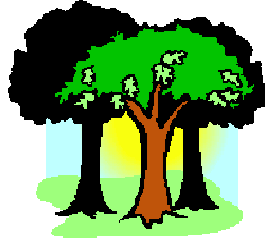


Stressed Trees Vulnerable to Boring Insects



The 2008 summer growing season is looking to be a very dry situation and this adds incredible stress to our favorite trees. Boring insects can literally sense when some trees are under stress. In addition, stressed trees are less likely to be able to fend off an attack. Most all trees can be attacked. It is critical that trees be planted correctly, irrigated appropriately, and fertilized regularly to avoid these stress issues.

Bark beetles are common pests of conifers and some attack broadleaf trees. Several hundred species occur in the United States. The most common species infesting pines in California are the western pine beetle, engraver beetles, and the red turpentine beetle. Cedar or cypress bark beetles attack cypress, and redwoods. Oak bark beetles attack oaks and California buckeye. Shothole borer attacks damaged trunks of many tree species, including English laurel, fruit trees, and hawthorn. The European elm bark beetle feeds only on elms and vectors the Dutch elm disease fungus.

Except for general cultural practices that improve tree vigor, little can be done to control most bark beetles beneath bark once trees have been attacked. Prune and dispose of bark-beetle-infested limbs. Promptly remove the entire tree if its main trunk is extensively attacked by bark beetles. Unless infested trees are quickly removed, large numbers of beetles can emerge and kill nearby host trees if they are weakened or predisposed by other factors. The exception is when pines are attacked by a few red turpentine beetles. Trees can often survive low density attacks by this species. Valuable, uninfested host trees near infested trees may be protected from bark beetles by spraying the trunk with a persistent insecticide in spring; however, do not substitute preventive sprays for proper cultural care.

Plant only species properly adapted to the area. Learn the cultural requirements of trees, and provide proper care to keep them growing vigorously. Healthy trees are less likely to be attacked and are better able to survive the damage from a few bark beetles. Rapid, vigorous growth encourages host resistance.

Pay particular attention to old, slow-growing trees, crowded groups of trees, and newly planted trees in the landscape. Large nursery stock or transplanted trees, notably oaks and pines, can become highly susceptible to bark beetles after replanting. Transplanting success depends on the tree species and its condition, appropriate tree and site selection, characteristics of the planting site, the season of the year, the transplanting method, and follow-up care. Stresses placed on a tree caused by poor planting or planting at the wrong time of year, lack of proper care afterwards, or the planting of an inappropriate species for the site will increase the tree susceptibility to bark beetle invasion.

Prevention is the most effective method of managing wood-boring insects; in most instances it is the only available control. Avoid injuries to roots and trunks and protect trees from sunscald and other abiotic disorders. Irrigation may be important during dry summer months in drought years, especially with tree species that are native to regions where summer rain is common. Also, dense stands of susceptible trees should be thinned to increase their vigor and ability to withstand an attack.

Irrigate when appropriate around the outer canopy, not near the trunk. Avoid the frequent, shallow type of watering that is often used for lawns. The specific amount and frequency of water needed varies greatly depending on the site and tree species (i.e., whether trees are adapted to summer drought or regular rainfall).

This article adapted from Cooperative State Research, Education and Extension Service, USDA. Please contact the Farm Advisor's office at cdcalaveras@ucdavis.edu or 754-6477 with your agricultural questions. Talk to a certified Master Gardener every Wednesday, 10:00-12:00, 754-2880.