

Wood Borers and Bark Beetles After a Fire

After a fire, trees are often attacked by wood boring insects and bark beetles. These native insects are always present in the forest, but many are attracted to fire activity and the weakened trees left behind. Wood borers are beetles or wasps that live under the bark and inside the wood of trees, and their tunneling activity helps to decompose the tree. They normally attack weakened trees, and aren't usually capable of killing healthy trees. Trees that are not killed outright by the fire are often attacked by wood borers or bark beetles the year of, or the year following the fire. Wood borers do not always kill scorched trees, but they do add more stress to these already stressed trees. Bark beetles live under the bark, and are capable of attacking healthy trees, though some do specialize in weakened trees.

- **Wood Borers** Most wood borers belong to two beetle families: the longhorn beetles (round headed borers), and the metallic wood boring beetles (flat headed borers). A separate unrelated group of borers, the horntails or wood wasps, also commonly attack trees after a fire.

•Identification

- Look for **egg niches** on the darkened bark (see image below). Females chew a hole in the bark and lay eggs there. The eggs hatch and larvae tunnel under the bark before entering the sapwood.
- Look for **boring dust** or sawdust in bark crevices or around the base of the trunk. Boring dust of longhorned beetles can look like wood shavings.
- Look for **woodpecker** activity loosening the bark and exposing insect galleries.

- **Bark Beetles** Bark beetles are a large group of insects that live under the bark of trees, often killing them. Many are capable of killing healthy trees, but some are more common after a fire. Bark beetles spend almost their entire life cycle under the bark, but they do not bore into the wood. The most common species are shown on the opposite side of this document.

•Identification

- Look for fine **boring dust** on the bark or around the base of the tree. Bark beetle boring dust is usually brown colored, and very fine. It usually shows up well against the dark, fire-scorched bark.
- On pines, **pitch tubes** may be present with red turpentine beetle and western pine beetle (but not pine engraver). No pitch tubes will be seen on Douglas-fir, grand fir or western redcedar.
- Look for **woodpecker** activity, especially with western pine beetle on ponderosa pine.

Wood borers



Wood borer egg niche on scorched ponderosa pine bark



Wood borer frass under fallen log



Wood pecker activity indicates borer or bark beetle infestation



Longhorned borer frass around base of fire scorched tree

Bark Beetles



Red turpentine beetle pitch tube on ponderosa pine



Western pine beetle pitch tubes on ponderosa pine



Orange inner bark from wood pecker activity on ponderosa pine indicates western pine beetle infestation



Douglas-fir beetle frass on scorched tree

Insects Attracted to Scorched Trees

Wood Borers (*Not species specific*) (*Will attack most conifers this year*)

Longhorned Beetles
(Roundheaded borers)

Metallic wood borers
(Flatheaded borers)

Horntail Wasps
(Wood wasps)

Adults



Larvae



Frass/Galleries
under bark



Frass and galleries are
in wood and are
rarely seen

Adults

Larvae

Frass/Galleries
under bark

Photos courtesy of www.bugwood.org

These species usually attack weakened or dead trees

Aggressive Bark Beetles (*Species specific*)

Douglas-fir Beetle
(*Will attack Spring 2016*)
Only Douglas-fir

Fir Engraver
(*May attack this year*)
Only grand fir

Western Pine Beetle
(*May attack this year*)
Only ponderosa pine

Pine Engraver
(*May attack this year*)
All pine species

Frass



Galleries



Frass

Galleries

These species can kill trees

Red Turpentine Beetle (*Not usually a tree killer*)



Granular Frass

All pine species



Pitch tube