



Ask the Arborist

What is the best way to keep native oaks healthy?



There are four practices important to keeping our oaks healthy.

- Mulch 6" from the trunk to beyond the edge of the canopy. Fallen leaves, left to decompose naturally, are best. For a neater look, try a layer of wood chips. Do not use river rocks.
- Avoid unnecessary watering – and don't water within the tree's dripline area in summer. During drought years, one deep watering in January or February should be enough.
- Feed only as needed. Mature oaks usually need little or no fertilization. It may be appropriate in landscaped situations to replace nutrients supplied by leaves and other litter that normally accumulates under an oak in its native environment. Trees that have recently undergone severe pruning or root damage should not be fertilized for at least 6 months. Yellowish leaves and lack of new growth in spring may reflect a need for nitrogen. But a seeming lack of nutrients often indicates root or crown rot. When an oak appears unhealthy, consult a certified arborist to determine the cause.
- Prune only to remove weak or dead branches, limit pest damage, remove end weight on heavy limbs, or to reduce wind resistance in a mature tree by thinning it. Avoid over-thinning or stubbing branches. Stubbed branches respond with vigorous watersprout growth that is susceptible to powdery mildew. Large pruning wounds leave the tree more subject to decay. For oaks, as for other large trees, have an experienced arborist handle major pruning and spraying.

Warning: Check Tree Care Credentials

Last year, several fatalities in California were linked to dangerous tree care practices, especially work done by untrained and uncertified individuals. The United Voice for Healthier Communities (UVHC) is a coalition of arborists and urban foresters that urges contractors to hire only certified tree-care professionals. Landscapers or gardeners who are not trained arborists or certified tree workers risk legal consequences resulting from pruning or other dangerous tree work. UVHC includes the California Urban Forest Council and the Western Chapter of the International Society of Arboriculture. "Property owners who don't understand the dangers involved in tree care are hiring unskilled workers who are dying to trim their trees," said Andy Trotter, Chairman of the UVHC. Arborists, urban foresters, and tree care professionals urge everyone to take the following steps before hiring anyone to remove or trim a tree. These steps are:

- Check credentials and references
- Check for a contractor's license
- Confirm that workers are covered by worker's compensation liability insurance
- Seek professional guidance, especially when planning to trim on one's own

ISA/Western Chapter maintains a toll-free number with experts on hand who can advise on tree care: 1-866-785-TREE (8733). The International Society of Arboriculture also has a hotline for tree care, 1-888-472-8733.

Source: *United Voice for Healthier Communities*



The Atherton Tree Committee
91 Ashfield Road
Atherton, CA 94027

Atherton Resident
Atherton, CA 94027

PRESORTED
STANDARD

U.S. POSTAGE PAID
MENLO PARK, CA
PERMIT NO. 26

ECRWSS



Atherton tree news

Atherton Tree Committee Newsletter
Winter/Spring 2008

The Winter/Spring issue of the Atherton Tree News is being devoted to the Town's most notable tree species, the oaks.

This newsletter is brought to you by the Atherton Tree Committee and funded by a grant from California ReLeaf.

Atherton Tree Committee
91 Ashfield Road
Atherton, CA 94027



Oak Ailments: Identification and Treatment

Native California oaks can generally fight off most infections and pests, especially when growing under natural conditions. They are subject to problems in an irrigated setting or a disturbed area. Knowing which problems to treat will allow you to achieve success with the least toxic treatment. Trees in a state of decline cannot afford any leaf loss and any problem must be treated. Root collar diseases should almost always be treated. But healthy, vigorous trees can usually endure a cycle of insect infestation without damage to their long-term health. Proper management of cultural conditions (soil, water, and air) is the best preventative.

FUNGAL INFECTIONS

Crown Rot (*Phytophthora*, *Pythium*): Too much moisture around the base of the tree stimulates this water mold fungus, which attacks roots. Infected trees decline slowly and foliage becomes increasingly sparse. Live oaks are most susceptible. Don't plant under oaks with plants that require summer water, and don't raise soil level around the crown (base of trunk). Both practices encourage crown rot. If symptoms indicate crown rot, stop all watering between trunk and drip line (the ground directly below the outer edge of the leaf canopy). Pull back soil to expose infected parts to air.

Oak Root Fungus (*Armillaria mellea*): Our oaks experience little damage from this disease under natural, dry summer conditions. When oaks are watered in the summer or weakened by other impacts, the tree can suffer damage from the fungus. Symptoms shown by an infected oak include die-back of branches and yellowing, smaller leaf size, and thinning of foliage. The fungus itself may appear as honey colored mushrooms at the base of the tree or a white, fan-like growth under the bark. Uncover the infected root crown and leave it exposed to air. Stop watering within the drip line. It is usually best to consult a certified arborist.

Branch Dieback (*Diplodia*): *Diplodia* is encouraged by dry, hot summers. Branches from 1/2" diameter to 2" diameter are infected and die. The attached leaves turn brown and remain on the tree. *Diplodia* can kill large parts of the canopy. Treatment requires removal of diseased wood and spraying with 4 pounds of Fungo-Flow in 100 gallons of water in the spring.

Twig Dieback (*Cryptocline* or *Discula*): These fungi can destroy up to 90% of new growth in wet years. 2-3" long twigs and the attached leaves die, turning a straw brown color and remaining on the tree. Dieback of leaves and shoots appears scattered throughout the canopy with the heaviest infestation occurring in the lower canopy. Pruning out dead twigs minimizes damage but can't prevent it. No treatments have been found that eradicate either twig blight pathogen. Some control can be achieved by pruning infected twigs and applying benomyl fungicide as a foliar spray. The treatment resulting in the most effective control is: (1) prune out all blighted twigs in fall (October- November); (2) spray with benomyl within 7 days of pruning; (3) spray with (Continued on page 2)

The Atherton Tree Committee is composed of a small group of dedicated individuals who are devoted to the development and preservation of Atherton's unique and important urban forest. We are always interested in welcoming new members. We meet the fourth Thursday of the month at the Town's administrative offices.

The Atherton Tree News is proud to say we print our newsletter on recycled paper.

Oak Ailments: Identification and Treatment (Continued from page 1)

benomyl again at budbreak (February-March). Oak twig dieback occurs on coast live oaks and valley oaks. The infection pattern among nearby trees is unpredictable; trees untouched by the disease may grow right beside ones that are severely afflicted.

INSECT INFESTATIONS

Oak Moth, California Oak Worm (*Phryganidia californica*): Adult moths lay eggs in live oaks twice a year, in spring and fall. Young larvae feed on the surface of leaves till about half grown, and then eat through the entire leaf. Severe infestations can almost defoliate oaks. The larva has a brown or reddish head and an olive green brown body with black and yellow stripes running lengthwise on back and sides. In the spring look for little green droppings from feeding larvae; May through June and again in September and October. The oak moth is subject to attack by many natural enemies, including parasites, predators and a wilt disease. These natural predators may be important in limiting the damage done by oak moth larvae. If leaf damage is unacceptable, *Bacillus thuringiensis* is an effective control when applied to coincide with the appearance of young larvae.

Pit Scale (*Asterolecanium*): Often associated with oak twig blight, pit scale attacks oak twigs. The pinhead-size insects that cause pit scale are green, golden, or brown. They live immobile, in a depression in the bark. By sucking the sap, they reduce an oak tree's vigor. Poor growth and dieback of twigs are common results from infestation. Dieback is most noticeable in the summer and early fall. Affected twigs of deciduous oaks retain their leaves throughout winter. Severe infestation delays leafing out of deciduous oaks in spring. Control mature pit scale with sprays of horticultural oil in January.

Oak Twig Girdler (*Agilus angelicus*): The oak twig girdler attacks live oaks, infecting twigs that are usually less than ½" in diameter. When the twig is girdled, moisture and nutrients are cut off and patches of dead leaves quickly appear. When the twig bark is peeled back, girdler burrows are exposed. The burrows are spiral-like and filled with brown, powdery frass (boring dust). The adult beetle is ¼" long, slender and brownish bronze. Mature larva are ¾" long, legless and white. The life cycle covers two years. Adults emerge during May through July, feed on leaves, mate, and then lay eggs. The eggs hatch in 2-3 weeks and the young bore into the twig. This means there is only a one-month period in which the adult insect is outside the twig and can be reached with a contact spray.

Sycamore Bark Moth (*Ramosia resplendens*): The adult is a black, clearwing moth with yellow bands, like a yellow jacket. Larvae are ¾" long, white with flat heads. They feed primarily in the phloem tissue of older trees or drought stressed younger trees. Symptoms appear as broken, crosschecked bark, usually near the base of the trunk. Removal of bark exposes ½" diameter tunnels in phloem tissue. Broken pupal cases may be seen at exit holes.

Western Oak Bark Beetle (*Pseudopithiphorus agrifoliae*): Adults are cylindrical, brown beetles 1/16" long. Eggs are laid in the spring or early summer. The larvae tunnel into the phloem tissue. Look for 1 to 1- ½ diameter black, wet-looking spots with a white dot (egg laying sites) on the underside of branches and trunk. If left uncontrolled, they can be a serious pest. Most commonly found on newly transplanted, large specimens, or distressed trees. Treat when adults are present.

Gall Insects (*Cynipid wasps*): Galls on oaks are common on twigs, leaves, flowers and roots, and in acorns. They assume different sizes, shapes and colors, from rosy, pea-size blobs to apple-size goiters, depending on the insect that makes them. Cynipid wasps are seldom a serious menace to trees, although certain species puncture leaf tissue to deposit eggs, causing leaves to turn yellow or brown.

Insect infestations in otherwise healthy trees are generally little more than nuisances. Coupled with other stresses, however, they can develop into serious problems. For more information see *A Field Guide to Insects and Pathogens of California Oaks* published by the USDA, available online as a PDF file.

Treatment for Sudden Oak Death

Many tree professionals are recommending to Atherton residents that their coast live oaks be treated for Sudden Oak Death (SOD). The product being used is Agri-Fos fungicide. It is currently the only treatment approved by the State for use against *Phytophthora ramorum* infections on oaks and tanoaks. It is best used as a preventative measure and is not a cure, but it can help protect trees from getting infected, as well as suppress disease progression in early infections. The phosphonate product may be injected or mixed with a surfactant (Penta Bark) and sprayed on the trunk for absorption through the bark. It takes 3-6 weeks to start being effective against the pathogen. The treatment regime calls for the first treatment in November-December, with a booster treatment 6 months later, and then repeated annually. Because the treatment must be made to healthy trees, and the pathogens distribution and activity is somewhat unpredictable, it is difficult to determine which trees should be treated. Generally, you should treat healthy, high-value oaks within 50m of other infested plants. You may want to treat healthy, high-value oaks if they are surrounded by California bay laurel and there are known infestations between 50-300m away. The State is not recommending treatment in areas where infested plants are not already present. Although there have been no confirmed cases of SOD in Atherton, some residents with bay trees on their property are treating their live oaks as a preventative treatment. It is not expensive and it won't hurt the trees.

Please help us to reduce the spread of SOD, and hopefully keep it from reaching Atherton, by following these simple precautions:

- Do not collect or transport host plant material from an infested area.
- Avoid entering infested areas during wet conditions and stay out of wet soil and mud.
- Keep vehicles on paved and graveled surfaces when conditions are wet.
- If you do enter an infested area, check yourself, pets, vehicle and equipment for any mud, soil or organic matter. Clean off these accumulations before traveling to an area that is not infested.

If you are scheduling any tree work during the wet months, ask your tree contractor if they have been working in infested areas and if they are sanitizing their equipment and vehicles before leaving an infested area. Ask your gardener if he or she is working on properties in Woodside or Portola Valley that are infested and to make sure his or her tools, equipment and vehicle are cleaned before leaving these sites.

Atherton Tree Committee Projects

If one were to ask a member of the Tree Committee to choose a species of tree to plant, the answer would probably be an oak. Our town is known for its old and stately oaks which live to a great old age. As a consequence, our projects are most often the planting of oaks.

This year we planted trees at Selby Lane School. We planted a *Quercus lobata*, commonly known as valley or white oak, which develops beautifully gnarled branches and deeply furrowed gray bark. Left to grow naturally, its sweeping branches may cascade to the ground. It is deciduous, making its winter silhouette an impressive sight.

The second oak is *Quercus agrifolia* or California live oak, an evergreen tree, and probably the other most numerous tree in Atherton. It also grows to great height and age, producing great quantities of acorns which the squirrels and scrub jays plant, insuring the survival of the species.

The Committee planted three trees in Holbrook Palmer Park. Close to the railroad tracks, a valley oak was planted in memory of Bill Anderson who helped with many Tree Committee projects, and a blue oak, in memory of a long-standing Tree Committee member, Rita Gado. Blue oaks are immune to sudden oak death, and are deciduous, with attractive pastel fall colors of pink, orange and yellow. The third oak was a Manchurian Oak, *Quercus liaotungensis*. It has attractive shiny elongated leaves.

The next project under consideration is replacing elms that have succumbed to Dutch elm disease on Middlefield Road. In the past, the committee has planted several tree species there, including little leaf linden, flowering plums, tupelo or black gum, red oaks, red maples and oaks.