Wood Boring Beetles

Periodic drought can stress and, even kill, non-irrigated trees and shrubs. This leaves behind abundant dead and down woody material. Many different insects utilize this dead wood for food. The first scavengers are often wood boring beetles. Sometimes, moth caterpillars and other insects also feed on the freshly killed wood. Termites and carpenter ants continue to break down wood once it comes in closer contact to the soil. Fungi and bacteria will also colonize the material if moisture and temperature conditions are favorable.

In wood boring beetles, it is the larvae (grubs) that actually feed on weakened, dying, or recently killed trees and shrubs. As the larvae feed on the wood with powerful mandibles, they ingest the material, utilizing what they can of it, leaving behind frass (waste). The frass usually fills the entire cavity where feeding occurred, is tightly packed and the same color as the surrounding wood, but can be distinguished from undamaged wood by its homogenized, sawdust-like texture. Most importantly, wood boring beetles do to not pose a threat to homes and other structures.

Wood boring beetles are often divided into two major categories: flatheaded wood borers and roundheaded wood borers. Flatheaded wood borers belong to the family *Buprestidae* and can be distinguished by the oblong shape of the boring cavity the feeding larvae create. Flatheaded wood borer larvae resemble a pale white, segmented worm with a wider, flat oval head. Roundheaded wood borers belong to the family *Cerambycidae* and feeding larvae create a perfectly round boring cavity. Roundheaded wood borer larvae do not have a flattened head and more closely resemble a grub found in your lawn or compost pile.

The Banded Ash Borer (*Neoclytus caprea*) is a 3/4 inch long flatheaded borer that has been observed feeding on hackberry firewood and is commonly encountered in Arizona pecan orchards feeding on weakened and dead wood. The Giant Root Borer (*Prionus californicus*) has been found in the Prescott area feeding on scrub oak roots. It is a roundheaded borer and can be up to 4 inches long and ¾ inch in diameter.

People often encounter wood boring beetles when cutting firewood, removing dead trees, and digging out tree stumps. They are often found inside homes after they have been brought in with firewood. Sometimes, they are brought in with freshly milled lumber. There is no need to be alarmed, as I mentioned earlier, they will not breed in or feed on dry, structural wood. If they create a nuisance, simply vacuum them up. I do not recommend using insecticides on these insects.

Some exotic wood boring beetles have been unintentionally introduced to the United States and have caused extensive economic and social impacts. For example, the Asian longhorn beetle was first introduced in New York City (1996) then in Chicago (1998). The insect was transported to the U.S. in wooden shipping crates from Asia. The Asian longhorn beetle feeds on several species of deciduous hardwood trees. Most importantly, it colonizes healthy trees rather than the weakened and dying. Similarly, the emerald ash borer is an introduced pest that killed millions of native ash trees in the Northeast and Midwestern U.S. It has not reached Arizona yet, but is known in Colorado and Texas. Thousands of trees have been removed in an attempt to contain these exotic insects and the process will likely continue for many years to come.

As for our native wood boring beetles, there is no need for alarm. They are just part of the native landscape. Every ecosystem needs a recycling system.

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