University of California Cooperative Extension

# THE GREEN SCENE

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## Cypress Tree Problems

Two cypress tree species are frequently found in Kern County landscapes and windbreaks. In recent years significant numbers of these cypress species appear to be in poor health, principally due to their limited adaptation to the local climate. Some opportunistic pests may accelerate their decline.

Arizona cypress, *Cypresses arizonica*, and Leyland cypress, *Cupressocyparis leylandii*, have been extensively planted throughout Kern County. These species are often found in windbreak plantings around houses or corrals. Arizona cypress has been widely established in Mojave desert landscapes in the Ridgecrest, Rosamond, and Mojave areas, while Leyland cypress has been planted in Tehachapi and on the San Joaquin Valley floor. Both species possess cold tolerance sufficient for almost any Kern County location. Arizona cypress is considered to be drought tolerant based on its performance in desert areas. When vigorous, these cypresses have few pest problems.

In recent years a number of these trees appear to be declining or have died. In almost all situations plants have apparently been adequately irrigated and otherwise well maintained. For Leyland cypress, the fundamental problem appears to be a lack of adaptation to the warm, dry climate found in Central California, that renders the species susceptible to attack by a canker disease, resulting in a life expectancy of 12-15 years. It has not been uncommon to see entire rows of Leyland cypress turn brown together, almost as though a clock had struck, and this despite sufficient irrigation and appropriate maintenance. Fungal pathogens, such as cypress canker, *Seridium* or *Coryneum cardinale*, cause lesions to form on small branches, resulting in death of branch tips, often followed by colonization of larger-diameter wood. This process of decline and death often occurs over 1 - 2 years. Fungicides cannot be expected to provide any control of this disease, and are not recommended. Although Leyland cypress trees grow rapidly and provide an excellent screen, their short life expectancy must be considered if they are selected for planting in Central California or desert locations.

For Arizona cypress, tree ages are about 20-30 years at the time of decline. These trees appear to be nearing the end of their natural life span in the desert, but their decline may be accelerated by bark beetle attack. Although trunk sprays of insecticides may forestall beetle attacks, insecticides are a distant third line of defense – after keeping plants vigorous (especially by supplying sufficient irrigation) and preventing injury (such as from sunburn), which are far more effective strategies.

## Powdery Mildew on Roses

Powdery mildew is a common disease problem on outdoor roses, and appears to be off to an early start in 2010 in Kern County. Susceptibility varies greatly among rose varieties, and most outdoor plantings usually withstand the disease without treatment.

Powdery mildew, caused by the fungus *Sphaerotheca pannosa* var. *rosae*, is recognized by its white to gray powdery growth on leaves, shoots, sepals, buds, and occasionally on petals. Leaves may distort and drop. Unlike most fungus diseases, powdery mildew does not require free water on the plant surfaces to develop and remains active during warm, dry summer months. Overhead sprinkling (irrigation or washing) during midday may limit the disease by disrupting the daily spore-release cycle, yet allows time for foliage to dry. The pathogen requires living tissue in order to survive, so pruning, collecting, and disposing of leaves during the dormant season can limit infestations, but may not entirely eradicate them; airborne spores from other locations can provide fresh inoculations. Rose varieties vary greatly in resistance; landscape (shrub) rose varieties are among the most resistant. Glossy-foliaged varieties of hybrid teas and grandifloras often have good resistance to powdery mildew as well. Plants grown in sunny locations with good air circulation are less likely to have serious problems. Fungicides containing triforine or other effective active ingredients may be helpful, but generally must

be applied to prevent rather than eradicate infections, so timing is critical and repeat applications are necessary. In addition to synthetic fungicides, sodium bicarbonate (baking soda) in combination with horticultural oils has been shown to control powdery mildew of roses when used in a solution of about 4 teaspoons of baking soda per gallon of water with a 1% solution (about 1 oz per gallon) of a narrow-range oil. The best time to apply this solution to avoid problems with phytotoxicity is during cool weather. Sodium bicarbonate is deleterious to maintenance of soil pH and soil structure and may leave white foliar deposits, so numerous applications with resulting runoff should be avoided. Commercial fungicides containing potassium bicarbonate (Kaligreen™, Remedy™) have been available. Commercial formulations of neem oil are also reported to control powdery mildew.

## *Green Kyllinga and Nutsedge in Turfgrass*

The weed green kyllinga, *Kyllinga brevifolia*, is a newcomer but increasingly common in turfgrasses around Bakersfield. It is a sedge rather than a broadleaf or grass, and can thrive despite the low mowing heights common in hybrid bermudagrass. Green kyllinga likes wet conditions and full sun, but will thrive in partial shade. Typical irrigation is sufficient for it. The plant can be introduced by mowing equipment, and that's how I think it arrived where I live.

As for other weeds, making turf competitive is key through proper mowing height, sufficient nitrogen, and sufficient (not too much) irrigation. Green kyllinga spreads through growth of underground stems (rhizomes) as well as through seed head formation, although mowing can reduce the seedhead numbers. Removing solitary plants by hand is effective, but it is important to pull out as much of the main stem as possible.

One reason for the spread of green kyllinga is its resistance to many of the common herbicides used in landscapes. Glyphosate (Roundup™, other tradenames) can limit the spread of kyllinga but will also kill turfgrasses so is not a very good option. Pre-emergents such as oryzalin (Surflan™) or pendimethalin can limit seed germination, but may not be available to homeowners and may not be labeled for turf use. Pre-emergents are not effective against established plants.

A related plant is nutsedge, an upright-growing, grass-like plant often found in landscapes and turf. Control is difficult, and the best management strategy is to avoid introduction!

Although nutsedge is often called nutgrass, it is not a grass but rather is also in the sedge family. Its shiny triangular stem is a reliable characteristic for identification. The two principal species, *Cyperus esculentus*, yellow nutsedge, and *C. rotundus*, purple nutsedge, are found in Kern County. The nutlets of yellow nutsedge are globe-shaped, smooth, brown, and found at the ends of rhizomes. They are reported to have an almond-like flavor. The leaves at the base of the flowering stem are as long or longer than the stem. Purple nutsedge can be recognized by that color on the inflorescence, and produces nutlets that are oblong, scaly, reddish, and appear as chains. They are reported to have a bitter flavor. The leaves at the base of the flowering stem are shorter than the stem. Yellow nutsedge is more tolerant of cold conditions than is purple nutsedge, but purple nutsedge is the more drought tolerant and difficult to control.

In the spring, nutsedge plants sprout from tubers (nutlets, nuts) that overwinter in soil and are very resistant to drying and cold. The growing plant develops roots and underground stems (rhizomes) accompanied by tubers, which are thickened stems that act as food reservoirs. Flower clusters develop during the summer on unmowed plants, but seedlings are rarely observed. Rather, tubers that form at the ends of rhizomes are more important in spread of nutsedge as one parent plant gives rise to numerous daughter plants.

Tubers can be spread during soil cultivation, movement of fill earth containing them, in topdressing materials, and in organic amendments. A frequent source of introduction has been the use of contaminated topdressing materials applied in autumn for overseeded ryegrass, including "weed-free" manure products (a claim California law does not require testing to verify). Many gardeners have switched to other organic matter sources not containing soil, such as forest humus, or establish overseeded grass without mulch materials.

Why is nutsedge so difficult to control? It reproduces rapidly and is adapted to most soil conditions. Because nutsedge is neither a member of the grass family nor is it a broadleaf, it is not affected by most herbicides that are effective against either of these plant groups. Also, herbicides do not move into the mature tubers, and if the rhizome is killed the tuber remains to begin a new plant. For post-emergent control, MSMA (active ingredient, now difficult to find) can be used, but repeat applications are necessary and MSMA can cause yellowing of turfgrasses at high temperatures or high rates. In recent years, the herbicide halosulfuron (Sedgehammer™, formerly Manage™) has become available. It is more expensive than MSMA, and experience

suggests more than one application is necessary. Glyphosate (Roundup™, Kleenup™) does not work well for suppressing nutsedge.

To reiterate, the best approach is still to prevent introduction of nutsedge or green kyllinga and to maintain a healthy turf.

Descriptions of the biology and control, with photos, are available for both green kyllinga and nutsedge on the UC IPM website, http://www.ipm.ucdavis.edu/.

## Termites and Shade Trees

Do termites feed on landscape trees, causing injury? The answer is, termites feed only on deadwood and do not injure living tissue.

Termites are social insects living in colonies, and found wherever the annual temperature is 50°F or above. At least 69 species exist which can be divided into four broad groups, but only the subterranean and drywood termite groups are found in Kern County. Winged ants superficially resemble termites, but the rear wing of a termite is about the same size as the front wing. The waist is not much smaller than the mid-body and the antennae are not elbowed. Ants have a smaller rear wing than front wing, elbowed antennae, and a very narrow waist where the abdomen attaches. Carpenter ants are found in wooded areas and sometimes get into homes, but definitely resemble other ants. They build nests in wood but do not eat wood as termites do. Powder post beetles tunnel in wood, but produce very fine sawdust unlike the coarse pellets of termites.

Subterranean termites must maintain contact with the ground to do damage to wood. Insects can enter directly if wood rests on soil, or tunnels of soil called chimneys can reach from the soil to exposed wood. Subterranean termites are much more destructive than drywood termites, creating an extensive gallery system in wood beams and traveling from board to board. One control strategy is to break the contact with the ground, a standard practice in construction accomplished by a concrete slab foundation. Soil beneath the foundation or in a crawl space could also be treated with an insecticide. It is rare to find subterranean termites in trees, because dead wood on the exterior of the tree in contact with soil would be required.

Drywood termites do not need contact with soil, and can therefore colonize wood well above ground. They can fly into buildings, often in the autumn, and are often found in wood window frames or other exposed wood. They remain where they first invaded and usually stay in the same board. Bits of sawdust-like frass can be seen around the colonized area approximately three years after colony establishment. Control methods include drilling holes to reach the feeding sites and injecting an insecticide, or in cases of heavy infestation a building can be tented and fumigated. Drywood termites can often be found in shade trees where large pruning cuts afford access to dead tissue in the heart of a tree. Older sapwood (xylem) is no longer alive, and can be a food source for these insects; however, termites feed only on dead wood and do not injure living tissue. Topical chemical treatments are generally ineffective because the chemical is not able to penetrate the dead wood in sufficient concentration to affect the termites. Systemic insecticides cannot move in dead tissue, and are therefore also ineffective against termites living in trees.

## Fall 2010 Master Gardener Classes

I haven't made a final decision about Master Gardener classes for Kern County for fall of 2010. That said, we plan to offer one or two classes at the UC Extension office, 1031 S. Mt. Vernon Avenue. As in previous years, the likely start time will be in the latter part of August. It is likely I will offer both MG I and MG II this year. I will announce the classes in July via my newsletter, and ask the *Californian* to also carry an announcement.

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