Woodboring Beetles

Forest Health Fact Sheet

July 2022

C. Buhl, ODF

Roundhead and flathead borer larvae, respectively (left) and woodborer exit hole with whitish frass (right)

Most woodboring beetles such as ambrosia, Buprestidae (metallic woodboring beetle or flathead) and Cerambycidae (longhorned beetle or roundhead) beetles native to Oregon are not pests but instead take advantage of dead or dying trees and aid in the decomposition process. Despite their (often) large size, *most* are not a major concern as they are not tree killers. However, they may tunnel into wood which can devalue timber. Several features differentiate woodboring beetles from bark beetles, the latter of which can be tree killers. Woodborers usually make holes in wood, leave large round or oval exit holes, create whitish frass (boring dust) and may be large in size. Bark beetles do not enter wood but stay just under the bark, leave tiny round exit holes, create reddish-brown frass and are about the size of a grain of rice. Below are a few of the types of native woodboring beetles commonly encountered in Oregon that may or may not be tree pests, as well as some non-native woodborer pests to look out for.

Native woodborers: non-pests

Golden buprestid (*Buprestis aurulenta*)

Steve Valley, ODA

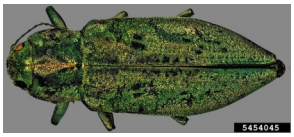
Adults are approximately 2.0cm long and metallic yellow, green and red. Larvae attack dead or dying Douglas-fir or pine. Various other beetle species of similar shape and color also occur.

Sculptured pine borer (*Chalcophora virginiensis*)

Steve Valley, ODA

Adults are 1.8-3.0cm long, have defined sculpturing on the back and may be slightly metallic. Larvae attack dead or dying Douglas-fir, true fir or pine. Various other beetle species of similar shape and pattern also occur.

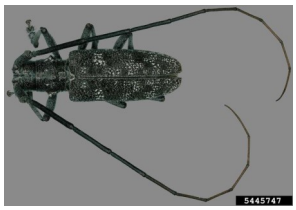
Wester cedar borer (*Trachykele blondeli*)



Steve Valley, ODA

Adults are 1.0-1.7cm long and bright metallic green. Larvae most frequently attack dead and dying redcedar and incense cedar but also cypress and juniper.

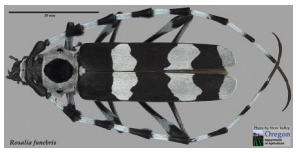
Sawyer beetles (*Monochamus* spp.)



Steve Valley, ODA

Adults are 1.5-2.7cm long, typically dark in color but may have white mottling or spots. Larvae attack dead and dying Douglas-fir, true fir, spruce and pine depending on the beetle species.

Banded alder borer (*Rosalia funebris*)



Steve Valley, ODA

Adults are 2.5-3.5cm long and have distinct blueish white banding. Larvae attack dead and dying alder, ash, maple, oak, willow, etc. These insects may be confused with non-native Asian longhorned beetle which has spots not bands.

Amethyst cedar borer (*Semanotus amethystinus*)

C. Buhl, ODF

Adults are 2.0-2.8cm long and metallic black and blue/violet. Larvae attack dead and dying redcedar, Port Orford and incense ‘cedars’.

Native woodborers: non-pests

Giant root borer (*Prionus californicus*)

Steve Valley, ODA

Adults are 3.0-5.0cm long, brown with serrated antennae. Larvae attack various dead and dying conifers and hardwoods but may also be orchard pests.

Ponderous borer (*Ergates spiculatus*)

C. Buhl, ODF

Adults are 4.5-7.0cm long, brown with non-serrated antennae. Larvae attack dead and dying Douglas-fir or pine. The mandibles and boring action of these larvae inspired the 'teeth' on the modern chainsaw chain.

Ambrosia beetles (various species)

Steve Valley, ODA

Adults are often <0.5cm long and look similar to bark beetles. Ambrosia beetle larvae and adults attack dead and dying conifers or hardwoods. They create tiny holes in wood and vector fungal stains that can discolor wood - each of which may devalue some timber. See ODF Ambrosia fact sheet.

Native woodborers: pests

Flatheaded fir borer (*Phaenops drummondi*)

Steve Valley, ODA

Adults are 0.7-1.0cm long and have six light-colored spots. Larvae attack stressed or dying Douglas-fir, often attacking trees that are growing outside of their preferred range or exposed to drought conditions. This species does not enter wood. Flaked off bark from woodpeckers is often the first noticeable sign of attack from this insect. See ODF flatheaded fir borer fact sheet.

Bronze birch borer (*Agrilus anxius*)

Steve Valley, ODA

Adults are 0.8-1.2cm long, slender and olive to blackish brown. Larvae often target non-native birch species or trees planted in overly warm or dry spots. This species does not enter the wood. See ODF bronze birch borer fact sheet.

More information:

Oregon Dept. of Forestry, Forest Health
http://tinyurl.com/odf-foresthealth
2600 State St. Bldg. D, Salem, OR 97310
503-945-7200

Oregon invasives online hotline:

https://oregoninvasiveshotline.org

Non-native woodborer: pests

Emerald ash borer (*Agrilus planipennis*)

Adults are 1.0-1.3cm long, slender and olive to metallic green. Larvae attack all species of ash. Many other species may be confused with EAB, notify entomologists at the Oregon Departments of Agriculture or Forestry to confirm identification of specimens.

EAB was found in Oregon July 2022, more info: https://tinyurl.com/odf-eab

EAB look-alikes

Asian longhorned beetle (*Anoplophora glabripennis*)

Steve Valley, ODA

Adults are 2.0-3.0cm long and shiny black with white spots. They may be confused with native banded alder borer which has bands not spots. Larvae attack many hardwood species.

ALB has not been found in Oregon.

ALB look-alikes

Other references:

Oregon Department of Agriculture Pest ID:
https://www.oregon.gov/ODA/programs/IPPM/InsectsSpiders/Pages/IdentifyInsect.aspx

Oregon State University Insect ID Clinic:
http://www.science.oregonstate.edu/bpp/insect_clinic/index.htm