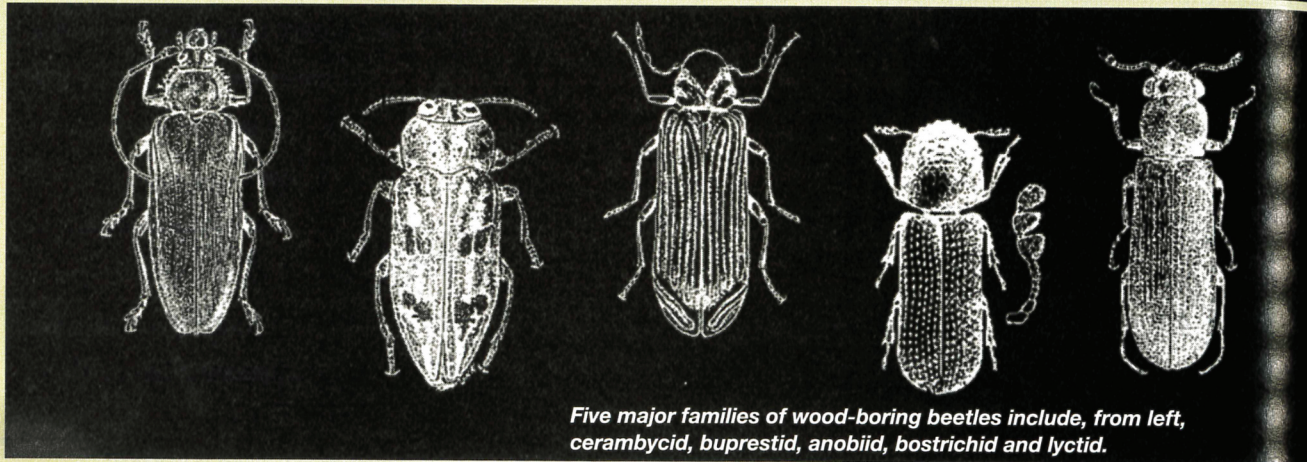


MEET THE BEETLES!

Here are some tips on the identification, control and prevention of five types of wood-boring beetles.



Five major families of wood-boring beetles include, from left, cerambycid, buprestid, anobiid, bostrichid and lyctid.

BY HEATHER GOOCH
Associate Editor

When pest control professionals think of wood-destroying insects (WDIs), termites and carpenter ants probably top the list. However, there are also several beetle species that should not be overlooked as enemies of wood.

Dr. Tom Weissling, an assistant professor at the University of Florida, Gainesville, Fla., names three broad groups of wood-boring beetles that pest controllers may encounter. These include the lyctids (such as the "true" powderpost beetle), the bostrichids (such as the false powderpost beetle) and the anobiids (such as the deathwatch beetle).

According to Dr. Dan Suomi, a pest control operator (PCO) specialist at the Washington State Department of Agriculture, Olympia, Wash., lyctids are found primarily in hardwoods. Anobiids and bostrichids can be found in both softwoods and hardwoods, therefore, they are more common of a problem in structures (commonly constructed of pine, etc.). In fact, bostrichids can even be found in items made from bamboo, which is a grass.

Dr. Terry Whitworth, owner of Whitworth Pest Control, Tacoma, Wash., notes that the primary wood-destroying beetle in his area is the anobiid. However, in his 25-year career, he has seen houses go through numerous pest inspections as they are bought and sold, and the ventilation efforts have improved, thus, alleviating some of the problem.

The Cerambycids

Then there's the cerambycids, which include longhorned beetles (also known as round-headed borers) and the old house borer. Weissling says that most longhorned beetles tend to attack trees out in the forest or right after a tree



Dr. Tom Weissling says that most longhorned beetles tend to attack trees out in the forest or right after a tree has fallen.

has fallen. Thus, the problems begin once the tree is processed into lumber.

"The female beetle will go out and look for a piece of wood, she's attracted to the odor. She'll lay her eggs in there, and then the larvae start to develop," he explains. "As long as the larvae aren't disturbed during the milling process, they keep developing. It takes a long time for them to develop—it may be two to four years after that egg hatches, that it pupates and emerges out of that piece of wood."

Suomi says that the slow growth cycle of most of the wood-boring beetles can be attributed to the poor nutrition available from the wood.

"If you cut through a log, the outside, or sap wood, is higher in carbohydrates," he notes. "The heartwood, though, where the infestation often occurs, does not provide much carbohydrates."

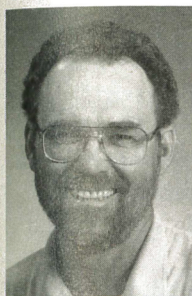
Of the approximately 1,200 cerambycid species, only the old house borer and the flat oak borer will attack seasoned, dried out wood. The other species will emerge and be on their merry way looking for unseasoned wood.

While Whitworth does not see the old house borer in Washington, he says they do have a lot of golden buprestids.

"Golden buprestids do not reinfest, but they are very common around here, and are often mistaken for a much more serious pest (than they really are)," he says.

Beetle Control

Identification is obviously very important, to determine whether it's an insect that's going to reinfest the wood



Dr. Terry Whitworth says that anobiids thrive in a damp environment.

(bostrichids, lyctids, anobiids), or just something that's emerging from having developed in a piece of wood, but will never go back to it (cerambycids).

"For example, the longhorned beetle adults that emerged from wood are going to go out in search of a dying tree to lay their offspring. They'd never go back to a two-by-four or anything like that. That would be more like the powderpost beetle or the old house borer," Weissling explains.

"You almost never see the bugs, you just see the holes in the wood," adds Whitworth. "If you don't happen

to be there on that warm sunny afternoon when all the beetles emerge, you miss them—and they're little tiny things. They're just very hard to observe because they spend most of their life in the wood. The larvae are in the wood for a couple years, then several of them emerge at once, and they mate. The female lays eggs, and the cycle starts over again—but they don't hang around for very long."

Firewood can be a source of wood-boring beetles, Weissling points out, so PCOs should remind their customers of many of the same practices they would suggest in a termite account.

"You want to try to rotate your wood, so you only have wood that's been around two to three years at the most, and definitely store the wood away from the house," he advises. "If there's a concern, there's probably the potential to tarp the wood and fumigate it, if you're worried about an infestation coming into the house."




Borates are a fairly effective treatment on unpainted wood, such as an attic, says Weissling.

"For wood on the inside, any time you start to see emergence holes, patch the holes and either paint, varnish or shellac over it. This basically prevents them from laying their eggs—or at least, the larvae can't penetrate the wood to infest it," he states.

Whitworth says that for the anobiids, moisture control is a must.

"Improve the ventilation, make sure there's adequate clearance in the crawlspace, remove wood scraps and

Identifying the Infestation

Beetle Type	Exit Hole Shape & Size (in inches)	Characteristics of Frass & Tunnels
Powderpost Beetles (Lyctids)	 <p>ROUND 1/32-1/8</p>	Round tunnels, loosely packed with very fine powder.
Anobiid Beetles	 <p>ROUND 1/16-1/8</p>	Round tunnels, loosely packed with powder and oval gritty pellets.
Old House Borers (Cerambycids)	 <p>OVAL 1/4-3/8</p>	Oval tunnels, tightly packed with coarse powder and small pellets

Dr. Tom Weissling notes that the three groups of powderpost beetles have distinct emergence holes and frass characteristics. Here's his take on telling them apart, which is accompanied by a pictorial key from Nisus Corp. (Note that the chart shows old house borers, which are cerambycids, instead of the bostrichids)

- **The lyctids:** If you take a (clickable type) ball-point pen, only the tip fits into the exit hole. The frass feels like talc, it feels very loose and dry.

- **The anobiids:** The tip of the pen and part of the angled face of the pen, fits into the exit hole. The frass feels gritty. It's still dry and easily dislodged from the gallery.

- **The bostrichids:** You can still put most of the point of the pen into the exit hole. It's the largest of the three, and the frass itself tends to not be very easily dislodged from the hole. So, you wouldn't find nearly as much frass, if any, with the false powderpost beetle. □

debris and drain any water that might be standing in the crawlspace," he advises. "One of the most important things is to install a vapor barrier (typically, a type of plastic sheeting that is laid on soil). That traps moisture under the plastic and keeps it from making the air humid, because the higher the humidity in the air, the higher the moisture content in the wood."

In essence, Whitworth continues, "create an undesirable environment for the anobiids, and they can't live and reproduce happily."

He suggests following up with a borate product to prevent reinfestation and break the beetle's cycle.

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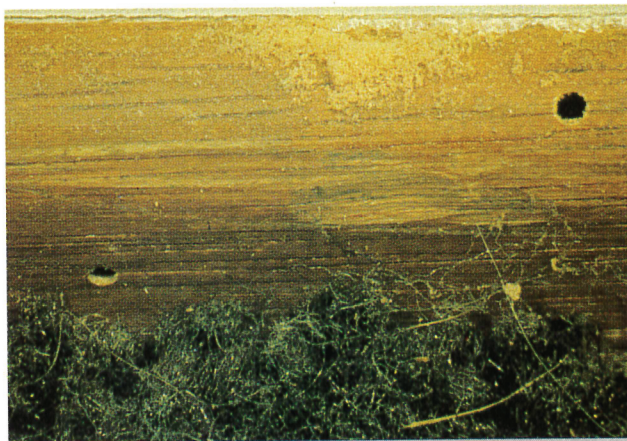
Case in Point

While Whitworth finds that moisture control and a borate treatment will usually solve the anobiid infestations, lyctid situations are another story. Fumigation seems to be an effective choice.

"The anobiid problem is one of the structure," he notes. "They're softwood pests, so they're attacking the Douglas fir or pine or any of the soft woods used in structures. Furniture is more of a problem with the lyctids, the hardwood pests."

One case Whitworth, who does expert witness testimony, was recently involved in had to do with \$25,000 cabinets made of myrtlewood (a West Coast hardwood related to laurels) that were full of lyctids. The homeowner was quite concerned that they may have gotten into the rest of her house, as she had other hardwoods in her home.

"In this case, I recommended she have the cabinets



An example of powderpost beetle damage to floor molding.

removed and fumigated separately," he reports. "She did not have much hardwood there, so she could have someone go ahead and spray (a general insecticide, in case these things were running around) inside, but not fumigate the home itself. There were hundreds of them emerging from her cabinets on a daily basis. These were gorgeous cabinets, and she was quite distressed."

Still, there's little homeowners can do to prevent an

infestation, short of a visual inspection of their wooden possessions for exit holes and buying their furniture and lumber from reputable sources.

"We see a lot of this on things that are supposed to be kiln-dried, but aren't properly dried," says Whitworth, adding that the beetles infest trees, as a rule, before the wood is cut down and dried. "If it's properly dried, that kills them, and you don't have a problem." **PC**

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