

CALIFORNIA OAK MORTALITY TASK FORCE

News Release

LARGEST SUDDEN OAK DEATH EXPANSION IN CALIFORNIA IN A DECADE

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BERKELEY—The 2016 citizen scientist-based sudden oak death surveys (SOD Blitzes) in California forests and parks documented a substantial increase in SOD from 2015 levels associated with high rainfall levels experienced in 2016. The 2016 Blitzes detected *Phytophthora ramorum* (invasive, water-loving plant pathogen known to cause SOD) on multiple trees in San Luis Obispo County. Because these are the first detections of the pathogen south of Monterey County, and because SOD Blitzes findings have no regulatory implications, the UC Berkeley Garbelotto lab will be working closely with the California Department of Food and Agriculture and USDA Animal and Plant Health Inspection Service to validate the data for regulatory use.

P. ramorum was also found for the first time on Mount Diablo in Contra Costa County. Both the San Luis Obispo and Mt Diablo infestations were identified on California bay laurel. Mortality of susceptible true oaks^{**} is not yet evident in either region, suggesting these outbreaks are recent.

The Blitzes also identified new outbreaks near Ukiah and southern coastal Mendocino County as well as in the city of Piedmont (Alameda County) and several areas east of Highway 280 on the San Francisco Peninsula. Infected trees were also detected in areas where SOD infection had subsided as a result of the drought, including northern and central Sonoma County and the Napa Valley region. A significant outbreak on bay laurels was identified in San Francisco's Golden Gate Park near the AIDS Memorial Grove (first found positive in 2004) and, for the first time, *P. ramorum* was found in the San Francisco Botanical Garden at Strybing Arboretum, which houses an international plant collection. Infected trees at the Arboretum include two possible new host species; as newly identified putative hosts, their susceptibility to *P. ramorum* needs to be further studied in order to be confirmed.

"We were very surprised by this year's SOD Blitz findings. This is the most significant increase in SOD in California since the Blitz program began in 2006. Whether or not this surge of new infection continues will depend on rainfall levels this coming winter and spring. Significant rain could mean a lot of new infection; whereas, a dry year could slow disease spread

^{**} coast live oak, CA black oak, Shreve's oak, and canyon live oak

substantially," said Matteo Garbelotto, UC Berkeley Forest Pathology and Mycology, and SOD Blitz founder.

In areas where outbreaks had decreased, the pathogen reemerged, such as in Big Sur, Monterey County, where *P. ramorum*-infection rates increased by 27 percent. In Marin County, infection rates increased by 2.3 percent, and in some areas of California that used to be marginally affected by SOD, there have been sharp increases in infection, such as in western San Mateo and western Santa Cruz Counties. Overall, in the counties known to have natural landscape infestations, *P. ramorum* outbreaks more than doubled in severity.

"These results are powerful and show how citizen science can make a difference. We really have to thank our volunteer citizen scientists for making the SOD Blitzes so successful and for helping us gain all of this information. We simply don't have the resources to do this level of work without their help," continued Garbelotto.

The 2016 SOD Blitzes included 23 spring training sessions, resulting in approximately 500 trained volunteers who surveyed over 14,000 trees and submitted symptomatic samples to the Garbelotto lab for genetic testing for SOD. Data collected from the Blitzes (both positive and negative samples) will be uploaded to the SOD Blitz map (www.sodblitz.org) on October 16th as well as to SODmap (www.SODmap.org) and the free SODmap mobile app and can serve as an informative management tool for those in impacted communities.

The SOD Blitz surveys were made possible thanks to funding from the USDA Forest Service, the National Science Foundation, and the PG&E Foundation. The Blitzes are organized by the UC Berkeley Garbelotto lab in collaboration with numerous organizations, including the city and county of San Francisco, Land Trust of Santa Cruz County, Midpeninsula Regional Open Space District, San Francisco Public Utilities Commission, Santa Lucia Conservancy, Save Mount Diablo, National Park Service, and California Native Plant Society. Each training session was held in collaboration with local environmental leaders or UC Master Gardeners.

For more information on the SOD Blitzes, go to <u>www.sodblitz.org</u> or contact Katie Harrell at <u>(510) 847-5482</u> or <u>kpalmieri@berkeley.edu</u>. For more information on Sudden Oak Death and *P. ramorum*, go to the California Oak Mortality Task Force website at <u>www.suddenoakdeath.org</u> or contact Katie Harrell.

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