

BREAKTIME

University of California
Cooperative Extension

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Annual Meeting
January 6, 2000

NOTABLE FAILURE: YOUNG EUCALYPTUS

Reserve Thursday, **JANUARY 6, 2000** for the CTRFP Annual Meeting. We will return to FILOLI Center in Woodside for a full day of topics relevant to tree failures and hazardous tree management. Registration forms will be sent by early December. Call 650-726-9059 for more information.

Report Count

We have 2480 reports in the database. There have been 85 reports submitted so far in 1999. Of the 677 California arborists and tree workers who receive this newsletter, only 40 have submitted reports since December 1998. If all of you use the enclosed form and report *just one* failure, it will make a large impact on the program.

Prizes will again be awarded at the Annual Meeting to cooperators in various categories for submitting the greatest number of reports. Last year's winners were:

Commercial: Bill Pramuk, Britton Tree Services
David Nelson, Treescapes Inc.
Municipal: San Francisco Recreation and Park
Private Park: John LaFleur, Lotusland

Two of last year's winners are still the ones to beat for 1999!

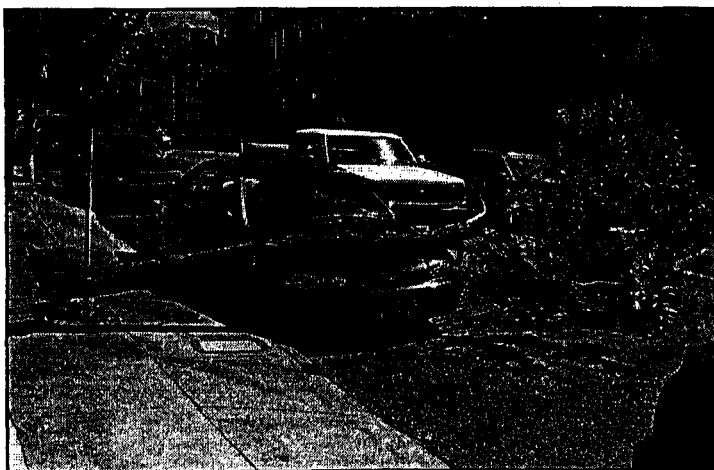


Fig. 1 Extensive decay in the primary roots caused this red-flowering gum to fail.

Two visitors to San Francisco were surprised recently when they returned to their rental car to find a red-flowering gum (*Eucalyptus ficifolia*) laying across the car's hood. Fortunately, the tree was relatively small (18-feet tall with 8-inch DBH) and the damage was not major. (fig. 1)

The fact that the tree failed at all was surprising. It had been in the ground for only ten years (estimate) and the canopy looked healthy, although somewhat thin.

Eucalyptus ficifolia performs very well as a street tree in SF, even in 3 ft x 3 ft sidewalk cutouts. In many cases, it grows too fast and sidewalk damage occurs.

The failure occurred in the primary roots, just below the root crown. All roots inspected appeared to be decayed. This was determined by observation: the wood had broken across the grain (brash wood failure). There were gusty winds at the time of failure, but they likely dealt the finishing blow to a tree with a significant structural defect.

Reasons for a tree of this size and age to have such extensive decay are open for speculation. Some root cutting could have been done early in the life of the tree. This would serve as an entry court for wood decay organisms. Although most street trees are not watered extensively (if at all), this tree may have received a certain level of "care" not experienced by neighboring trees (i.e., by the homeowner). Of course, a moist condition in the root crown area could have led to disease and decay.

Whatever the specific reason(s), this failure should serve as an alert to tree inspectors. Decay in relatively young, small trees can be sufficient to result in mechanical failure. Although the potential for damage (hazard) may be less than in larger trees, it can be substantial, particularly if the tree is next to a roadway or other high-use area. Decay should not be ruled out as a key structural defect in young trees. More importantly, tree care practices which minimize the potential for wood decay should be applied, whether the tree is young or old.

Comparisons between ALL SPECIES and PINUS PINEA

	ALL SPECIES	PINUS PINEA
NUMBER OF REPORTS	2480	69
MEAN AGE	63	41
MEAN DBH	30"	29"
MEAN HEIGHT	56'	43'
MEAN CROWNSPREAD	38'	41'
LOCATION OF FAILURE		
trunk	28%	30%
branch	37%	30%
root	35%	39%
STRUCTURAL DEFECTS		
failed portion dead	9%	1%
multiple trunks/ codominant stems	14%	22%
dense crown	10%	19%
heavy lateral limbs	19%	13%
uneven-one sided	4%	1%
uneven-topheavy	2%	1%
multiple branches	4%	0%
embedded bark	4%	6%
crook/sweep	2%	1%
leaning trunk	6%	11%
cracks/split	3%	3%
kinked/girdling roots	11%	13%
none	6%	3%
MONTH OF FAILURE		
December-February	50%	49%
March-May	19%	17%
June-August	15%	22%
September-November	16%	12%

	ALL SPECIES	PINUS PINEA
SITE CATEGORY		
residential	27%	17%
street	11%	9%
park	41%	54%
school	7%	9%
highway	2%	0%
parking lot	3%	3%
SITE USE		
undeveloped	8%	4%
low use	18%	13%
medium use	27%	31%
high use	46%	53%
DECAY		
root rot	18%	9%
heart rot	15%	8%
sap rot	3%	0%
heart and sap rot	9%	3%
no decay	54%	80%
DECAY EXTENT		
25 % or less	12%	14%
26-50%	12%	3%
51-75%	9.5%	3%
76-100%	9%	0%
none	54%	80%
WIND SPEED		
less than 5 mph	24%	34%
5-25 mph	29%	29%
over 25 mph	47%	25%
PRECIPITATION		
no precipitation	42%	46%
some precipitation	58%	54%

Obviously, there is no such tree as ALL SPECIES, but looking at the averages for all compared with the species of interest will point out notable numbers associated with the species. In the case of *Pinus pinea*, Italian stone pine, notice differences in Mean Age, Mean Height, Structural Defects (failed portion dead, multiple trunks, dense crown and leaning trunk), Decay and Decay Extent (no decay and none) and Wind Speed (over 25 mph).

Thanks to those of you who have submitted reports. Keep them coming!

L.R. Costello

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