

Controlling Wood-Boring Beetles in Houses

After termites, wood-boring beetles are the most important wood-destroying insects in homes. The amount of damage that wood-boring beetles cause depends on many factors. The type of wood (hardwood or softwood), the moisture of the wood, and the environmental conditions at the infestation site all affect the severity of beetle damage. This circular discusses the identification and control of some of the most common wood-boring beetles found in Alabama homes.



Powdery wood dust from powderpost beetles often collects in piles in crawl spaces.

Lyctid Powderpost Beetles

Description. In the United States, there are more than thirty-five kinds of lyctid beetles. These are considered the “true” powderpost beetles. Generally, adult lyctid beetles are $\frac{1}{8}$ to $\frac{1}{4}$ inch long. They are slender and range in color from reddish-brown to black. Their heads are obvious when these insects are viewed from above.

Habits. Lyctid beetles infest only hardwoods, such as oak. They can live in wood with a wide



Sometimes powderpost beetle damage creates lines of wood dust on infested lumber.

moisture range, from a dry 8 percent to a very moist 32 percent.

Only the larvae damage wood. The female lays an average of twenty to fifty eggs in crevices or on the ends of boards. When they hatch, the tiny larvae bore down into the wood. As the larvae grow, they bore to a point just underneath the surface of the wood, where they change into adults.

After they change, the adults cut a $\frac{1}{32}$ - to $\frac{1}{16}$ -inch circular exit hole in the surface of the wood. Often, powdery wood dust created by the beetle's feeding is pushed out as the adult emerges. This is why they are called "powderpost" beetles.

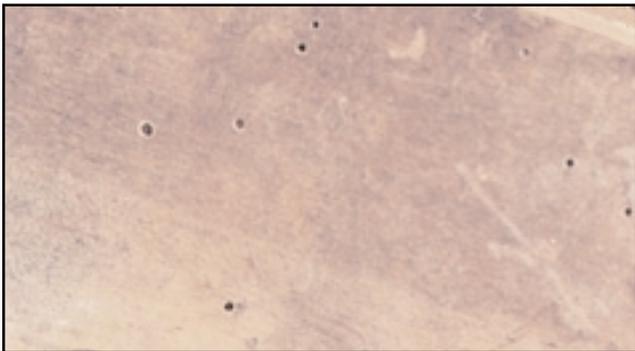
Males and females exit at the same time and mate, and the new generation of females lay eggs again. The entire life cycle for most lyctid beetles takes 9 to 12 months.

Anobiid Powderpost Beetles

Description. There are more than 200 kinds of anobiid beetles, of which very few infest wood. Most anobiid beetles found in homes, like drug-store beetles, infest grain products. The few that do infest wood are also called powderpost beetles or deathwatch beetles.



True powderpost beetles are only $\frac{1}{8}$ to $\frac{1}{4}$ inch in length and range in color from reddish-brown to black. *Photo courtesy Van Waters & Rogers, Inc.*



True powderpost beetles can damage hardwood furniture such as this walnut drawer.

The wood-infesting anobiids range from $\frac{1}{8}$ to $\frac{1}{4}$ inch in length. Their color ranges from reddish brown to nearly black. The body segment just behind the head is hoodlike and completely covers the head when the insect is viewed from above.

Habits. Anobiids can infest both hardwoods and softwoods. Only the larvae feed on wood. They generally prefer wood in cool locations with moisture levels above 14 percent. Anobiids are the most common beetles infesting crawl spaces and outbuildings.

Female anobiid beetles usually lay fewer than fifty eggs under wood splinters, in cracks, or in old exit holes. Like lyctid beetles, the small anobiid larvae bore into the wood, where they eat and develop.

When the larvae change into adults, they chew round exit holes between $\frac{1}{16}$ and $\frac{1}{8}$ inch in diameter. The male and female emerge together and mate, and the female deposits her eggs. Though the females fly well and can lay eggs at new locations, they are most likely to lay their eggs on the board from which they emerged. Most anobiid beetles take 2 to 3 years to complete their development.

Bostrichid Powderpost Beetles

Description. Bostrichid beetles are sometimes referred to as "false" or "large" powderpost beetles, bamboo borers, or even lead-cable borers. The adults range in color from reddish brown to black. They range in size from $\frac{1}{8}$ to $\frac{1}{4}$ inch. Like anobiid beetles, the segment just behind the head conceals the head from above. The heads of most bostrichid beetles are directed strongly downward.

Habits. Generally, bostrichid beetles cause much less damage in homes than lyctid or anobiid beetles. Most bostrichid beetles bore into freshly cut hardwoods, but a few will attack softwoods. Unlike lyctid or anobiid beetles, both adults and larvae of the bostrichid beetle damage wood.

Adult females bore "egg tunnels" into wood to deposit their eggs. After hatching, the larvae tunnel into the wood to feed and grow. Under most conditions, the larvae complete their development by the spring of the year following egg-laying. Adults cut $\frac{3}{32}$ - to $\frac{9}{32}$ -inch, round exit holes when they emerge. The adults rarely reinfest the wood from which they emerge.

Old House Borers

Description. The old house borer belongs to a group called cerambycid beetles, which are also known as long-horned beetles. Most long-horned beetles are wood borers in the larval stage, but



Anobiid or deathwatch beetles can infest hardwoods or softwoods. *Photo courtesy Van Waters & Rogers, Inc.*



The heads of most bostrichid beetles are bent downward. *Photo courtesy Van Waters & Rogers, Inc.*



The old house borer is one of the largest wood-infesting beetles. These beetles cut $\frac{1}{4}$ to $\frac{3}{8}$ inch oval holes when they emerge. *Photo courtesy Van Waters & Rogers, Inc.*

only the old house borer is a serious pest in homes.

Adult old house borers range from $\frac{5}{8}$ to 1 inch in length. They are brownish black in color, with many gray hairs on the head and forepart of the body. The segment just behind the head has a shiny raised bump on each side, giving it the appearance of a face.

Habits. Old house borers infest softwoods, especially pine. They can be found in old houses, as their name suggests, but they are actually more common in new homes.

The females lay about fifty eggs in cracks and crevices in wood. The larvae penetrate the wood

to feed, but they often stay near the surface. Larvae usually require 2 to 3 years to develop in wood with 15 to 25 percent moisture, but they can take as long as 15 years to develop in very dry wood.

Usually, larvae become adults in the spring, but they may not emerge immediately. When they do exit, the adults cut oval holes about $\frac{1}{4}$ to $\frac{3}{8}$ inch in diameter. Adults are normally most active in June and July.

Control

There are several factors you should consider before starting control measures for wood-boring beetles. The first is that no control may be necessary. Many homes have some damage from wood-boring beetles. However, in many cases the damage is very minor and old, which means that all the beetles have died. Unless you see beetles or fresh wood powder around the holes, chemical treatment is not necessary. Fresh wood powder is usually light in color and does not clump. Old wood powder is often yellowed and clumps together.

Also, there are many beetles in nature that attack wood but do not cause serious damage or reinfest lumber in homes. It is important to know which beetles you have before you go to the trouble and expense of some of the treatments.

Finally, with the advent of central air conditioning and heating, the potential for widespread damage has decreased. In fact, even with the more serious lyctid and anobiid beetles, if a house has no moisture problems, has a central cooling and heating system, and is not unoccupied for long periods, serious problems are not likely.

Spot Treatments. For active wood-boring beetle infestations, several spot treatments are possible. These include controlling wood moisture, using surface covers, mechanical removal, freezing, and insecticide treatments.

Moisture problems are most commonly found in the lumber in crawl spaces. A crawl space should be well ventilated and, in many cases, should have a vapor barrier. Generally, plastic sheets (4 mil polyethylene) covering 70 percent of the crawl space will keep the lumber from getting too moist. Surface cover, including paint, polyurethane, and water sealants, will protect wood from moisture problems and help prevent wood-boring beetles from penetrating the wood.

However, surface treatments usually do not prevent beetles already in wood from emerging. If an infestation is limited to a few pieces of lumber,

Damage By Common Wood-Boring Beetles

Insect Type	Wood Type	Age Of Wood ^a	Shape	Size Of Holes	Reinfestation ^b
Anobiid Beetles	Soft & Hard	New & Old	Round	1/16" - 1/8" ● ●	Yes
Bostrichid Beetles	Soft & Hard	New	Round	3/32" - 9/32" ● ●	Rarely
Lyctid Beetles	Hard	New & Old	Round	1/32" - 1/16" ● ●	Yes
Old House Borer	Soft	New & Old	Oval	1/4" - 3/8" ● ●	Yes

^aNew wood is freshly cut or unseasoned lumber. Old wood is seasoned or dried lumber.

^bMany other wood-boring beetles can initially infest new wood in homes, but their damage is limited and they do not reinfest.

or if the lumber can be removed easily, replacing the wood may be the best control strategy.

Freezing temperatures can kill wood-boring beetles, especially in small furniture. If you have access to a large or walk-in freezer, you might want to consider this control method. Wood subjected to freezing should first be tightly wrapped in plastic. Freeze the item for about a week. After removing it from the freezer, leave the item wrapped until it reaches room temperature. This protects the wood from water marks due to condensation as the item warms. Also, handle the item carefully since glue joints are very fragile when frozen.

Most insecticides for wood-boring beetles are restricted and can be used only by certified pest control operators. You may be able to find some formulations of Dursban (chlorpyrifos) that are labeled for wood-boring beetles around the home. Most labels will recommend mixing Dursban in water to make a 0.25- to 0.5-percent solution. For treatment, the emulsion can be sprayed or brushed on small areas to the point just before the solution begins to run off. Before applying the insecticide, remove any surface covering, such as paint, so the insecticide can penetrate the wood.

As with any insecticide, you must follow the specific instructions on the label of the product you buy. Since pest control operators have access to a wider range of insecticides and equipment, your best option may be to employ a professional.

Fumigation. In situations where spot treatments have failed or in serious infestations where there are large numbers of beetles throughout the house, fumigation may be the best control option. The penetration of fumigants can kill wood-boring beetles in all areas of the home. However, fumi-

gants cannot prevent future wood-boring beetle infestations.

Fumigation is expensive and complicated. Fumigation in Alabama can be done only by an Alabama certified pest control operator. Before employing a professional, get quotes from several reputable firms.

Information on the types of wood-boring beetles found in homes and the damage they cause is summarized in the table above.

This publication was prepared by Eric P. Benson, *Extension Entomologist*.

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Use pesticides only according to the directions on the label. Follow all directions, precautions, and restrictions that are listed. Do not use pesticides on plants that are not listed on the label.

The pesticide rates in this publication are recommended only if they are registered with the Environmental Protection Agency or the Alabama Department of Agriculture and Industries. If a registration is changed or cancelled, the rate listed here is no longer recommended. Before you apply any pesticide, check with your county Extension agent for the latest information.

Trade names are used **only** to give specific information. The Alabama Cooperative Extension Service does not endorse or guarantee any product and does not recommend one product instead of another that might be similar.

For more information, call your county Extension office. Look in your telephone directory under your county's name to find the number.

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