Bark Beetle Management

DAVEY Institute

TREE DOCTOR TIPS

Bark Beetle Management

DESCRIPTION:

Bark beetles are tiny insects that feed under the bark of trees and disrupt the vascular system. There are numerous species that are pests of landscape trees worldwide.

HOSTS:

Many conifers and some broadleaf trees; stressed and weakened trees are most susceptible.

BIOLOGY AND SYMPTOMS:

Bark beetle damage is severe because they feed within the phloem and sapwood, which impedes the movement of water and nutrients throughout the tree.

Symptoms such as canopy thinning and branch dieback or signs such as exit holes and frass (sawdust-like excrement) indicate an ongoing infestation. This almost always means the tree is in severe decline and death may be imminent.

Bark beetles are usually secondary pests that accelerate tree death. In almost all cases:

- Healthy trees can resist bark beetle attacks.
- Stressed trees with weakened defenses are most susceptible.

Bark beetle populations can sometimes reach extremely high levels in a given area, and in these situations, they can overwhelm the defenses of healthy trees.

MANAGEMENT:

Preventing attack is the ideal way to manage bark beetles. Only in rare cases can a tree be saved once already infested. Enact the following preventative care guidelines.

Cultural practices to reduce tree stress:

- Water regularly, especially during dry, hot periods. Amount of water necessary will vary based on tree species, local climate, and soil type.
- Install wood chip mulch around the base of the tree to conserve moisture, reduce turf competition, and add organic matter.
- Prune during the dormant season to avoid beetle-attracting wounds.
- Fertilize to supplement the soil with nitrogen and other nutrients.

Preventative measures to stop initial infestation:

- Remove dead or dying trees to avoid attracting bark beetles.
- Apply insecticides to protect non-infested trees. Treat with bark sprays or direct trunk injections at regular intervals.

Reasons a tree may be susceptible to bark beetle attack:

- A known host of bark beetles in your region.
- Near other infested trees.
- Stressed due to drought, mechanical/pest damage, or poor site conditions.

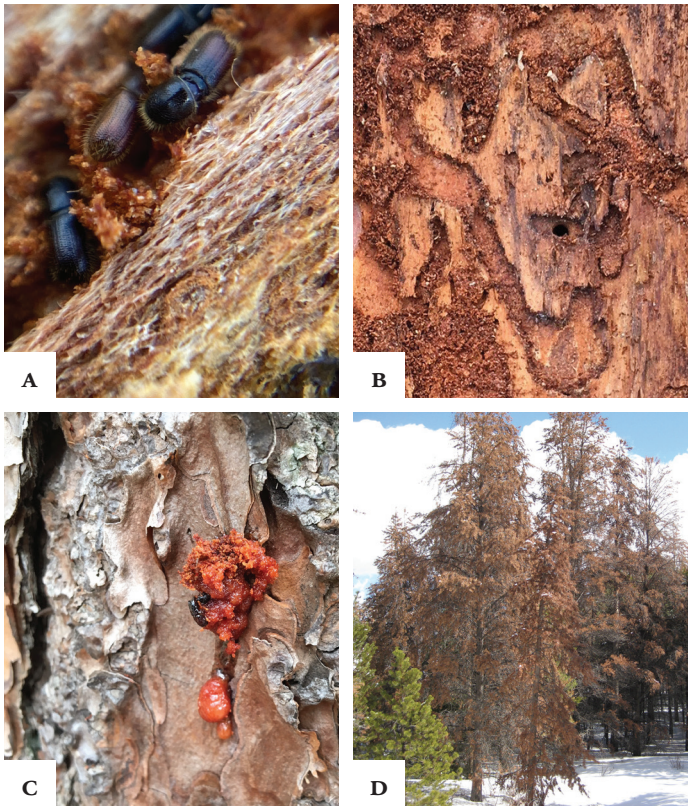

FIGURE A. ADULT BARK BEETLES
FIGURE B. DAMAGE WITH GALLERIES AND HOLES IN TRUNK
FIGURE C. CLOSE-UP OF DAMAGE, PITCH TUBES
FIGURE D. SYMPTOMS OF MORTALITY FROM BARK BEETLE ATTACK

*The scientists at **The Davey Institute Research and Diagnostic Laboratories** support our arborists and technicians in diagnosing and prescribing based on the latest arboricultural science. For specific treatment and application details, your arborist may consult The Davey Institute's Plant Health Care Treatment Guide.*