

## INVASIVE SHOT HOLE BORERS

# Small Beetle, BIG Problem

Article courtesy of University of California Agriculture and Natural Resources



**A**nother bad bug – of the insect variety – is threatening the beauty and safety of our communities. Invasive shot hole borers are killing trees in urban and suburban neighborhoods as well as parks and wildlands. Unlike many insect pests, these beetles are equally happy to infest a wide variety of tree species, including many common ornamentals, avocados and California natives. And, since most homeowners and associations aren't aware of the problem, beetle infestations can cause extensive damage before they are detected.

Already well established across a broad area of Southern California, the beetles appear to be spreading to the north and east, possibly by hitching rides in infested firewood or green waste. So, while the tiny killers haven't yet reached Northern California, they are a real concern for HOAs throughout the state. A similar insect – the Mediterranean oak beetle – is now attacking oaks in the Napa region.

No bigger than a sesame seed, invasive shot hole borers can do enormous damage. They tunnel into trees, creating galleries where they introduce and “farm” a fungus to feed their larva. This fungus causes a tree disease called Fusarium dieback. Over time, as the fungus spreads within the tree's inner layers, it disrupts movement of water in the tree. Deprived of water and nutrients, the tree suffers from branch dieback and breakage. When many of these trees eventually die, they are not only unsightly, but also pose a safety risk for residents and their homes due to falling limbs and potential fuel loading for fires.

Native to Southeast Asia, the beetles don't have any natural enemies in California that could keep them in check. And, their cryptic lifestyle make them notoriously hard to control. The beetles spend most of their lives inside their galleries, where the females mate with their own brothers or sons. That makes it difficult to kill

them with pesticide sprays, and when already-mated females do emerge to find new host trees, they aren't attracted by pheromones, so trapping and killing isn't an effective control method.

The best way to battle these bugs is to stop them before they spread to new trees. That requires awareness both of the pest and symptoms of infestation, as well as a willingness by associations and their residents to inspect and monitor their trees regularly. While it is unlikely to find a beetle on a tree's bark, there are a number of signs and symptoms to confirm their presence. Shot hole borers leave small, round entry-holes – about the size of the tip of a medium ball-point pen. Descriptions and photographs of other signs and symptoms as well as identification/reporting tools are available at [www.ishb.org](http://www.ishb.org).

While just a couple of years ago, there were no effective treatments for invasive shot hole borers, the science surrounding these pests and understanding of best management practices is advancing rapidly. Heavily infested trees may not be able to be saved and should be removed – including the stump – on a timely basis. For low to moderately infested trees, removal of actively infested branches and treatment with a combination pesticide and fungicide have proven effective control measures. Several trials of biological controls are currently underway at various University of California facilities.

HOAs should consult with their contracted landscapers/gardeners to ensure that they understand and follow best practices with respect to both maintaining trees and disposing of infested wood and green waste. HOAs also can help by using their existing homeowner communications to educate their residents about the threat posed by invasive shot hole borers and the fungus they carry. With coordinated action now, our communities can save their trees and avoid significant costs in the future.

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