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Sudden oak death resurgent in Bay Area amid wetter weather



The remnants of diseased oak trees lie on a slope of Mount Tamalpais near Fairfax on Oct. 24, 2001. (Jeff Vendsel/Marin Independent Journal)



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Spurred on by two rainy years, the spread of [sudden oak death in Marin](#) and 18 California counties is back on the rise — this time with an aggressive new strain invading the Bay Area.

Until recently, only one strain of the microscopic phytophthora ramorum, which causes [the disease that is lethal to oak trees](#) and damages the leaves and stems of several other plants, has been dominant in California.

The potentially more destructive and infectious new form of the pathogen has not been detected in Marin. However, researchers at the University of California, Berkeley, have discovered at least four outbreaks of the intruder infecting bay laurel trees in San Mateo, Alameda and Contra Costa counties.

“This is the year when people should deal with protecting their oaks because we could have oak infection,” said Matteo Garbelotto, an adjunct professor at UC Berkeley, who has been leading research on the disease for years.

First discovered in Mill Valley in 1995, the disease kills tanoak, coast live oak, California black oak, Shreve’s oak and canyon live oak trees, among others. Since 2000, some 60 million trees have died of the disease. It is believed to have originated in Asia, hitchhiking on ornamental plants to California, where it escaped to forests.

Garbelotto and David Rizzo, a professor at University of California, Davis, identified a previously unknown species of phytophthora as the cause of sudden oak death in 2000. The dominate strain is known as NA1.



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Since 2008, Garbelotto has tracked the spread of the disease by enlisting the help of volunteers to collect samples from California bay laurels and tanoaks in their locales. Bay laurels and tanoaks are sudden oak death hosts that spread the disease to oaks. Oaks aren't surveyed because testing them would require cutting into their bark.

For the latest report, more than 22,000 trees were surveyed across 200,000 acres in 18

In Marin, 31.9% of 561 trees surveyed were determined to be infected. That compares to a 4% infection rate in 2023, and a 5.2% infection rate in 2022.

Production of the spores that cause the virulent plant disease spikes during wet weather. Water splashes and wind are believed to play a key role in spreading the spores from tree to tree.

During the drought, infection rates declined. But it took two years of rain for the disease to reactivate, Garbelotto said.

“Everything we’ve got this year is telling us, we are at that threshold where if it rains, the pathogen is ready: It will produce enough spores to infect oaks,” Garbelotto said.

What’s worrisome about the discovery of the new NA2 strain in the Bay Area is that lab results show it thrives in warmer weather, whereas its NA1 cousin thrives in cooler conditions. In fact, the new NA2 strain is four times more infectious than its cousin in warmer weather.

“And those sites that were drier and were free of the disease before, now potentially they could develop the disease if the new lineage is there,” Garbelotto said. “Together, the two lineages can actually cause a much more widespread disease than just one by itself.”

Garbelotto believes the presence of the new strain could be an effect of a warming planet.

Garbelotto says infected oaks are a fire hazard and pose a risk to life and property should they topple.

“When they’re dead and down it creates a substantial fuel load,” Marin County Fire Department Chief Jason Weber said of sudden oak-infected trees.

“I think it highlights the work we’re doing with MWPA to make sure that dead and down material is being managed appropriately, piled and burned, chipped or mulched or appropriately removed,” Weber said. MWPA is the Marin Wildfire Prevention Authority, a tax-supported joint powers authority.

Mark Brown, executive director of the authority, said it’s protocol that crew members working on vegetation management or other projects clean equipment, clothing and footwear; segregate and treat soils and vegetation that is contaminated; and other take other measures to prevent infections.

“Regardless of any upswing or downswing in sudden oak death, we are taking measures to make sure we are not spreading contagions,” Brown said.

Garbelotto said the best way to protect oak trees from sudden oak death is to remove bay laurels that are growing within 30 feet of the oak. Treating trees with phosphonates could also help protect oak trees.

More information is at [SODblitz.org](https://www.sodblitz.org).

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