Tree Borers

A number of different types of insects may bore into tree trunks and branches in their larval stages, producing sawdust or sap-filled holes and weakening trees. Most borers can successfully attack only trees that have been stressed by under- or over-irrigation, disease, lack of proper care, or injury by mechanical equipment. Usually by the time the tree is infested with borers, there is little you can do to manage them other than improve tree vigor, prune out infested branches, or remove the tree. Insecticides are occasionally used to prevent infestations of bark beetles on high-value trees or to manage certain clearwing moths.

To avoid a borer attack, keep trees healthy:

- **Plant only species adapted to your area.**
- **Irrigate trees properly and separately from the lawn.**
- **Avoid injuries to trunks and roots.**
- **Protect tree trunks and branches from sunburn.**
- **Avoid pruning trees when borer adults are flying, usually late winter through late summer.**
- **Replace old declining trees.**
- **Monitor tree trunks and branches regularly to detect infestations before they become serious.**

If borers are in your trees, identify them correctly:

- **Effective management practices vary according to species.**
- **Confirmation of species requires finding the insect, although knowing symptoms and host plant species can help.**
- **Many tiny holes in tree trunks and branches may indicate bark beetles; larger open tunnels filled with sawdust-like frass indicate clearwing moths; flatheaded or roundheaded borers leave wet spots and dark stains and D- or 0-shaped emergence holes.**
- **Call your UCCE office or County Agricultural Commissioner for help in identification or refer to the UC IPM Web site at www.ipm.ucdavis.edu.**

ANR
UNIVERSITY of CALIFORNIA

Nonchemical ways to manage tree borers:

- Follow the guidelines above for keeping trees healthy.
- Local infestations of bark beetles and other boring beetles on branches may be pruned out.
- If the main trunk is extensively bored, remove the tree and focus on protecting neighboring trees of the same species.
- Clearwing moth larvae may be killed by probing tunnels with a stiff wire.
- Clearwing moth larvae may also be killed with applications of beneficial nematodes in the genus *Steinernema*.

Turning to insecticides:

- Seriously affected trees cannot be saved with insecticide treatments and should be removed.
- Insecticides must be applied to kill adults as they are laying eggs on trunks and branches of trees before they are seriously infested. Careful timing is essential for success.
- No insecticides are effective against larvae within trees, including systemic insecticides such as acephate or imidacloprid.
- If treatment is warranted, use persistent insecticides labeled for bark treatment such as carbaryl and certain pyrethroids. The most effective materials are available only to licensed applicators.

adult clearwing moth

western pine beetle

–PROTECT YOUR WATER–

To eliminate runoff to storm drains and protect our creeks, rivers and the ocean, minimize the use of pesticides and follow proper use and disposal practices. Whenever possible, use non-chemical alternatives or less toxic pesticide products.

For more information, contact the **University of California Cooperative Extension Master Gardeners of Orange County Hotline: (714) 708-1646 or ucmastergardeners@yahoo.com or visit www.uccemg.com and www.ipm.ucdavis.edu.**

UC IPM
University of California Cooperative Extension

UCCE Master Gardeners

PROJECT Pollution PREVENTION
www.ocwatersheds.com

What you use in your garden affects our creeks, lakes, and rivers!