

Marin sudden oak death infections surge



Andrea Williams, an ecologist with the Marin Municipal Water District, inspects a dead coast live oak at Lake Lagunitas in 2014. Spore production has increased since then because of relatively wet winters. (Frankie Frost/Marin Independent Journal)

By [Richard Halstead](#), *Marin Independent Journal*

POSTED: 10/28/17, 7:04 PM PDT | UPDATED: ON 10/30/2017
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The sudden oak death infection rate in Marin has doubled to more than 21 percent since 2015, according to an ecologist with the University of California, Berkeley.

“It’s a big change,” Matteo Garbelotto, the director of the UC Berkeley Forest Pathology and Mycology Laboratory, said Tuesday.

The increasing number of infected trees is bad news for Marin homeowners concerned about the risk of devastating wildfires like those that erupted in Sonoma and Napa counties earlier this month.

Garbelotto said oak trees that have been killed by sudden oak death “ignite very easily and they can burn very hot.”

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“They burn so hot,” Garbelotto said, “that during the Big Sur fires firefighters were telling me that if they knew there was a hot spot of sudden oak death they would call the crews back because it was too dangerous to fight fires in those areas.”

Garbelotto said as the Wine Country fires burned he compared the areas where the fires were burning out of control with those where the highest level of sudden oak death infection has been found over recent years, and there was a close match.

Since 2008, Garbelotto has been enlisting the help of volunteers throughout California to survey trees and collect samples in their locales. Garbelotto has dubbed the surveys “sudden oak death (SOD) blitzes.”

Blitz efforts this year discovered a tripling of the overall infection rate to 13 percent in those areas sampled since the drought ended in 2015.

“In 2017, we recorded the highest infection level that we have ever recorded,” Garbelotto said.

In eastern Sonoma County, where some of the heaviest fire damage was sustained this month, the blitz survey found a 33 percent infection rate.

Higher infection rates were expected because of the last two wet winters. Production of the spores that cause the virulent plant disease spikes during warm, wet weather. Dry weather doesn’t kill the spores; they just lie dormant waiting for the next rain.

Garbelotto said although fire has a distinct effect on the pathogen that causes sudden oak death, the pathogen recolonizes forests from spots where it survives following fires.

“The indirect effect, by lowering tree density and the number of bay trees, is more significant,” he said.

Garbelotto said another finding of this year’s blitz survey is that sudden oak death has taken advantage of the rain to generate outbreaks in more populated suburban areas such as Ignacio, Greenbrae, Kentfield and Mill Valley. He said that will likely mean more dead trees in people’s backyards and combustible material closer to homes.

The survey also found substantial new infestations at Point Reyes National Park Visitor Center near Point Reyes Station and at other popular public destinations including the San Francisco Presidio, the UC Berkeley campus and Botanical Gardens, and the UC Santa Cruz Arboretum.

Regarding the Point Reyes National Park Visitor Center, Garbelotto said, “That worries me because it is an incredibly popular destination.”

He fears that unless steps are taken visitors to these tourist destinations will inadvertently spread sudden oak death to new areas.

John Dell’Osso, a spokesman for the Point Reyes National Seashore, said, “We get conservatively 350,000 people a year through the Bear Valley Visitor Center, so it’s a high traffic area for sure.”

Dell'Osso said researchers determined in 2008 that sudden oak death had already infected many trees in the park. A study found that in heavily affected areas, an average of 75 percent of the park's tanoaks were dead, with some areas exhibiting as much as 95 percent tanoak mortality.

But Dell'Osso said the fact that sudden oak death had spread to trees adjacent to the visitor center was news to him.

The 2017 blitz survey was the largest to date in terms of the area covered. An estimated 300 volunteers surveyed nearly 15,000 trees and submitted leaf samples from approximately 2,000 symptomatic trees. The survey spanned 17 counties.

Data collected from the blitzes have also been uploaded to the Sudden Oak Death Blitz map at sodblitz.org, as well as to SODmap, SODmap.org.