After the Drought: What about the Trees?

By Becky Miller-Cripps

It's a time of interesting contrasts. We've recently survived a sweltering heat wave. At the same time, some of our local mountain passes are still closed due to deep snow and road damage from heavier-than-usual winter storms. The drought is officially over; waterfalls are gushing. Water is running everywhere in the high country and we are warned about unsafe conditions near rivers from fast-flowing cold water. So, what about the trees? Are they now safe from the intense die-off event we've witnessed in the last few years?

According to the Stanislaus National Forest – Tree Mortality Fact Sheet, Tuolumne County has lost an estimated 7,679,000 trees with over 6 million dying in 2016 alone. It also warns that, "Trees will continue to die throughout California despite the winter 2016/2017 precipitation. Typically, it takes one to three years after an above-normal precipitation year before trees regain their natural defenses against bark beetles."

The Western Pine Beetle that took advantage of our recent drought is a natural part of the conifer forest environment in California. And it is highly adapted to the "right" conditions. According to Beverly Bulaon, Forest Health Specialist and entomologist for U.S .Forest Service Region 5, the Western Pine Beetle adult can start flying after a week of 65-degree days. With previous years' warm temperatures in January and February, adults could start looking for a place to lay eggs in the late winter and early spring. Temperatures never get cold enough in the Sierra Nevada foothills to kill over-wintering pine beetles and they can reproduce three generations in one year! The U.S. Forest Service offers an excellent publication about our Western conifers and the beetles that attack them, "Bark Beetles in California Conifers: Are Your Trees Susceptible? https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5384837.pdf

Once bark beetles have successfully invaded a tree, there is little you can do. However, there is much that can be done to maintain the health of existing trees to help them repel bark beetle attacks. According to Susie Kocher, UC Cooperative Extension Forestry Advisor, part of the reason for the massive tree die-off is that we have exceeded the carrying capacity of the landscape. Thinning tree stands increases each remaining tree's access to available resources such as light, water and air movement.

If you have incense cedars on your property, it may be comforting to know that they are not easy prey to bark beetles. Ones that died probably succumbed to lack of water from the drought. According to Kocher incense cedars can "hang" (continue living) and recover even though they have very little foliage remaining. If you have a stand of incense cedars with blackened trunks (trees look fire-singed), it's an indication that they need thinning. The black pigment is a sooty mold that grows on the "honeydew" excreted by a type of scale that lives on incense cedars. The presence of the scale, the honeydew and the black sooty mold is an indication of overcrowding and a lack of air circulation.

Another thing you can do to increase the health of your landscape is to give things time to recover. If you have lost trees to the drought or to pine beetle, don't be in a hurry to replant. Assess the new growth that's already occurring on your property. For example, at a recent "train-

the-trainer" workshop hosted for Master Gardeners by the University of California Cooperative Extension Central Sierra in Tuolumne County, attendees on a field trip found baby incense cedars growing into the space vacated by downed Ponderosa pines. There were also a few baby pines and some oak youngsters. These can be nurtured and thinned to healthy spacing.

Should you water landscape trees? If you have a large specimen tree that is valuable to you, by all means provide it with some supplemental water during a hot, droughty year. For Ponderosa pines, the supplemental water needs to be applied during the spring – by late summer they are already in conservation mode. A specimen oak tree can accept a deep watering once a month during July, August and September to help it fight off drought stress. It isn't practical to water trees growing in a more forested landscape.

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