

## WHAT YOU CAN DO ABOUT SUDDEN OAK DEATH

Sudden Oak Death (SOD) is a tree disease caused by the plant pathogen *Phytophthora ramorum* (pronounced Fi-TOFF-thor-ra ra-MOR-um). The disease kills trees in the red oak division of *Quercus* and tanoak (*Lithocarpus densiflorus*). A non-native mold, *P. ramorum* first was identified in California in 1995, at a Marin County nursery. SOD has killed millions of oaks and tanoaks in the state since its introduction.

Despite extensive research and localized small-scale management, there has been no large-scale attempt to slow the spread of the pathogen in California to date. This year, Sudden Oak Death symptomatic plants were discovered in our Santa Rosa Creek watershed. The pathogen's spores



**Figure 1. SOD in Coastal Live Oak**

were lab-verified at UC Berkeley, but there is not yet a confirming second sample. In the meantime, we must gather our collective concern into educational and effective actions.

Description and history of the pathogen helps us to understand a watershed's

response to SOD. There are more than 60 different types of *Phytophthora* plant diseases identified worldwide, with the most notable being one that caused the great potato famine in Ireland. *P. ramorum* is an introduced pathogen to North America. Scientists suspect that it first came from the Himalayan region of Nepal and the western provinces of China. It is now also present in Europe.

There are now well over 100 plant species that *P. ramorum* affects both in the wild and in ornamentals.

Among the host plants that many Cambrians know are rhododendrons, camellias and azaleas. The most common vector plant is California bay laurel. The plant pathogen is a moisture-dependent mold that spreads by water splash, infested soil and plant parts like firewood. Oaks do not infect each other.

While it is lethal to red oaks, including coastal live oaks, *P. ramorum* appears not to infect white oaks. Studies indicate that it moves from infested areas to uninfested areas by wind-blown rain and moist soil. Such recreational activities as hiking, mountain biking, four-wheeling, and mushroom collecting can move the pathogen from place to place. Illegal cultivation of marijuana in infested areas also can spread the disease. Other means of infection include plant nurseries, firewood, vegetation management and firefighting equipment and personnel.

Greenspace's involvement with SOD began at the onset of the pathogen's discovery. As original members of the California Oak Mortality Task Force Biomass Subcommittee, we learned that managing a huge waste stream of infected material was fraught with disease hazards and regulatory issues. New regulations and best management practices had to be developed.



**Figure 2. SOD Symptoms on Bay Laurel**

Early in the response efforts, burning or burial of infected material was the best management practice. Now the BMP can be to remove an infected vector tree or plant if it is the first one detected in

close proximity to vulnerable oaks. Infected material is disposed of at a registered receiver site, not a compost facility, or cut into small pieces and spread to dry in a sunny spot on site. Nearby oaks can be treated with phosphonate (Agri-Fos). If the infected tree or shrub is near valued vegetation, cutting it into smaller pieces to dry out and spreading the material away from roads and access points in order to keep the movement of tree parts from leaving the area.

**What you can do:** The California Oak Mortality Task Force website, [www.suddenoakdeath.org](http://www.suddenoakdeath.org), is a key site for information on preventing spread. If you are an outdoors person, these steps are essential to help limit the expansion of SOD:

**Hikers/Runners:** Remove soil and plant material from your shoes, followed by a water rinse and a disinfectant. Dog walkers: Keep your dog clean by staying on established trails and away from contaminated forest areas. Clean any plant material and mud from your dog's coat and paws with a towel and brush, or rinse off before leaving the site.

**Bicyclists:** Remove soil and plant material from your bike, shoes, and clothes. Rinse your bike and shoes with water and follow with a disinfectant before leaving the site.

**Equestrians:** Keep yourself and your horse clean by staying on established trails and out of contaminated forest areas. Clean any plant material and mud from the horse and its hooves with towels, brushes and a hoof pick before leaving the site.

**Plant collectors (mushrooms, firewood, specimens, etc.):** Remove soil and plant material from your shoes and tools, follow with a water rinse and a disinfectant. If you intend to move potential host plants out of an infested county, you must first contact the local Agricultural Commissioner for a permit.

**Off-road vehicles (motorcycles, OHV's, FWD's):** If you drive off-road during the wet season, mud can collect on your vehicle and drop off in uncontaminated areas. Take your off-road vehicle to the closest car wash before driving out of the area to ensure removal of any contaminated material.

**Campers:** Camping equipment that may have collected plant debris and mud, such as tents, should be cleaned off and cleaned out before leaving the campground. Once contaminants have been removed, you may also want to sanitize with a disinfectant.

If you find plants, particularly those listed above with any symptoms shown in Figures 1, 2 or 3, please contact SLO County Agriculture Office at **781-5939**.  
– Rick Hawley



Figure 1. SOD impact on a landscape

## 🌲 GRATITUDE 🌲

The Board and Staff at Greenspace are so grateful for the ongoing support of our members and friends. Especially as we look toward more challenging times in our community, nation and the world, we thank you for your gifts, your volunteer hours, and your concern for the environment of the San Luis Obispo County North Coast and your own home places.

Please consider a generous annual gift this year. Now more than ever, we need to step up and support the organizations and causes we believe in. The road ahead is still very hazy this Thanksgiving season. What we do know is that together, we can accomplish vital work to heal, protect and defend the places we love, and the plants and animals that depend on them as well.

Would you consider a monthly donation to Greenspace in the coming year? It's easy to set up—just click the “Donate” button on our website, [www.greenspacecambria.org](http://www.greenspacecambria.org).

May your holidays be a time of renewal and hope.

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The North Coast area of San Luis Obispo County is a national treasure. Greenspace will protect and enhance its ecological systems, cultural resources and marine habitats through land acquisition, education and advocacy.