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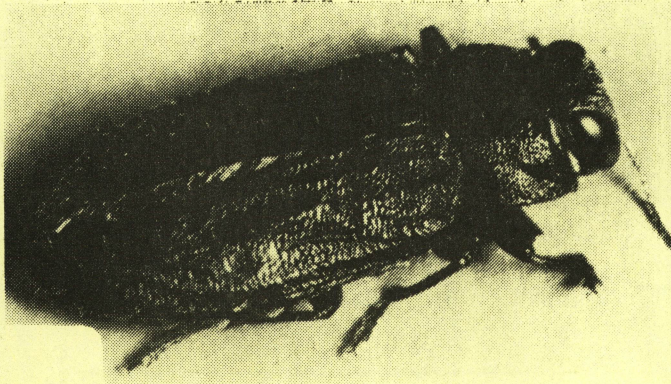
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The Pacific Flatheaded Borer

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The Pacific flatheaded borer attacks many native and introduced deciduous trees and shrubs. The larvae of this beetle kill or weaken plants by girdling the trunks and lower branches.

Stressed plants are most subject to attack. Newly planted nursery stock, drought stressed trees, sun scalded trees and plants whose trunks are exposed to the sun usually are most seriously affected. One borer may kill or severely weaken a small tree. In Idaho, the greatest damage occurs in orchards and nurseries in the southwestern part of the state.

The adult of the Pacific flatheaded borer is ovate in shape, somewhat flattened and about $\frac{1}{4}$ to $\frac{1}{2}$ inch in length. It is brownish, has a coppery luster and is always brilliant green on the dorsal surface of the abdomen beneath the wing covers.

The larvae are yellowish-white and slender, and the front part of their bodies is broadly expanded and flattened. This characteristic appearance has prompted the common names "flatheaded borer" and "horseshoe nail" for this group of insects. The larvae usually lie with their abdomens curved to one side, forming a "U."

Eggs are deposited from early June through July in cracks and crevices in the bark, usually on young trees from the trunk base to the first branches where there is greatest exposure to the sun. The eggs hatch from mid-June to mid-August under most conditions in Idaho.

A newly hatched larva burrows and feeds in the outer bark. Larger larvae burrow into the inner bark to complete feeding. The larvae pack their burrows tightly with sawdust and frass as they feed. The mature larva burrows into the wood and builds a cell where it overwinters and pupates in the spring.

Most larvae mature and emerge as adults after one year. The adult's emergence hole in the bark or exposed wood is characteristically strongly elliptical.

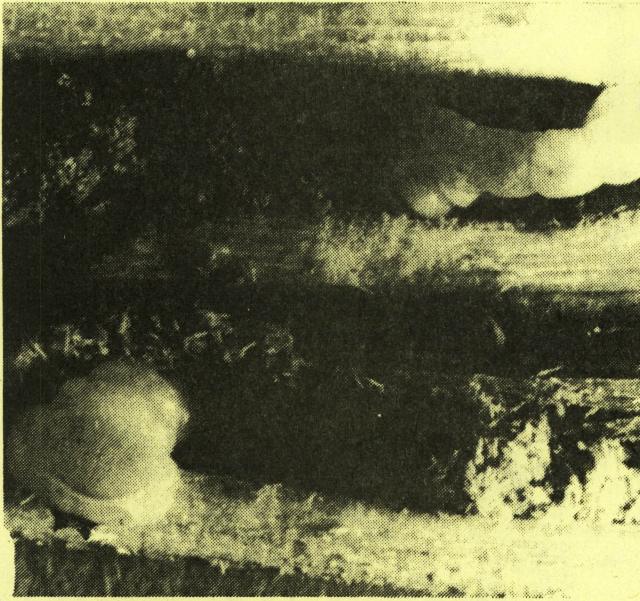
Damage

The first sign of damage is a wet spot on the bark. The bark then cracks slightly, and you can see frass and boring tunnels under the cracks. The bark covering the wound then becomes roughened, cracks further and soon falls off. The wood thus exposed becomes weather-beaten and eventually rots.

Control

Several mechanical methods or a pesticide application are available to control the Pacific flatheaded borer. The pesticide application kills newly hatched larvae, and the mechanical method prevents egg deposition. No effective controls are available for larvae once they have entered the bark.

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Pacific Flatheaded Borer Larvae

Mechanical Control

Since the adult only lays its eggs in the direct sun from the base of the trunk to the first branches, you can make barriers or sun shades to prevent egg laying. Use one of these methods:

- Use loose paper or other tree protectors.
- Wrap the trunk loosely with paper, cloth or burlap.
- Erect a "V" of two boards on the south side of the tree trunk.

Chemical Control

Chemical control must be applied so that residues remain on the trunk during egg hatching. This will kill the larvae before they enter the bark. Lindane should be sprayed on the trunk from the soil level up to the lower limbs about June 1 and again on July 1. Lindane is registered for use on many deciduous trees. Read and follow label directions for rates and application methods.

Trade Names

Trade names are used in this publication to simplify the information presented. Use of trade names does not imply an endorsement of the product nor criticism of similar products that are not mentioned.

Chemical Recommendations

The chemical recommendations made in this publication are based on the best information available at the time of printing. Before using pesticides, read the instructions on the label and be sure you follow all precautions and restrictions for safe use of the product.