



# America's Least Wanted Wood-Borers

Department of Entomology

## OAK SPLENDOR BEETLE, *AGRILUS BIGUTTATUS* (FABRICIUS)

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This metallic wood-boring beetle (Family Buprestidae) primarily attacks oaks. Oak trees under stress are especially at risk. Oak trees in climatic conditions similar to the beetle's native range exist at many North American ports. Controlling this beetle will be very difficult if it becomes established because the larval stage causing damage is concealed within the tree as with other wood-borers.

**Distribution:** The native geographical range of this beetle includes parts of Asia, Africa and Europe.

**General Description:** The shiny green adults are slender, cylindrical insects with a length of 9 – 12 mm. On the interior edge of the posterior third of the elytra are two distinct white marks. Grubs are creamy white, legless, and upon maturity reach a length of 24 – 43 mm. The first thoracic segment is broader than the remaining body segments. The last abdominal segment bears two hornlike projections. Trees attacked by these beetle show symptoms such as dieback, growth of epicormic shoots, thinning of crown, meandering larval galleries filled with frass, D-shaped exit holes made by the emerging adults, and tree death.

**Biology:** The larvae within the genus *Agrilus* are cambium feeders or stem feeders. Feeding in the cambium results in meandering galleries beneath the bark. The adults emerge through D-shaped exit holes. Adults fly from May to July, and may fly several kilometers to find suitable host trees for the next generation. Adults feed on the foliage of oaks. Eggs are laid in clusters of 5 – 6 eggs in the crevices of the bark.

**Source:** Ciesla, W.M. (2003). Exfor Database Pest Report, *Agrilus biguttatus*. Available at: <http://spfnic.fs.fed.us/exfor/data/pestreports.cfm?langdisplay=english&pestidval=154>. Accessed Sept. 15, 2011.

**Molecular Identification:** A DNA barcode for this species has been developed and is freely accessible online at the National Center for Biotechnology Information [www.ncbi.nlm.nih.gov](http://www.ncbi.nlm.nih.gov), and the Barcode of Life Data

Systems database [www.boldsystems.org](http://www.boldsystems.org). If a specimen of this species is suspected, DNA analysis could help to confirm the identification even if the material is of a life stage that cannot be identified with morphological identification techniques.



**L** - Adult *A. biguttatus* (Photo credit: Gyorgy Csoka, Hungary Forest Research Institute, [Bugwood.org](http://Bugwood.org).);

**R** - Larva *A. biguttatus* (Photo credit: Louis-Michel Nageleisen, Département de la Santé des Forêts, [Bugwood.org](http://Bugwood.org).)

**A. biguttatus NCBI accession numbers:**  
JQ015123 - JQ015125

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