Structural Wood Pests

Forest Health Fact Sheet

June 2021

There are many different types of insects that attack seasoned, structural and/or decorative wood. Many of these insects are beetles. These insects typically feed on wood made from the sapwood rather than the heartwood of a tree because it contains more dietary starch. They may have a preference for either hardwood or softwood, and differ in their tolerance to wood moisture level, but they generally avoid materials that contain resins or glue. Once these insects infest wood, there is nothing to do to remove them although they can be killed by heat or gas treatments. To prevent infestation, wood should be properly dried, or barriers such as boric acid treatment, paint or varnish (not stain alone) should be applied. It is common for these insects to tunnel *out* of (even painted or varnished) wood years after they have infested due to their slow growth on this nutrient -poor food source, although at a certain point the starch content degrades or wood becomes too dry for them to develop on and the infestation subsides. Unlike with termites, damaged caused by these beetles is generally aesthetic and does not result in structural damage.

Powderpost or Shothole beetle (Lyctinae)

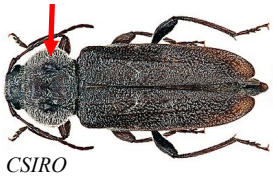
3-7mm long adults that are slightly flattened. Exit holes are 0.8-1.6mm wide and frass (boring dust) is fine. Attacks newer hardwoods and bamboo and may repeatedly reinfest wood, sometimes for as long as 5 years.

False powderpost beetle (Bostrichidae)


Salvador Vitanza

3-6mm long adults with blunt, slanted front and rear ends with head not visible from overhead. Exit holes are 3-7mm and frass may be fine or coarse but is clumpy. Attacks newer hardwoods and bamboo and sometimes softwoods but rarely reinfests the wood after the first generation.

Old house borer (Cerambycidae/Hylotrupes)


CSIRO

20-25mm adults with two bumps on pronotum (arrow). 6-10mm oval exit holes and powdery frass. Attacks newer softwoods.

Furniture or Deathwatch beetle (Anobiidae)

3-7mm long adults with heads not visible from overhead. Pronotum structure covers head and is pointed. 1.6-3mm exit holes and frass is coarse and packed or in oval pellets. May make tapping or clicking sounds. Attacks newer softwoods and aged softwoods and hardwoods. They prefer higher moisture content such as crawl spaces and don't often persist in homes and attics which are drier due to central air. If conditions are right they can persist for many years regardless of wood age.

Beetle management highlights

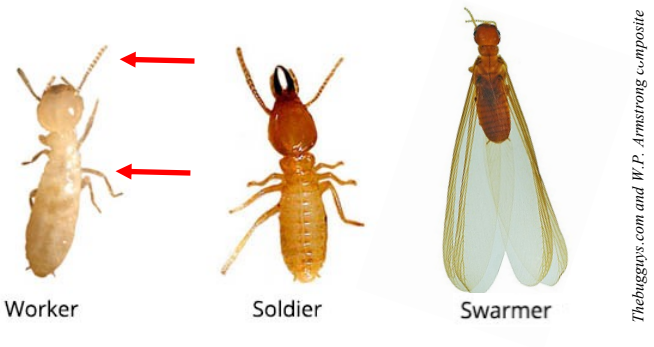
Kill insects within wood:

- Heat wood at 60°C (140°F) for 60 minutes
- Methyl bromide gas treatment (poisonous, expensive)

Prevent insect attack:

- Apply boric acid product (e.g., Timbor) to surface
- Paint or varnish the surface (stain alone is not an effective barrier)

When using pesticides, always read and follow the label



Thebugguys.com and W.P. Armstrong composite

Holperspest.com and executivepestcontrol.com

Termites and ants are separate orders from beetles. Termites have straight antennae and wider waists (left) and ants have elbowed antennae and narrow waists (right). The images above show the different castes and morphological differences within species of each of these orders.

Termites

There are two common types of termites in the PNW: subterranean termites (Reticulitermes spp.) and dampwood termites (Zootermopsis spp.). A third type, drywood termites (Incisitermes and other genera), have been found occasionally in dry areas of Oregon but there is no evidence that they have become established. Drywood termites more often occur in furniture or lumber imported from southern states. The subterranean termites are more common east of the Cascades, whereas dampwood termites are more prevalent in western Oregon. Subterranean and drywood termites can cause significant structural damage but dampwood termites tend to only infest rotting trees and stumps in the forest. If a termite infestation is suspected, contact a certified structural pest control company to identify the type of termite and determine if control measures are necessary.

Carpenter ants

Carpenter ants are predators that do not feed on wood. They are 0.6-2.5cm long and some individuals have wings. They excavate and nest in moist wood and can be an indication of leaks or other moisture in wood. Removal of moist wood will clear up an infestation.

Various other insects that do not attack wood may be found in structures and may be confused with these insects. These include: skin, larder, hide, leather, carpet, khapra, drugstore, sawtooth, stored grain, red flour, cigarette and mealworm beetles; lesser grain borer, various weevils and India meal or clothes moths.

More information:

Oregon Dept. of Forestry, Forest Health
http://tinyurl.com/odf-foresthealth
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503-945-7200

Other references:

USFS Forest Health Protection
www.fs.usda.gov/goto/fhp/fidls

OSU Forestry Extension
http://extensionweb.forestry.oregonstate.edu/