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Invasive Beetle Threatens Malibu

Shot hole borers are killing trees in the Santa Monica Mountains.

By Genevieve Finn / Special to The Malibu Times

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Small holes made by shot hole borers in the Raymond and Karen Bark's sycamore tree

Photo courtesy Raymond Bark

In 2018, Raymond Bark and his wife Karen started noticing their sycamore trees looked as if they were “weeping.” Now, the Malibu couple has trimmed their 120-plus-year-old giants for their safety’s sake—and all because of a tiny insect called the shot hole borer.

The shot hole borer’s name tells you exactly what you need to know: The invasive species burrows into trees such as avocado, olives and sycamores, creating holes “fine as a pencil point,” according to Raymond. Once there, they begin producing a fungus that cuts off the tree’s food, so much so that soon sap begins to dribble out of the shot holes the creature created upon entry.

“Almost the entire trunk became wet from the sap,” Raymond said of one of his sycamores. “When you cut them, you can see the path of the beetle itself.” Raymond said the syrupy sap began to flow more freely in the summertime, exacerbated by the heat.

The tiny, wingless brown beetles, native to Vietnam, cause tree stress and death within five years, according to Los Angeles County Supervisor Sheila Kuehl’s office, which warned residents of the threat in February 2021.

The “grave threat to natural habitats in LA County ... has the potential to disrupt ecosystems and supply chains alike,” Kuehl’s office wrote.

Rosi Dagit, senior conservation biologist with the Resource Conservation District of the Santa Monica Mountains, reported the invasive beetles are “quickly reaching epidemic proportions, destroying entire riparian areas and resulting in widespread environmental, economic, and aesthetic implications for the region.”

The pests were first detected in the Santa Monica Mountains in 2016 and have been studied in the Topanga area. Last year, the district initiated an “innovative, volunteer-driven project” that “trained dozens of community members to identify evidence of invasive shot-hole borers in native trees in their neighborhoods, parks and wildland areas to understand and combat the spread of these harmful pests,” according to the agency’s annual report.

The California Native Plant Society calls the infestations “a disaster.”

When Raymond and Karen Bark saw the telltale signs on their historic sycamores, they took note. Multiple arborists visited their property to look at their trees, the couple said; all of them concluded that their sycamores, which had leaned over their house’s roof, would have to be

trimmed or else they might fall on the Barks themselves.

One of the arborists who checked their trees told the couple he was shocked that the shot hole borers had "gotten west of the 405 [Freeway]," Raymond recalled. The main place they had been found in California was in Riverside County, where researchers at UC-Riverside began studying the issue, according to Raymond.

Money for the UC-Riverside study poured in from the avocado industry, Raymond said, but once the researchers learned that the shot hole borers would take limbs down from trees but not kill them entirely, funding seemed to dry up (it was difficult to verify Raymond's claim here).

Raymond and Karen went through a long permit process with the city, ultimately trimming four historic 60- to 70-foot trees down to their roofline.

In the meantime, over the next four years, shot hole borers began to infest the sycamore trees that line the nearby creek—a defining feature of Bonsall Canyon from which most of the flora draws its water.

"The whole of Bonsall's got it," Raymond said during a phone interview, saying that all but one family's sycamore trees in the neighborhood seemed to be in different states of death. "Nobody raised alarms," Raymond said, mentioning he'd approached the city and the city's biologist had not known much about the topic. That turned out to be true, according to a city spokesperson; city staff in the environmental sustainability department could not be reached by *The Malibu Times'* deadline on Tuesday.



Sap "weeps" from a sycamore tree infested with shot hole borers.

Photo courtesy Raymond Bark

At the Malibu City Council meeting on Thursday, May 13, Mayor Paul Grisanti commented that the shot hole borers were "an invasive beetle that attacks trees such as sycamores--which are protected in California--that are apparently delicious to these animals. We are in the beginning stages of an infestation that may change the look of Malibu if we don't spend some effort to make something happen."

Grisanti later told *The Malibu Times* that a eucalyptus tree in his own yard had begun to show signs of shot hole borers.

Grisanti said he did not know what was to be done about the problem, but that residents must be aware of the shot hole borers and make sure that their trees are not stressed, which makes it more likely the insects will overpower the trees and cause them to collapse.

But what was to be done beyond that? Raymond said that some landscapers had come up with a highly expensive tree treatment--a combination of spraying and injecting trees with fungicide--but he and his wife had tried it and found it ineffective. He also said others in his neighborhood had tried the fungicide, but without the entire neighborhood on board, spraying and injecting, many worried that shot hole borers would constantly jump from one sycamore tree to the next, creating a never-ending cycle.

Raymond said that in Vietnam, the shot hole borers have a natural predator; he hoped that species could be brought over to the states.

But by and large, Raymond, his wife, the mayor and multiple environmental and land agencies have drawn a blank.

"How do we save them?" I really don't know the answer," Grisanti said.

And without a better solution, destruction seems to be the answer. According to 2018 guidance from LA County's planning department, "The only way to control the spread of [shot hole borers] is to cut down the diseased tree and carefully treat the wood on-site. It is important to chip the infected wood smaller than one inch, as this eliminates habitat big enough for the [shot hole borers] to continue thriving. A heat treatment, either through composting or solarizing, is done after chipping to kill the beetle and the fungi."

One key way to avoid their spread? Follow the advice that's been given for years across California--don't move firewood. Similarly, homeowners should carefully source all landscaping mulch as well.

Editor's note: An earlier version of this story was mistakenly published without the latter half of the original text. The online version has been edited to include the full article. The story has also been corrected to reflect that Rosi Dagit is not a part of the LA County Agricultural Commission.

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