Bark Beetles

Bark beetles are common pests of many trees, but some of the most damaging attacks occur on pines and other conifers.

Trees already stressed by drought, disease, or mechanical damage are most likely to suffer. Insecticides won’t save heavily infested trees. Instead, promptly remove infested trees and protect healthy ones with proper care.

Identifying bark beetles and their damage.

- Adults are small, dark, cylindrical insects about the size of a grain of rice; they can fly from tree to tree.
- Larvae are tiny grubs that feed beneath bark on trunks and branches.
- Infested trunks and branches have many tiny holes where beetles have bored in or emerged. Tree sap or dust from boring can exude from holes.
- If you peel back bark on infested trees, you may see galleries (tunnels) from adult and/or larval mining.
- Bark beetles in California include western pine beetles on ponderosa pine; mountain pine beetles on lodgepole and sugar pines; and engraver beetles on Monterey, pinyon, and other pines.
- Shothole borers and elm bark beetles attack some broadleaf trees.

Bark beetles injure trees by disrupting the flow of nutrients.

- Adults and larvae feed in the area of the inner bark that transports nutrients through the tree.
- Needles turn yellow and drop off from infested trees.
- Infested trees can die in one season, causing limb drop and increased fire hazards.

Quick Tips

For more information about managing pests, visit ipm.ucanr.edu or your local University of California Cooperative Extension office.

Keep trees healthy to reduce attacks.

- With low to moderate numbers of beetles, healthy trees defend themselves by releasing sap into holes before female adult beetles can lay eggs.
- Drought, disease, and injuries reduce a tree’s ability to combat invasions.
- When possible, properly irrigate drought-stressed trees.
- Thin groups of trees or stands to keep remaining trees vigorous. Dense stands favor beetle attack.
- Avoid compacting soil and injuring roots and trunks during activities such as construction.

Remove severely infested trees.

- Regularly inspect your trees for signs of bark beetle invasions. Signs include dust from boring, small holes exuding sap, and tree crown decline.
- Promptly remove infested trees and destroy infested material by chipping or solarizing to prevent emerging beetles from attacking healthy trees.
- Solarize infested wood by tightly wrapping small piles in thick (10 mil) clear plastic and leaving them in the sun for several months.

What about pesticides?

- Limit insecticide use (sprayed or systemic) to protecting healthy trees and combine with other nonchemical methods to improve tree defense.
- Insecticides are most effective when applied before adults land on the tree.
- Insecticides won’t save heavily infested trees because they have limited impact on bark beetles inside the tree.
- Effective insecticides for bark beetles are available only to licensed applicators.

What you do in your home and landscape affects our water and health.

- Minimize the use of pesticides that pollute our waterways and harm human health.
- Use nonchemical alternatives or less toxic pesticide products whenever possible.
- Read product labels carefully and follow instructions on proper use, storage, and disposal.