



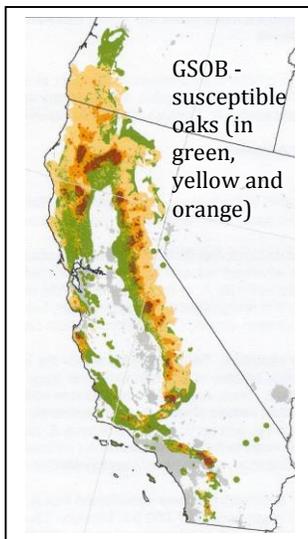
- Research
- Education
- Outreach

Goldspotted Oak Borer (GSOB) Situation (October 2014)

Spread and Damage Since being identified in 2002, a non-native invasive beetle, the goldspotted oak borer (GSOB - *Agrilus auroguttatus*), has killed an estimated 80,000 oak trees in San Diego County. Previously, GSOB occurrence in the U.S. was limited to southeastern Arizona. Scientists believe that GSOB was introduced to San Diego County through the movement of infested firewood from Arizona. GSOB is causing significant tree losses across all ownerships in San Diego. GSOB was discovered in Riverside County in 2012, likely as a result of the movement of firewood from San Diego.



GSOB Distribution September 2014



Susceptible oak species (coast live oak, California black oak, and canyon live oak) are found throughout much of California and southern Oregon. GSOB could rapidly spread to these non-infested areas aided by the movement of infested firewood.

In San Diego County, GSOB-caused oak mortality has continued to increase within known infested areas and progressed somewhat along the margins. Costs associated with this infestation so far have exceeded an estimated \$10 million of public and private funds for both direct costs and opportunity costs: infested tree mitigation (dead tree removal & infested wood disposal); research; public education/outreach; survey, detection & mapping; and lost revenues (due to closures of parks and campgrounds dealing with hazardous dead trees). The decline in real estate value for residential and commercial properties which have lost large iconic oaks is not included in that figure.

To reduce human-caused spread of GSOB, public land management agencies in San Diego County have adopted policies to prevent the removal of known infested wood from their lands. The safe disposal of the resulting enormous piles of infested logs is difficult and costly. There are no programs to help private property owners defray the costs of tree removal or preventative treatments.

The Riverside County infestation in the San Jacinto Mountains community of Idyllwild has been attributed to the importation of infested firewood from San Diego. The Riverside County Mountain Area Safety Taskforce (MAST) is leading an aggressive and coordinated response with the help of citizen volunteers. Just over 50 GSOB infested trees have been identified within the community. To date, no GSOB trees have been found on nearby surrounding national forest or state park lands.

Integrated Pest Management (IPM) Trials using certain systemic and other topically-applied pesticides to protect high-value oaks have shown promise, but conclusive results are not yet available. The use of large tub grinders and horizontal wood grinders to a 3" minus standard have proven very effective in killing GSOB in infested wood. Landowners and land managers are being urged to consider removing highly-infested "brood trees" before they release high number of adult GSOB to attack nearby healthy trees. Several federal, state, county and city agencies and tribal lands are developing IPM plans for managing GSOB on their lands. Unfortunately, the current prospect for finding an effective biological control are dim.



Southern California. Both a web-based reporting system [Managing Oak Mortality (MOM)] and a new phone application [GSOB Tracker] enable lay-people to easily report a suspect tree. Links to both apps are at: http://ucanr.edu/sites/gsobinfo/How_You_Can_Help/s/

Firewood Movement Firewood originating on private property within GSOB-infested areas continues to be moved. There is no law or regulation at the federal, state, or local level which prohibits or regulates movement of GSOB-infested wood.

Outreach and Education Demand for GSOB presentations, workshops, and field training has increased, especially since the discovery of GSOB in Riverside County. An inter-tribal GSOB working group for southern California tribes was initiated in May 2013 and other tribal meetings have occurred. Over 300 GSOB identification kits produced by UC Riverside have been distributed to partner agencies and volunteer groups. We continue to improve and update the www.gsob.org website and create and provide educational materials. A 4-5th grade GSOB curriculum is being distributed to schools. Over 12,000 6th graders each year are taught about GSOB and how to conduct oak tree surveys at the Cuyamaca Outdoor School in San Diego County.

GSOB Task Force In November 2013, the California Forest Pest Council established a GSOB Task Force incorporating the agencies and groups working on GSOB in southern California. The initial meeting of the Task Force took place on June 4, with good participation. Following a briefing on the current status of GSOB spread and mitigation efforts, participants discussed the proposed Mission, Goals, and Objectives of the Task Force. Revisions will be discussed at the next meeting (date TBD).

GSOB Funding UC Cooperative Extension is applying for grant funds so as to maintain the current GSOB outreach/education, detection, mapping, and agency coordination efforts. Funds provided for GSOB-related research by the USFS and UC have been reduced due to tight budgets. Affected federal, state, and local agencies continue to redirect existing staff from other programs to do GSOB work when possible. Many agencies are finding that they must allocate some of their normal operating funds to cover the cost of identifying and removing infested trees. Private property owners might be encouraged to implement IPM strategies that could impact the spread and severity of GSOB in their communities if cost-share programs were made available to encourage their participation.

How to Support GSOB Prevention and Response Efforts

Funding, partnerships, networking, research, educational outreach, and strategic regulation are key components of oak protection. Here are some steps to consider:

- **Participate in a joint GSOB legislative hearing with other legislators and representatives from local, state, and federal agencies to discuss how best to stop the spread of GSOB.**
- **Investigate potential regulation of the firewood industry to reduce the risk of invasive species spread, including GSOB.**
- **Support National Firewood Task Force and California Firewood Task Force (www.firewood.ca.gov) efforts to prevent the spread of invasive species via firewood movement.**
- **Support research funding for GSOB prevention, management, and control.**
- **Help educate constituents and peers about the risks of GSOB and other invasive pests and pathogens, including the threat posed to local, state, and national parks as well as forests and communities.**
- **Support the statewide GSOB Task Force**

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