

Meetings and Announcements

UCCE Kern County Office Situation--UCCE is still working!

Yes, the usual: Our office on Mt. Vernon Ave. is currently open to the public. **In accordance with the public health emergency declared by the County of Kern, all visitors are required to wear face coverings in all public places until further notice.** Many of us advisors will be alternately in the office and working from home, and I have answered many questions via email, and new queries come in regularly from Kern residents as well as from those who live much further away. Email is the best way to reach me, my address is jfkarlik@ucanr.edu.

Weekly Zoom presentation on gardens and design has resumed: Organic Agriculture is the next topic, followed by Longwood Gardens

I continue offering weekly Zoom presentations on gardens and landscape design, augmented with a bit of history. These presentations are Thursdays at 4:30 pm, and are mostly based on photos from our past horticultural tours. The next presentation, March 18, will be the 39th in this series, and feature a discussion of organic agriculture. The following week, March 25, I plan on a discussion of Longwood Garden, one of the most notable in the U.S. If you didn't receive the Zoom log-in information, please send me an email, jfkarlik@ucanr.edu, and I'll send you the meeting ID and password.

Horticultural Study Tour XI: Wales, Edinburgh, Northern Scotland

As you know, we've had to cancel Hort Tour XI due to Covid. We had hoped we might reschedule for 2021, but that seems infeasible. Accordingly, and so we might see spring bloom, we are looking at spring 2022 for this tour. It will be retitled Horticulture Study Tour XII, and we plan to offer essentially the same itinerary listed for Hort Tour XI.

Return to Chernobyl...when?

Likewise, we had to cancel our planned 2020 return to Chernobyl. We know there are interested people who would like to visit. Perhaps we can return in 2022.

Tree Decline

I often think of Kern County as the garden spot of California, and trees are a part of the attraction of our fair city of Bakersfield. Unfortunately, most trees do not live to great age on the Valley floor and the desert because the Kern climate in those locations often does not resemble where respective shade trees grow naturally. More specifically, stresses caused by warm summer temperatures, low humidity, and alkaline soils can shorten tree

longevity. Perhaps the most obvious example is coast redwood, *Sequoia sempervirens*, remarkably successful in Bakersfield considering mountain locations of natural stands, but frequently displaying needle discoloration even as young trees.

The term decline refers to progressive loss of vigor and health. Decline may include slow growth, sparse foliage, dieback and undersized foliage. Decline because of age is common, since trees have life spans and life expectancies, and so trees pass through stages of growth, maturity, decline and death--and in general in Kern County they do so more rapidly than in many other locations.

Trees of the same species and similar ages may decline together without a specific infectious agent moving among them, although disease can hasten the process, as can insect attack. However, decline is an inclusive word where more specific causes of a malady may not be known. Trees exhibiting poor growth often do not have one identifiable cause responsible for their condition. Sometimes the word "pressure" is used to describe the effect on trees of parts of the environment which are not favorable.

Decline can be caused by repeated or continual challenge from one factor, such as decline of pin oaks due to inadequate uptake of iron. Many trees species can be affected by drought stress or sunburn. Trees weakened by these factors become abnormally susceptible to fungi and insects, especially boring insects. Also, as trees become larger, demand for water increases, and so previously adequate irrigation may become limiting.

Decline can be caused by drastic injury plus secondary stress, for example, the decline of native oaks after root loss as the result of construction of excavation. Although not common in recent years, sycamore and ash may be affected by repeated spring defoliation caused by anthracnose disease, most damaging if the foliage is removed just as leaves become fully expanded. This loss triggers a second flush growth during the same season, and the replacement of growth depletes the stored carbohydrate reserves of the tree and leaves it more susceptible to attack by secondary insects.

Decline can be caused by other contributing factors, such as girdling roots, restricted rooting space leading to water stress, soil compaction, or severe trunk wounds. Trees in parking lot plantings often have very small soil volumes for roots with resulting stress, stunting, and short life.

Since any given tree will experience slower growth and ultimate death at some point, we can plan for that. On larger properties, such as HOA complexes and golf courses, a regular removal and replanting program can be developed.

John Karlik
Environmental Horticulture/Environmental Science

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