NORTH COASTER

POINT REYES LIGHT

Sudden oak death on rise, including at Bear Valley

David Briggs

A tanoak infected with a pernicious pathogen rapidly spreading on the California coast is one of many around Bear Valley Visitor Center and other Bay Area tourist spots. A University of California, Berkeley scientist who tracks sudden oak death is urging better protections against its spread.

By Anna Guth
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Sudden oak death rates in California are soaring. In the past year, the rate in Marin County has doubled, and growing infestations at tourist destinations like the Bear Valley Visitor Center are causing special concern for the Berkeley scientist who conducts annual surveys of the disease.

At the Point Reyes National Seashore's most frequented visitor center, where 350,000 visitors pass annually, a stand of trees is streaked deep brown. The oaks and tanoaks are succumbing to phyophthora ramorum, a pathogen that has devastated forests in coastal California and Oregon since its arrival on the West Coast in the '90s.

A survey conducted by Matthew Garbelotto of the University of California, Berkeley found a sharp increase this year in infection rates near the visitor center, both in directly affected oak and tanoak and in carrier species such as bay laurels.

Dr. Garbelotto, who directs the university's Forest Pathology and Mycology Laboratory, said the thousands of visitors passing through each month amplify the risk of spread. "It's worrisome ... because it's such a tourist attraction," said Dr. Garbelotto, who has conducted annual surveys of sudden oak death on the West Coast since 2007.

The 2017 survey, called a “blitz” because of its quick timeline for taking field samples, was the largest to date, spanning the area from Siskiyou County in Oregon south to San Luis Obispo County. An estimated 300 volunteers surveyed nearly 15,000 trees and submitted leaf samples from approximately 2,000 symptomatic trees. Volunteers do the brunt of the collection, but the National Forest Service and the PG&E Foundation cover annual costs of around $150,000.

The results showed that statewide numbers are three times higher than they were two years ago. In some areas, increases were even higher.

In Marin, the overall infection rate was around 21 percent, up from 10 percent in 2016. In eastern Sonoma County, an area ravaged by wildfires last month, the rates were 32 percent, up from 5 percent last year.

Though researchers are studying the role sudden oak death may have played in the recent wildfires, forest service biologist Susan Frankel said identifying any possible correlation was complicated.

“As far as increased fire danger, that is very much tied to the stage of the disease at the time of the fire,” Ms. Frankel said. “The thing that’s most dangerous is flashy fuels, or fine debris that is low to the ground, which might occur in the first few years of the disease. Later on, when the trees die, the fallen logs are not going to increase fire severity in the same way.”

Yet Ms. Frankel added that in areas that have seen widespread disease for a number of years, including the Bolinas Ridge, sudden oak death is transforming the forest “into a brushfield.” Larger tanoaks are dying, while small re-sprouts of the species are creating a thick understory.

The combination of the remaining dead material and the newer, low-lying material is considered to increase fire severity—if not fire risk.

In Mr. Garbelotto’s 2017 survey, the Bear Valley Visitor Center was one of four tourist hot spots where sudden oak death was shown to have increased this year. The survey also found substantial new infestations at the San Francisco Presidio, the University of California, Berkeley campus and botanical garden, and the University of California, Santa Cruz Arboretum.

The infestation of sudden oak death is not news for the seashore. Another Berkeley study, conducted in 2008, found the pathogen spread throughout nearly the entire north-south range of the park. At that time, as much as 63 percent of redwood-tanoak forests, 45 percent of California bay-coast live oak forests and 24 percent of Douglas fir forests were likely infected in the seashore.

Seashore spokesman John Dell’Osso said the park has taken out a handful of infected trees, but that the efforts were time-consuming and costly. The park does have a detailed webpage on sudden oak death and an informational sign at the Bear Valley Visitor Center telling guests about the disease’s spread, characteristics and prevalence in the area.

“I feel the best approach is to have a unified approach for all of the various land management agencies in Marin so the message is consistent and visitors to the different areas will have the same message,” Mr. Dell’Osso wrote in an email. “Signage is key and messaging through social media platforms is a great use of that tool, too.”

But Dr. Garbelotto emphasized that more pro-active measures are also necessary, such as alerting the public about the dangers of collecting infected plant material.

The disease is airborne, but spreads through water droplets from plant to plant and contaminates soil through infected spores. So in addition to being mindful of not collecting leaves or other material, Dr. Garbelotto recommended the park require visitors to clean the soil off of their shoes before leaving the area.

Mr. Dell’Osso said he didn’t know about the efficacy of shoe washing, but said “we are open to ideas.”

As far as mitigating the spread of the disease on a larger scale, Dr. Garbelotto said land management approaches differ depending on the type of forest.

To protect oaks, the protocol is to remove all vector species—primarily bay laurels—30 feet around infected trees, which reduces the likelihood of disease transmission by 90 percent. For tanoaks, preventative measures are more extensive, with thinning recommended to 40 per hectare. The application of phosphonates, a group of fungicides, has also been found effective.

The data collected from Matthew Garbelotto’s sudden oak death blitzes are available at sodblitz.org and SODmap.org.