

Californians can Prevent Disaster by Inspecting Their Trees

A morning chill and the deepening slant of the sun's rays, often the first signs of fall, should remind all Californians to take a critical look at their trees before winter wind and rain places their homes, possessions and loved ones at risk.

Structurally unsound backyard, park, parking lot and street trees pose a serious hazard: they can crush cars, damage homes and injure people.

"Just this year, a woman was killed after part of a redwood tree fell on her at Stern Grove in San Francisco," said UC Cooperative Extension San Mateo-San Francisco County horticulture advisor Larry Costello. "We have to pay attention to the structural stability of trees."

The UC Statewide Master Gardener Program has developed a new set of posters that clearly illustrate and describe the most common structural defects that can lead to tree failure. The information for the posters is drawn from an extensive database on tree failure developed by a group of UC advisors.

Typically, any untimely death is met with the question, why? But for trees, that wasn't always the case. In the 1980s, the UC advisors realized that they had very limited hard evidence to explain why trees break apart, why trunks uproot or why branches suddenly tumble to the ground.

"We realized we needed to take a post-mortem approach, like the analysis done after an accident on the highway. We needed to know if there are defects that lead to a tree's failure," he said.

The group enlisted the help of arborists across California to collect details about tree failures. To date, more than 300 tree care professionals have reported the conditions surrounding nearly 5,000 California tree failures. With the support of the U.S. Forest Service, all the California data is now being integrated into an International Tree Failure Database.

The comprehensive information from the database has pinpointed the conditions Californians should look for in the trees that shade their homes, cars and children's play areas. The new posters are intended to be used by the state's master gardeners to educate gardeners, but can also be informative to anyone interested in preventing tree-related mishaps. They are available free online at <http://ucanr.org/treeposter>.

Costello said analysis of the tree failure database showed that Monterey pines and coast live oaks are examples of trees with different failure profiles. Because Monterey pines develop long horizontal branches with foliage at the ends, during winter storms, they are prone to break.

"One way you can minimize this tendency for long, heavy branches is by spacing trees closer together, rather than far apart," Costello said.

In coast live oaks, the key defect leading to tree failure has been wood decay. Costello said owners of coast live oaks can use a mallet to tap the tree. A hollow sound would indicate decay. If decay is suspected, an arborist should be contacted to conduct a complete assessment.

A common misconception, he said, is that healthy trees are safe trees.

"We've seen many cases where healthy trees fail," Costello said. "Health and structure are two different issues."

The master gardener poster describes the seven most common structural defects in trees. The defects are lean, multiple trunks, weakly attached branches, cavities and decay, trunk and branch cracks, hanging or broken branches and dead branches. The listing includes color photos of trees with each defect and suggestions for correcting them.

At the same Web site where posters may be downloaded (<http://ucanr.org/treeposter>), a more detailed tip sheet on inspecting trees and a list of tree failure resources are also available free. More information about tree failure is available in a UC Agriculture and Natural Resources publication titled "Recognizing Tree Hazards: A Photographic Guide for Homeowners," by Costello. The 10-page publication may be purchased for \$4 from the ANR online catalog, <http://ucanr.org/treehazards>.