



TREES & SHRUBS

Firewood and House Log Insects

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Quick Facts...

With few exceptions, insects found in firewood will not infest household furnishings.

The best way to avoid insects emerging in the home is to store wood outdoors until needed.

Some bark beetles in firewood, such as the mountain pine beetle and elm bark beetle, can infest nearby healthy trees.

An exotic wood borer, the Asian longhorned beetle (ALB) from China, is a potential imported threat to Colorado's deciduous trees.



Putting Knowledge to Work

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Hundreds of insect species potentially can inhabit the wood of our native and ornamental trees. However, the great majority of cases involve a few basic groups: roundheaded and flatheaded wood borers, bark beetles, carpenter ants, and powderpost and anobiid beetles.

With few exceptions insects found in Colorado firewood will not survive indoors and are capable of infesting only well-dried logs with intact bark. The primary problems with firewood insects involve a few species of bark beetles that can develop in firewood and later infest healthy trees.

By far, the most important of these insects is the mountain pine beetle, which kills large numbers of trees (primarily ponderosa pine) in natural forest areas. See fact sheet 5.528, *Mountain Pine Beetle*. Elm bark beetles and, rarely, *Ips* beetles also may threaten healthy trees after emerging from firewood. Simple precautions can prevent injury by these firewood insects.

Common Firewood and House Log Insects

Wood Borers

Wood borers are the most frequently observed insects infesting firewood and house logs. Most common are roundheaded borers, also known as longhorned borers or sawyers. Adults are medium to large beetles (1/4 to 2 inches), often with long antennae that may exceed the body length. Common roundheaded borers are gray-brown with black speckling (sawyers) or deep blue-black (black-horned pine borer).

Adult flatheaded borers, also called metallic wood borers, generally are smaller than roundheaded borers. Flatheaded borers commonly are gray, bronze or blue-green with a metallic sheen and have inconspicuous antennae.

Borer larvae are slender, white, segmented grubs with brownish heads and rather prominent jaws. These larvae produce the chewing noises and piles of wood-colored sawdust that frequently cause alarm. This sawdust material may be relatively fine or coarse and fibrous.

These borers also are responsible for the wide zigzag or meandering tunnels seen beneath the bark and deep in the wood. The tunnels of both groups are oval in cross-section, not perfectly round.

Wood borers are primarily a nuisance. The noise and sawdust they produce is suggestive of termites and, thus, disconcerting.

Because of their long life cycle, borers may be present in wood for a year or longer. They do not emerge and attack healthy trees. No Western species normally recycle in the same wood that produced them. Furniture, wall framing or other seasoned woods are not suitable for wood borer attack.

Despite producing what may seem like great quantities of dust, borers



Figure 1: Typical longhorned beetle.



Figure 2: Metallic wood borer.

rarely tunnel extensively enough to cause structural failure. Adult borers found inside the home may look ominous and pinch the skin if handled but are not dangerous.

Bark Beetles

Bark beetles commonly infest dead or dying trees and then appear in firewood from such trees. Several well-known tree killers and disease vectors are the mountain pine beetle (5.528), elm bark beetles (5.506, *Dutch Elm Disease*) and *Ips* beetles.

Adult bark beetles are small (1/16 to 1/4 inch), dark and bluntly cylindrical. Infestation on conifers usually is marked by a glob of pitch (pitch-tube) at the point of attack.

Eggs are laid in central pathways (egg galleries) constructed under the bark. The larvae feed on wood as they chew at right angles from the central gallery. Most bark beetles have a one-year life cycle, but a few can complete generations in two-month intervals. Bark beetles cannot reproduce in household wood products.

Powderpost and Anobiid Beetles

Powderpost and anobiid beetle infestations of structural wood and furniture are not common in Colorado but can be serious. Native species do occur naturally in dead tree limbs and dry, seasoned wood. However, problems with these insects in Colorado appear to be associated with the introduction of infested wood products from Eastern states. Fresh piles of fine sawdust and small round holes (1/32 to 1/8 inch diameter) are possible signs of infestation.

Carpenter Ants

Intact, sound logs are not used by carpenter ants (*Camponotus* spp.). These ants nest in rotting, water-damaged wood, and such logs are rarely used for firewood. Native populations of carpenter ants may develop within old rotting wood that has been stored improperly for long periods. (See 5.554, *Carpenter Ants*.)

Termites

There is a widespread but unfounded concern about transporting termites in firewood or other wood products. Colorado termites nest underground. Under natural conditions, they rarely infest firewood and timber products. Occasional termites found in this wood are not the reproductive stages. Furthermore, the low humidity in houses causes any incidental termites in firewood to quickly dry out and die. Colorado termites do not produce sawdust. See 5.532, *Termites*.

Control

Firewood insects do not normally pose any hazards to people, household furnishings or plants. This is particularly true for the wood borers, the most conspicuous group of firewood insects.

It is hard to witness the activity of borers without feeling a need to take action, but in reality borers speed up the drying process and promote better burning.

Firewood Storage and Collection

Problems with firewood insects emerging in the home are best handled by storing firewood outdoors until needed. Outdoor storage will greatly slow insect development during the winter and limit the opportunity of insects to emerge inside a home. The occasional insects that do manage to emerge indoors can be controlled by vacuuming.

To limit firewood insect infestations, stack wood so air readily flows through the pile. Well-dried wood will not invite bark beetle attack. The drying process can kill many developing bark beetle larvae already present in the wood.

When collected firewood is known to harbor mountain pine beetle or other undesirable species, the best option is to burn the wood before adult beetles begin to emerge in mid-July. Elm bark beetles emerge in mid-May.

To avoid wood infested by these insects, choose trees that have been dried for at least one year or that have noticeably loose bark. Check local ordinances as it is illegal to store certain types of firewood (elm, for example).

If log piles are small and located in a sunny area, firewood insects can be killed by covering the pile with a clear plastic tarp. The high temperatures produced will kill many insects inside the wood. Control of insects in logs at the top of the pile may exceed 50 percent, but insects in lower logs generally are not affected.

A more difficult but highly effective means of killing most firewood insects is to remove the bark. Debarking also prevents reinfestation and speeds drying.

Chemical Controls

Chemical controls may be needed in some situations to protect house logs. At present, insecticidal fumigants are not available for general use on firewood. Consequently, insecticide treatments involve sprays that kill the insects as they enter or emerge from wood. These sprays do not kill insects already in the wood but can prevent them from moving to healthy plants or reinfesting the wood.

Currently, no insecticides are registered for use in control of insects that infest firewood.

Asian Longhorned Beetle

An exotic wood borer, the Asian longhorned beetle (ALB) from China, is a potential imported threat to Colorado's deciduous trees. The problem with ALB is two-fold:

1. Where it shows up, it seriously damages shade trees, requiring their removal.
2. It is confused with at least two common, relatively harmless borer species native to Colorado. Mistaking our native borers in the genus *Monochamus* for ALB has led to unnecessary concern.

The ALB is similar in shape to the typical longhorned beetle (Figure 1, top). However, it is black, very shiny, and has prominent white spots scattered on its wing covers, making it resemble a starry sky.

ALB is a threat only to deciduous trees, such as maples and poplars. Our native "look-alikes" develop in pines and other conifers, typical Colorado firewood species. The ALB develops and is imported in crates and other heavy wooden packing material from Asia.