



## **Madrone Problems Evident in Southern Oregon**

What's wrong with the Madrone trees in our area? Many southern Oregon residents have been asking themselves this question lately.

Due to unusually low rainfall, the trees are experiencing drought stress. Drought stress occurs when water loss exceeds water intake over a lengthy period of time. This dehydration disturbs the normal tree physiology. The result is reduced growth and increased vulnerability to insect and disease problems.

During normal conditions at this time of year, madrone trees have grown a new set of leaves, while the older leaves have turned brown and been shed. This year the old yellow leaves have persisted on the trees and the new leaves are smaller than normal, giving the trees as a whole a yellowish sickly cast. In addition, branch dieback is evident on some trees. The symptoms have been observed over extensive areas of southwestern Oregon.

Madrone trees that flowered heavily this year or last year appear to have the most stunted foliage. The trees use a considerable amount of energy producing flowers. Consequently, few reserves were available for growth of this year's foliage.

Branch dieback is caused by one or more canker diseases that have become increasingly evident. A canker disease is caused by a pathogen that kills localized patches of the tree's inner bark. Entire trees or individual trunks die after exhibiting large black cankers that spiral down the stems. Or large numbers of branch tips turn yellow, foliage droops and the ends of many branches die, leaving the tree with little or no foliage. The diseases are associated with temperature or moisture extremes that stress or injure trees. Warm, wet weather favors infection.

What can be done to address these problems? For the widespread discoloration in forest situations, nothing. For landscape trees, deep, occasional watering every other week, near the drip-line and well away from the base of the tree should alleviate moisture stress during extreme drought conditions. Summer irrigation close to the tree trunk should be avoided because it may increase the tree's vulnerability to root disease.

The canker can be prevented by keeping trees free of damage and stress, including avoiding soil disturbance, especially compaction. If caught early, the disease can be mediated through pruning and burning individual cankered branches.

\*The above article was based on a news release from Rod Nichols of the Oregon Department of Forestry.

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