



NURSERY ADVISORY

NO. 06-2012

DATE: November 7, 2012
TO: All County Agricultural Commissioners
FROM: Pest Exclusion/Nursery, Seed, and Cotton Program
Plant Health and Pest Prevention Services
SUBJECT: Polyphagous Shot Hole Borer

Polyphagous Shot Hole Borer (PSHB), an undescribed beetle species in the genus *Euwallacea*, has been discovered infesting many species of trees in Southern California. The beetle is morphologically identical to the Tea Shot Hole Borer (*Euwallacea fornicatus*) and can only be distinguished through DNA sequencing. PSHB has been found to vector an undescribed fungus in the genus *Fusarium*. Both the beetle and fungus are currently rated "Q" by the California Department of Food and Agriculture (CDFA). Together these pests have been found to infest a wide range of hosts, and they present a major threat to the avocado industry in California.

Background

Currently PSHB and the *Fusarium* fungus are found in portions of Los Angeles and Orange counties, primarily in riparian and residential areas. The beetle has not been collected in a nursery in California, however, the associated *Fusarium* species which the beetle vectors has been collected from one commercial nursery near a known beetle infestation.

Description



The female adults of the beetle are dark brown to almost black and 1.9 - 2.3 mm in length. Adult males are wingless and brown, and are smaller than the females at 1.5 - 1.67 mm in length. The larvae can be found feeding on the fungus within the galleries of an infected tree.



Damage and Host Range

According to researchers with UC Riverside, the beetle has been positively identified on avocado, big leaf maple, box elder, California coast live oak, California sycamore, castor bean, coral tree, English oak, liquidambar, silk tree, and several other hosts. Exit holes (0.4-1.57 in width) of the beetle along the tree trunk and branches can be identified due to darkened, stained bark or white powdery exudates around the holes. Upon examination of the cortex and wood underneath the exit hole, one can see a brown and discolored necrosis caused by the fungus. Secondary pests can take advantage of the tunnels (1-4 cm deep) and cause further damage to the tree.

The *Fusarium* fungus associated with the beetle causes discoloration of leaves along with defoliation and dieback of branches. This damage is due to destruction of the nutrient and water conducting systems of the tree.

Inspection Procedures and Hold Notice

Currently there are no effective solutions for eradicating the beetle. To help limit the spread of these new pests, nurseries near known infestations should be notified and inspected. All suspect samples should be submitted to the CDFA Plant Pest Diagnostics Lab in Sacramento.

Infested plants do not meet the California Nursery Stock Standard of Cleanliness (FAC 6902 and CCR 3060.2) and may not be offered for sale. Upon confirmation of the pest, a Notice to Hold Commodities on Premises shall be issued for the plants. Any other host plants that may have been exposed to infestation should be thoroughly inspected, and symptomatic plants should be placed on hold pending cleanup (FAC 5701).

If you have any questions regarding this advisory, please contact Kristina Weber at (916) 654-0435 or by e-mail at kristina.weber@cdfa.ca.gov.