



America's Least Wanted Wood-Borers

Department of Entomology

CAMPHOR SHOT BEETLE, *CNESTUS MUTILATUS* (BLANDFORD)

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This alien bark beetle has been detected in Mississippi and Florida. These beetles are known to actively search for their host plants and also have a high reproductive capability. Congenial climatic conditions and host trees occur at many North American ports of entry with warm climate.

Distribution: The beetle is found in China, India, Indonesia, Japan, Korea, Malaya, Myanmar, Papua New Guinea, Sri Lanka, Taiwan, and Thailand.

General Description: When viewed from above, the pronotum completely blocks the view of the head. Leg bases are markedly separated from each other. No other species of *Cnestus* present in the US is as large as *C. mutilatus* (>3 mm). The pronotum is longer than the elytra. The characteristic symptom of these beetles is very small holes accompanied by bleeding or light colored dust.

Biology: The galleries of the beetles are found in the host's xylem. The beetle attacks broad variety of host plants. In the natural range it feeds on *Acer* sp., *Benzoin* sp., *Camellia* sp., *Carpinus laxiflora*, *Castanea* sp., *Cinnamomum camphora*, *Cornus* sp., *Cryptomeria japonica*, *Fagus crenata*, *Lindera erythrocarpa*, *Machilus thumbergii*, *Ormosia hosiei*, *Osmanthus fragrans*, *Parabezion praecox*, *Platycarpa* sp. and *Sweitenia macrophylla*. In Japan, the beetle completes one generation annually. Adults fly from June till August. Female beetles make a horizontal tunnel in the wood initiating gallery construction where they introduce the ambrosia fungus. The female lays 1 – 38 eggs. The eggs hatch about 7 days after being laid and the larvae feed on the fungus.

Source: Rabaglia, R. (2003). Exfor Database Pest Report, *Xylosandrus mutilatus*. Available: <<http://spfnic.fs.fed.us/exfor/data/pestreports.cfm?pestidval=149&langdisplay=>>. Accessed: Oct. 21, 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>, and the Barcode of Life Data Systems database <www.boldsystems.org>. If a specimen of this



Adult beetle, *Cnestus mutilatus* (Photo Credit: Kyle Schnepf)

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.

NCBI accession numbers for *C. mutilatus*:
JQ015151 - JQ015153

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