LOCAL NEWS

Marin sudden oak death infections decline amid drought

A Marin Municipal Water District ecologist examines the bark on a fallen oak at Lake Lagunitas in 2014. The tree was killed by sudden oak death. (Frankie Frost/IJ archives)

By **RICHARD HALSTEAD** | rhalstead@marinij.com | Marin Independent Journal

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The spread of sudden oak death in Marin and 15 other Northern California counties has slowed significantly during the state's drought, according to researchers.

"Regionwide in 2021 we had the lowest infection rate ever," said Matteo Garbelotto, an adjunct professor at the University of California, Berkeley.

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.

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.

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.

Garbelotto said that during this year's survey, more than 14,000 trees were surveyed in 16 counties. In Marin, 3.4% of the 777 trees surveyed were determined to be infected with sudden oak death, compared with 9.5% in 2020. That is the lowest percentage since 2018, when 2.5% of the trees surveyed tested positive.

Throughout the region, 3.3% of the surveyed trees were found to be infected, compared with 7.4% last year.

Garbelotto cautioned that even though a higher percentage of samples are testing negative for the sudden oak death pathogen, that doesn't mean the disease is vanishing.

"Once a pathogen arrives in an area, it is most likely not going to disappear due to a dry year," Garbelotto said. "The pathogen is not gone. It's in a dormant stage."

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

“Only about 30% of the California forests that could be colonized have been colonized,” he said. “We are still at the beginning of our interaction with this disease.”

Particularly worrisome is that during this year’s survey two trees in Del Norte County tested positive for the European strain of sudden oak death.

Garbelotto said work by his lab and labs in Europe have determined that this strain of Phytophthora ramorum can infect trees more easily than its North American cousin. An effort was made to eradicate the European strain after it was first spotted in California last year.

Garbelotto compares the European strain of sudden oak death to the generation of COVID-19 variants such as omicron. He said another thing that sudden oak death has in common with the coronavirus is that it spreads easily when its hosts are close together.

“Sudden oak death has been so pervasive in California because the state’s forests are so dense,” he said. Fire suppression has prevented the naturally thinning of woodlands.

Garbelotto says now is an opportune time for people to remove bay laurels if they are infected with sudden oak death and are located within 30 feet of an oak tree they want to protect.

Information on which Marin trees tested positive during the survey is available at SODblitz.org. Garbelotto’s lab has also initiated a new program to help arborists test oaks to determine if they are infected.

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

He said even though an oak might appear green, “if it is infected it is probably already very dry and if a fire comes that oak is going to burn super hot.

“If it is near a building it is going to ignite that building very easily,” he said.

Mark Brown, executive officer of the Marin Wildfire Prevention Authority, said the lower sudden oak death infection rate won’t do much to reduce the risk of a catastrophic wildfire in Marin.

“The trees that were infected and died are still on the ground providing fuel for a vegetation fire,” Brown said. “It would take a long time after the infection rates go down for that dead and down material to decompose and no longer be a fire threat.”

Brown said that while sudden oak death was initially concentrated in the county’s watershed it appears now to be throughout the entire county.

He said, “I don’t think there is a particular hotspot.”

Tags: **environment**, **Marin County**, **newsletter**, **Sudden oak death**

Richard Halstead | Reporter

Richard Halstead is a news reporter covering Marin County news, politics, health care, social services, Fairfax and San Anselmo.

rhalstead@marinij.com

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