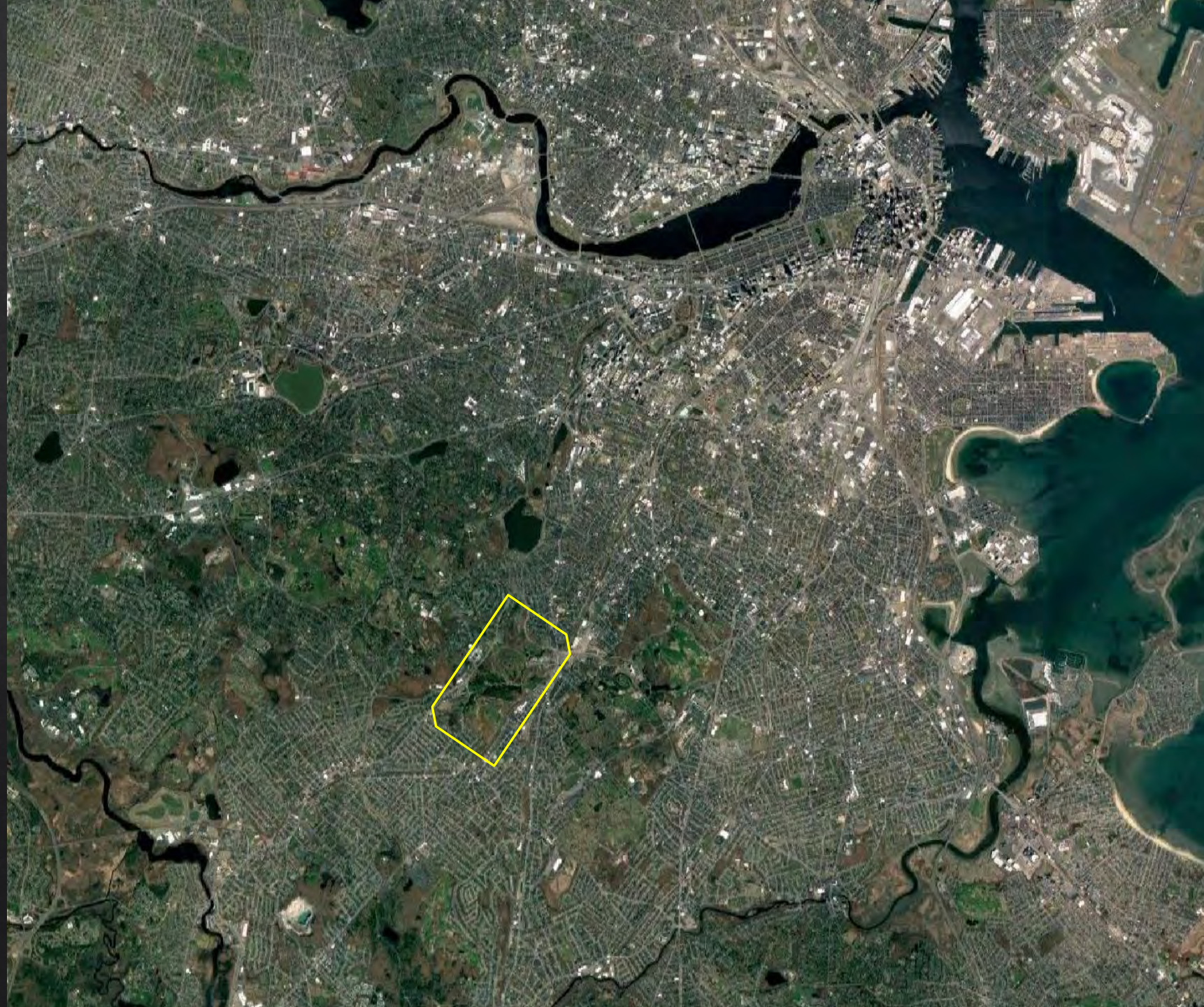
- ◇ Brooklyn, NY
- ◇ Founded in 1838
- ◇ 478 acres
- ◇ Arboretum accreditation in 2015
- ◇ 172 species in 72 genera
- ◇ <1km from several major terminals





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



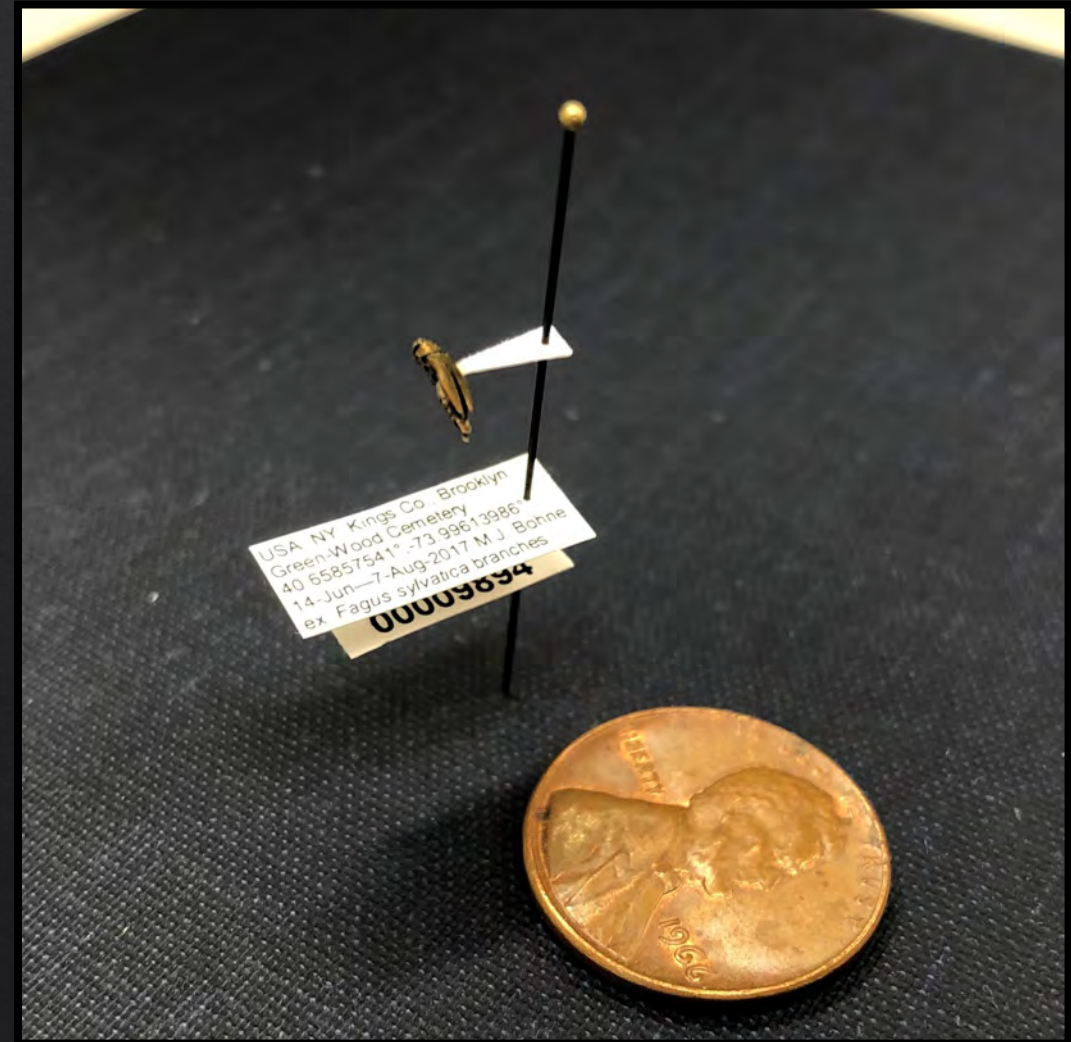
Results

- ◇ 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*, *Xylosandrus germanus* in *Enkianthus chinensis* (Chinese enkianthus)
 - ◇ *Anthaxia quercata* in *Picea asperata* (Dragon Spruce)

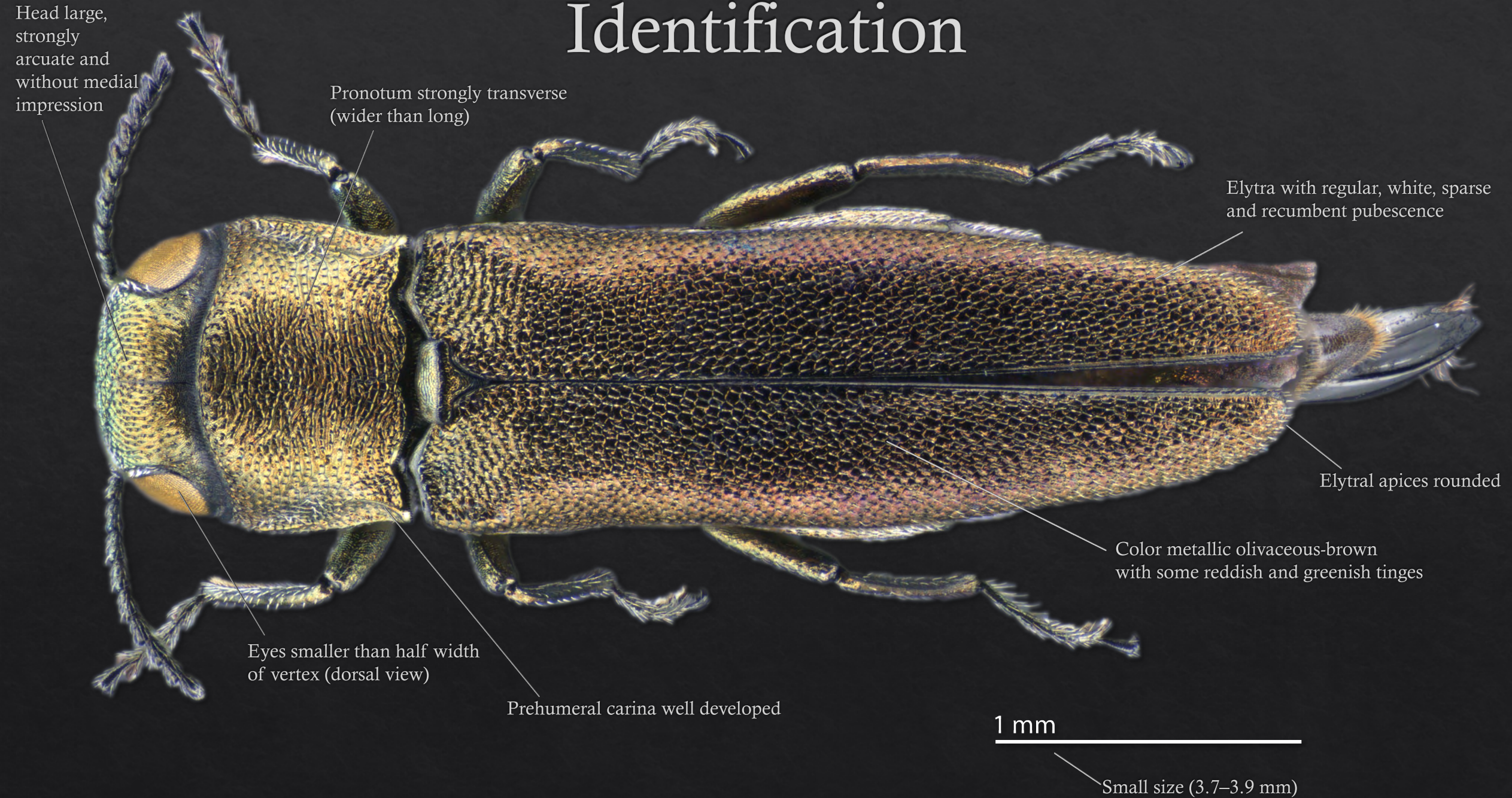


And... 1 species new to science

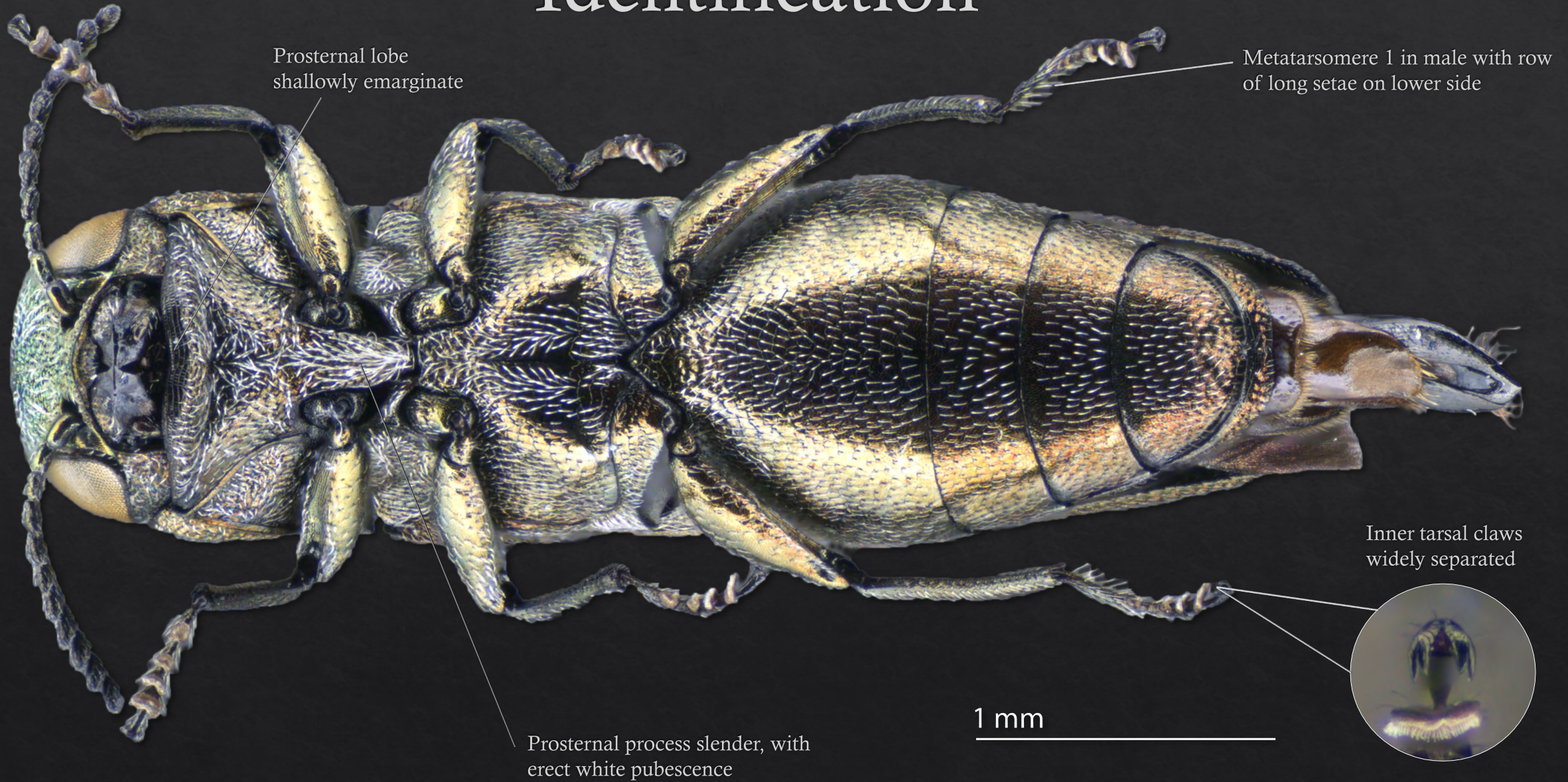
- ◆ *Agrilus* sp. 9895, temporary name given pending revision of species-group
- ◆ Related to European *Agrilus roscidus* species-group
- ◆ Discovered from a sample of European beech (*Fagus sylvatica*) pruned in June 2017



Identification



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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



Castanea mollissima - Chinese chestnut



Other Potential Hosts

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

Quercus palustris – Pin Oak



Signs & Symptoms

◇ Look for stressed host trees

◇ Chlorotic foliage

◇ Dead twigs

◇ Dieback

◇ Dead fallen branches

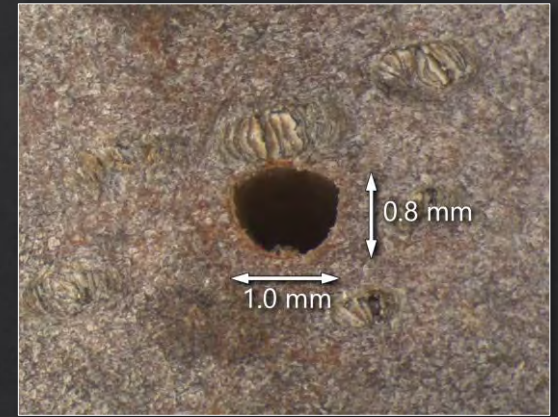


Signs & Symptoms



◇ 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?

- ◆ Special thanks:

- ◆ Eduard Jendek, Czech University of Life Sciences
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- ◆ Rick Hoebeke, University of Georgia
- ◆ Amanda Beauregard, Forest Service, University of Southern New Hampshire

michael.bohne@usda.gov