

New Southern California beetle killing oaks

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U.S. Forest Service scientists have completed a study on a beetle that was first detected in California in 2004, but has now attacked 67 percent of the oak trees in an area 30 miles east of San Diego.

Their report appears in the current issue of *The Pan-Pacific Entomologist* and focuses on *Agrilus coxalis*, a wood-boring beetle so rare it does not even have an accepted common name. Scientists have proposed the Entomological Society of America common names committee call it the goldspotted oak borer.

Land managers and scientists are concerned about further spread of the infestation because oaks are the dominant tree species in the area. Further tree mortality will increase fire danger and decrease wildlife habitat in southern California.

They are also concerned drought and climate change will make more oaks susceptible to an insect that is not native to California. Oak trees have a nearly continuous distribution in the state, reaching from the infestation area north to the Oregon border.

"We don't know how the beetle arrived in San Diego County because there's a broad barrier of desert around the localities where it was previously collected in Arizona, Guatemala, and Mexico," said Steve Seybold, an entomologist with the Forest Service's Pacific Southwest Research Station and one of the study's authors. "We suspect it was either recently brought to California or somehow expanded its range."

There are reports of oak firewood from Mexico frequently being brought into the area in the past 20 years and that could be how it was introduced, Seybold said.

The first California specimen was collected in 2004 in Cuyamaca Rancho State Park in San Diego County. But, aerial surveys of dying trees in the area suggest it might have arrived before 2002.

Last summer, Seybold and Forest Service Entomologist Tom Coleman assessed oak tree mortality in the Cleveland National Forest near Barrett Lake, Mount Laguna, and the community of Descanso.

It was there they found evidence of beetle attacks in 67 percent of coast live oak, canyon live oak, and California black oak trees. They estimate the infestation has impacted 17,000 trees on the national forest's Descanso Ranger District.

According to the scientists, to prevent further spread more research is needed to determine the beetle's California distribution, seasonal active periods, host preferences, and natural enemies in its native Arizona and Mexico habitat. Further research will also demonstrate how it survives and spreads through oak firewood.

More information: The study, "Previously Unrecorded Damage to Oak, *Quercus* spp., in Southern California by the Goldspotted Oak Borer, *Agrilus coxalis*," appears in the latest issue of *The Pan-Pacific Entomologist*.

Source: US Forest Service

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