Drought slows spread of sudden oak death in Sonoma County

Caroline Zsambok, left, and Bruce McConnell, with the fire and safety team for the Fountaingrovе II Open Space Maintenance Association, look at leaves on a California Bay Laurel that has tested positive for the sudden oak death pathogen in an open space area of Fountaingrovе, in Santa Rosa, on Tuesday, September 29, 2015.
(Christopher Chung/ The Press Democrat)
Four years of drought have slowed the spread of sudden oak death to its lowest level in a decade, but western Sonoma County remains one of the hot spots in the 15 infested counties from Monterey to Humboldt, and when rain comes again the tree-killer will resume its rampage through Northern and Central California woodlands.

Analysis of more than 2,100 bay laurel tree leaves sampled during an annual citizen-powered survey last spring found a 3.7 percent estimated rate of sudden oak death infection, down from 4.4 percent in 2014 and possibly the lowest level since the disease erupted in 1995.

“I think we’re at the bottom of the infection rate,” said Matteo Garbelotto of the UC Berkeley Forest Pathology and Mycology Lab.

Drought conditions thwart the spread of sudden oak death, which largely depends on wet, windy weather to blow infectious spores from bay laurel trees, which host the pathogen, to oak and tanoak trees that die within a few years of infection.

Predictions of a strong El Niño weather pattern this winter could mean heavy rains for the North Coast. And when rain starts falling again, the as-yet unstoppable tree-killer will renew its assault, Garbelotto said.

“We know the sudden oak death pathogen can respond readily to wet conditions,” he said.

A relatively wet climate, even during the drought, explains why west Sonoma County had an estimated 12.6 percent infection rate this year, up from 7.1 percent in 2014, he said.

The Big Sur area in Monterey County had the highest rate this year, at 19.2 percent, while the Santa Cruz Mountains were at 13.5 percent, according to results from the 2015 Sudden Oak Death Blitz organized by Garbelotto’s lab.

The coastal area’s cool, foggy climate also accounted for the difference between west Sonoma County’s 12.6 percent infection rate and the 3.8 percent rate east of Highway 101, which was down from 7 percent last year. Year-to-year comparisons for specific areas can be misleading because the sampling is not fixed but depends on where volunteers elect to collect leaves, Garbelotto said.

Throughout the 15-county region, more than 500 volunteers took leaves from 2,168 trees. About 35 volunteers participated in the Sonoma County blitz, collecting samples from 65 trees on May 30 and 31.
Two Fountaingrove II subdivision residents, Bruce McConnell and Dennis Searles, took leaves from 27 bay trees in the 230-acre open space area surrounding the hilltop neighborhood. Five of McConnell’s samples tested positive for sudden oak death, reinforcing the subdivision’s worries over damage to the valued woodlands.

“We’ve been concerned about it for several years,” McConnell said, noting that homeowners have paid thousands of dollars to have vulnerable oak trees sprayed with a chemical considered the best defense — but not a cure — for sudden oak death.

Last December, about 850 trees were sprayed, and the homeowners also had five bay trees removed, including two that tested positive for the disease in last year’s blitz.

Lisa Bell, Sonoma County’s sudden oak death program coordinator, noted that blitz volunteers found the infection everywhere they went looking for it. The disease, discovered in Marin County in 1995, remains entrenched in west Sonoma County and scattered through hilly, wooded areas east of Highway 101 from Geyserville down to Sonoma.

Two anomalies, Bell said, were the isolated infections on the plains west of Santa Rosa and Petaluma. Since the disease typically spreads under a closed forest canopy, she speculated those cases could have come from the arrival of a nursery-purchased plant, which is how the pathogen is believed to initially have reached California.

The infectious spores also travel on shoes and bicycle tires during wet weather, she said.

Most of the Sonoma County oak trees infected in 2011, prior to the drought, already have died and relatively few have been infected since, Garbelotto said. If an oak is dying now, there’s a 50-50 chance the cause is sudden oak death versus the drought itself, he said.

The drought’s heaviest toll now falls on pine trees and planted redwoods, he said.

Garbelotto will present the sampling results and new recommendations for protecting oak trees at a free public meeting at 6 p.m. Nov. 3 at the Sebastopol Veterans Building, 282 S. High St.

For a Google Earth map compiled by Garbelotto’s lab pinpointing the locations of infected trees found in blitzes since 2008, go to nature.berkeley.edu/garbelottowp/.
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