

## Meetings and Announcements

### Field Trip to UCLA: Landscape Design, Landscape Conversion and the Mathias Garden

Any interested would be welcome to join me and the Horticulture V class on a field trip to UCLA on Sunday, March 26. That campus provides examples of tree placement, tree pruning, landscape conversion to include low-water-use plants, and its landscapes reflect a high level of design.

The University of California is California's land-grant university, its establishment a result of the Morrill Act passed in 1862 by the U.S. Congress. The three campuses most associated with agriculture in California have been Berkeley (the first UC campus), then UCLA (the second), and later Davis. The Riverside campus was opened for classes in 1954 and declared a general campus by the Regents in 1959. The plant agriculture aspects of UCLA curriculum eventually migrated to UC Riverside. UCLA is still home of the botanic garden named after Mildred Mathias, an emeritus professor of botany and a recipient of the Liberty Hyde Bailey Medal of the American Horticultural Society. So, obviously, we plan to visit the Mathias garden as a part of our walking tour of the campus.

We plan to meet at 10:30 am at the Bruin, located in sight of the John Wooden Center and Ackerman Union—that's just east of Pauley Pavilion. At 11 am, we we plan to walk northeast up the Janss Steps and then to the quad area of the north campus before moving south and to the Mildred Mathias garden, returning north along Westwood past the Jules Stein Eye Institute and the Reagan Medical Center.

### 2017 Horticultural Tour: Iceland, July 15-22, 2017

I'd like to put out here what may be the last call for our Iceland visit. Our Iceland group is forming nicely, and we now have a private tour; that is, it will be our group only on the designated itinerary. It's not too late to join for a visit to the spectacular geology and horticulture of Iceland. However, because we are reserving hotel space and July is a busy season there, future booking will be subject to hotel availability. That means we can't guarantee space if someone decides to add to the group in future weeks.

Iceland is the world's leader in use of geothermal energy for plant production, and its natural landscapes have plants with specific adaptations that allow them to thrive in low-water environments—low-water because the ground is frozen during winter. Please contact me if you're interested, [jfkarlik@ucdavis.edu](mailto:jfkarlik@ucdavis.edu) or 661 868-6220.

## Fireblight Disease of Trees and Shrubs

Spring rains would be most welcome in the Bakersfield area, but rain also makes conditions favorable for fireblight, a destructive disease affecting only some species and varieties of plants in the rose family. The disease takes its name from the blackened appearance of twigs and branches, which appear as though scorched by fire. The incidence of fireblight is strongly affected by rainfall, and although a problem in Kern County, the disease is more frequent and more severe in higher rainfall areas. If a tree or shrub contracts the disease, careful pruning may be needed to prevent death of sections of the canopy or even the whole plant. Only plants in the rose family can be affected, so problems in unrelated trees and shrubs, for example, elm, willow, redwood, etc., cannot be the result of fireblight.

Although most plant diseases are caused by fungi, fireblight is caused by *Erwinia amylovora* bacteria. Infection occurs during wet spring weather when splashing rain, wind, bees, and other insects contribute to spread the bacteria from old bark infections to blossoms and new leaves. As bacteria multiply, plant shoots suddenly wilt, with leaves showing patches of brown and twigs turning black. Shoot tips bend over into a hook shape as wilt progresses down a twig. As bacteria move further down the stem to larger wood, attached branches may wilt as water-conducting tissues are killed. Cankers, which are sunken areas of dead tissue, form on branches. During warm (70-85°F) wet weather bacteria mixed with sap ooze to the surface of these cankers and can spread to uninfected parts of the plant or nearby susceptible plants. Overhead irrigation will prolong the active period. As weather turns warmer and drier, bacterial activity ceases, but bacteria residing in wood are not killed and remain quiet until the following spring.

Susceptible plants can be killed in one season by fireblight. Edible pears and quince are extremely susceptible, while apples and crabapple are less so, with some varieties showing more susceptibility than others. Ornamental pear species and varieties vary in susceptibility, with most exhibiting low incidence of fireblight in Kern County. However, 'Aristocrat' ornamental pear is very susceptible and cannot be grown further north in the San Joaquin Valley, although it does grow in Bakersfield. Occasionally, pyracantha, hawthorn, photinia, cotoneaster, or loquat may be affected, but damage is usually slight. Non rose-family members, such as camphor, redwood, ash, and oaks, cannot contract fireblight.

If the disease is progressing in a tree or shrub, pruning several inches below the infected wood can arrest further damage. During dry weather dead areas should be cut out of the tree several inches below the diseased twigs or cankers. On heavier wood in very susceptible trees, like pears, pruning cuts should be made in healthy wood 6-12 inches below cankers. Because pruning tools can spread the bacteria, it is important to disinfect pruning tools between cuts by dipping in a solution of one part bleach to nine parts water, or using another household disinfectant.

If fireblight seems likely to occur based on weather, plant susceptibility, past history, and local disease prevalence, blossoms can be given limited protection through application of a copper-containing fungicide. For larger plants, such treatment would need to be repeated and is impractical in most landscape situations. Protective sprays must be applied before infection occurs, and it's already too late this year to catch the beginning of the disease.

Succulent growth is more susceptible to infection. Excessive nitrogen, heavy irrigation, and heavy pruning force rapid growth. Try to be moderate with these cultural practices if fireblight is a problem.

Further information is found in the University of California Pest Note, *Fireblight*, publication no. 7414, available at the UC Cooperative Extension office, or via the web at [www.ipm.ucdavis.edu/PDF/PESTNOTES](http://www.ipm.ucdavis.edu/PDF/PESTNOTES).

The left photo below shows infection centers in an 'Aristocrat' pear, while the right photo is a closeup. The lower photo shows small branches killed by fireblight, a lasting effect visible in summer on an ornamental pear.



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