



## ALERT – NATIVE TREE PESTS AND DISEASES

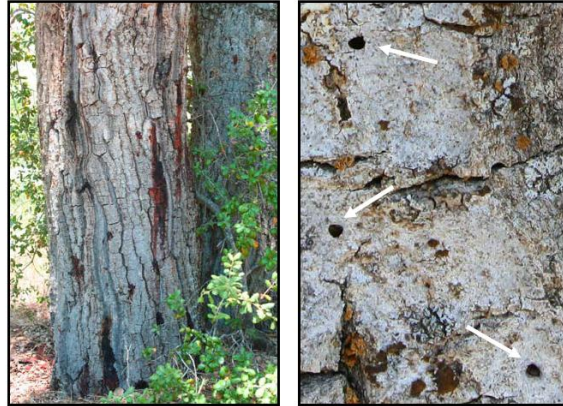
Three pests/diseases that have the potential to affect our native trees are the Goldspotted Oak Borer (GSOB) and Sudden Oak Death (SOD) which affect oaks, and Thousand Canker Disease (TCD) which affects walnuts.



USDA Pest Alert R5-PR-08 (Oct. 28, 2008)

The GSOB is currently not known to occur in Los Angeles County, but does occur in San Diego County. GSOB (*Agrilus auroguttatus*) is a 10 millimeter long beetle with six golden-yellow spots on the dark green forewings. It attacks oaks by the larvae burrowing into the tree where they feed under the bark at the cambium, the layer of tree tissue responsible for producing xylem and phloem that transmit nutrients through the tree. Heavy damage to the cambium can eventually cause tree death. Symptoms include thinning and dieback of foliage in the crown over several years, staining or “bleeding”

on the bark, or D-shaped beetle exit holes; however, other diseases can also cause some of these symptoms. **It is believed that the primary route of infection to new locations is via firewood transported from an infected tree**, where adult beetles may mature from larvae in firewood logs and emerge at the new location to lay eggs on other trees. Methods to manage GOB are being researched, but current recommendations include educating the public about firewood transport and treatment, potential removal of infected trees to prevent spread, and possible application of pesticides primarily as a means of preventing the spread from infected trees to uninfected trees.



Walnut Twig and  
Thousand Cankers

TCD was only found in California in 2008 and is currently known to occur in Los Angeles (Debs Park). TCD is also a fungus (*Geosmithia*) which is spread to walnut trees via the walnut twig beetle (*Pityophthorus juglandis*). The walnut twig beetles transmit the fungus to the walnut at the site where they bore into the tree, generally on younger branches in the upper canopy. When the beetles move lower into the tree they can infect the phloem tissue with the fungus, which results in cankers or staining which coalesce together from multiple entry wounds (the fungus does not go systemic in the tree). Symptoms include wilting or yellowing leaves and dead branches, as well as visible cankers on the bark.

Beetle entrance and exit holes may also be visible, as well as beetle “galleries” or feeding tracks under the bark. **The most likely pathway for the spread of TCD is via raw wood, such as firewood**, as well as nursery plants and natural spread.

Management is still being researched, but severe pruning or full tree removal is the primary current control method. Insecticides and fungicides are also being tested.



Photomicrographs by Dr. Jennifer L. Parke, Associate Professor (Research) Department of Botany and Plant Pathology & Department of Crop and Soil Science Oregon State University

SOD is currently only known to occur in coastal areas of Northern California and parts of Oregon. SOD (*Phytophthora ramorum*) is a water-loving fungus which is spread through water, wind-driven rain, or transport of infected plant material and soil. SOD primarily infects oaks but can also occur on non-oak species such as California bay laurel, rhododendrons and camellias. These non-oak hosts can facilitate the spread of SOD from their leaves to the trunks of oaks. Symptoms include “bleeding” from the bark, or a gradual decline of tree health including gradual yellowing and thinning over several years; however, other diseases can also cause some of these symptoms. Confirmation of SOD infection can be difficult, and

sampling of suspected trees requires leaf or bark laboratory analysis. Management generally consists of quarantines on commercial nursery plants, removal of infected trees, sanitation of tools and vehicles between sites, and possible use of a preventative fungicide. SOD is probably not as much of a concern given that it is only known in coastal northern California, it is a water-loving fungus which is unlikely to persist in our hot and dry climate, and is mostly spread via non-oak hosts which generally do not occur in large numbers here.

The GSOB and TCD are considered to be a very real threat to the coast live oaks and black walnuts on the Preserve given that known locations are relatively close and the **primary mechanism for their spread is thought to be via transport of firewood.**

### **How you can help prevent these pests from affecting our native trees:**

- Please do not buy firewood imported from San Diego County, as it may be infected with the Goldspotted Oak Borer!
- Notify the Habitat Authority (562-945-9003 or [slucas@habitatauthority.org](mailto:slucas@habitatauthority.org)) if you see any of the symptoms of these diseases, especially an oak or walnut that shows staining/bleeding on the trunk, or has exhibited declining health over time

For more information, visit these websites:

Goldspotted Oak Borer -

[www.ucanr.org/sites/gsobinfo](http://www.ucanr.org/sites/gsobinfo)

[www.cisr.ucr.edu/goldspotted\\_oakborer.html](http://www.cisr.ucr.edu/goldspotted_oakborer.html)

Thousand Canker Disease

[www.thousandcankerdisease.com](http://www.thousandcankerdisease.com)

[www.ipm.ucdavis.edu/exotic/thousandcankers.html](http://www.ipm.ucdavis.edu/exotic/thousandcankers.html)

Sudden Oak Death

[www.suddenoakdeath.org](http://www.suddenoakdeath.org)