

Polyphagus Shot Hole Borer

A New and Important Beetle/Fungal Complex of Landscape Trees

- **The Beetles** - *Euwallacea* sp. - Polyphagus and Kuroshio Shot Hole Borers - www.pshb.org
- **The Disease** - Fusarium Dieback - *Fusarium euwallacea* - disease causing to susceptible trees. The disease and tunneling by the beetle disrupt the flow of water and nutrients that the tree needs to survive. The tunneling also weakens the trees trunk and branches. After repeated attacks the beetle/disease complex can cause branch dieback and tree mortality.
- **Impact** - Dozens of tree species found throughout Southern California are being attacked. Tree decline and death can result in public safety hazards due to falling limbs, increased fire danger, decreased property values, increased noise and air pollution, habitat loss for endangered species, loss of ecosystem services, cooling, water filtration and carbon sequestration.
- **What to Look For** - **1.** Entry holes that are perfectly round. **2.** Tree symptoms - dark wet staining, thick gumming, white powdery exudate (symptoms are unique to each tree). **3.** Dieback - dead branches and wilting leaves may be a sign of severe infection by the Fusarium Dieback disease.
- **Whats Being Done?** - Researchers are actively looking for solutions to control this new beetle/disease complex. Experiments by UCR are investigating pesticide efficacy, detection methods, and natural predators (biocontrol). At the time there are no known control methods, though there are multiple surveys being conducted to monitor the infestation.
- **Decision Making for Suitable Hosts and How to Handle Infested Plant Material**
<http://eskalenlab.ucr.edu/handouts/decisionmaking.pdf>
- **What Happens?** - **1.** Beetle is repelled with no infection. **2.** Beetle drills into tree and transmits the fungus, but doesn't produce offspring. This happens in 50% of the tree species being attacked. The final outcome is unknown. **3.** Beetle drills into tree, fungus infects the tree, beetle produces offspring in tree. Symptoms range from being mild (branch dieback) to killing the tree. http://ucanr.edu/sites/socaloakpests/Polyphagous_Shot_Hole_Borer/
- **Report a Tree**
Orange County - pshb.ucce.oc@gmail.com Outside Orange County - eskalenlab@gmail.com
- **More Information**
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