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Common Name: **Longhorned beetles, roundheaded wood borers**
Scientific Name: **Family Cerambycidae**

LONGHORNED BEETLES



Introduction. The common name of longhorned beetles comes from their antennae which are very long, often much longer than the body. The name roundheaded borer is given to the larva because of its swollen, rounded thoracic region directly behind the head, and its habit of boring through wood as it feeds. With the exception of the old house borer, *Hylotrupes bajulus* and the flat oak borer, *Smodicum cucujiforme*, these beetles do not re-infest seasoned wood and are therefore nuisance pests, although some can cause cosmetic damage by adult emergence from infested paneling, lumber, furniture and through various materials that cover infested wood. About 1,200 species occur in the United States and Canada. This section will focus those species which attack wood used in structures or are commonly brought into residences in firewood.

Recognition. Depending on the species, adult longhorned beetles range about 3/8 to 1 inch long and are usually oblong or elongate and somewhat cylindrical. The antennae are very long, usually exceeding the body length and the elytra (hardened front wings or wing covers) usually cover the abdomen.

Depending on the species, mature larvae range from 3/8 to 1 1/2 inch long and have an elongate, cylindrical body with an enlarged, rounded thorax. The larvae are white to ivory colored and are legless or have very short spine-like legs.

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Similar Beetles. Some representatives of other beetle families are like longhorned beetles but rarely occur indoors except by attraction to light through doors and windows.

Damage and Signs of Infestation. Larval galleries wind irregularly below the bark with much frass (fecal fragments) evident. The galleries usually extend into the sapwood (some species into heartwood) of softwoods and hardwoods.

Galleries are oval, up to 1/2 inch diameter, and have the frass loosely or tightly packed into them. Depending on the species, frass texture varies from being rather fine and meal-like to very coarse and almost excelsior like. Exit holes are round to slightly oval, with the widest diameter 1/8 to 3/8 inches; the widest part is never more than twice the height. Roundheaded borers attack unseasoned wood, both logs and lumber. They do not re-infest seasoned wood with the exception of the flat oak borer and the old house borer.

Representative Species.

1. Painted hickory borer, *Megacyllene caryae*, adults are 3/4 to 7/8 inch long, have reddish legs and have the body covered with yellow and black markings, bands and patterns that resemble those of yellowjacket wasps. Adults are active in the spring. The larvae feed in hickory, ash, Osage orange and hackberry wood.
2. Locust borer, *Megacyllene robiniae*, adults are very similar in size and coloration to those of the painted hickory borer; however they are active in autumn and may be found on goldenrod blossoms. The larvae feed in black locust trees.
3. Old house borer, *Hylotrupes bajulus*, adults are 5/8 to 1 inch long, elongate, somewhat flattened and tapering towards the rear. The head and pronotum (front top section of the thorax) are black and the elytra are mostly brown with black shoulder areas adjacent to the pronotum. The pronotum also has a shiny central ridge bordered on either side by a shiny bump. It is bordered with short, pale yellow fuzz (setae). The antennae are about 1/3 the length of the body. This species feeds in the sapwood of pine and other softwood trees and lumber.
4. Redheaded ash borer, *Neochlytus acuminatus*, adults are 1/8 to 9/16 inch long, elongate and tapering towards the rear. They are reddish-brown with yellow markings consisting of 4 cross bands. The adult flight period is May to August in the North. They attack many hardwood trees.

Biology. Female longhorned beetles lay their eggs in wood or bark crevices during the spring, summer, or early autumn. Eggs are laid singly or in small groups. Larvae hatch in a few days. After finding a suitable entry point, they feed near the surface at first where the protein is in greatest concentration. As they grow, they bore

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deeper into the wood. The larval stage may last from a few months to several years, being prolonged by a low nutritional value of the wood and any decrease in moisture such as caused by the wood being sawed into lumber. Pupation takes place in a cell near the wood surface. The time of adult emergence depends on the species and environmental conditions. Outside, they mate, lay eggs, and die. Indoors, the only 2 species that can re-infest dry, seasoned wood are the old house borer and the flat oak borer.

Most roundheaded borers require at least 2 years to complete their life cycles (adult to adult), The old house borer requires at least 3 years; the flat oak borer 1 to 2 years.

Habits. See the Damage and Signs of Infestation and the Biology sections above. Log homes present special problems. This is because bark is often left on the logs, especially around knot-holes. The logs are often either green or air-dried at the time of construction; design flaws allow the logs to increase or retain a high wood moisture content. Most log homes are constructed in wooded areas, and the logs are often not rigorously maintained with preservative and sealer. This situation often allows for a series of species of roundheaded wood borer infestations, which can start before the trees are cut and progress through advanced stages of wood decay.

Cultural Control & Preventative Measures. For adults emerging from firewood brought indoors, remove the firewood to the outside and bring it in just before burning. There is no threat of infestation except from the flat oak borer, which is uncommon in firewood. Rarely is fumigation justified except in cases of widespread infestation, incessant larval chewing noises, or peace of mind. For re-infesting species, such as the old house borer and sometimes the flat oak borer, fumigation is often the appropriate control measure.

For species that do not re-infest wood and occur in low numbers, the damage from emerging adults is not structural but cosmetic. The usual procedure is to fill the exit holes with appropriate wood dowels or wood filler compound and finish to match. Penetrated linoleum and floor tile will often require replacement and roofing usually requires patching.

Professional Control. Log homes often require fumigation but this should be done in conjunction with correction of the conducive moisture conditions and followed by proper maintenance procedures. It is usually desirable to make an appropriate application of boron-containing pesticide to reduce re-infestation and retard wood decay before the logs are sealed. All exit holes should be sealed after the boron application but the sealer application but before the sealer application.



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Old house borer adult and larva (roundheaded borer)