

DIEBACK IN CLARET ASH

Samantha Titheradge - School of Forestry, Australian National University

Claret Ash, *Fraxinus oxycarpa* Raywood is a popular ornamental tree widely planted in Canberra for its exquisite red autumn foliage. Many trees are today exhibiting crown dieback which takes several seasons to become apparent and eventually ends in tree death. The cause(s) of this dieback are unknown. They could be caused by an unknown pathogen or be related to site conditions.

This study aims to provide data on the speed with which the dieback advances through tree crowns, and to identify any links between the dieback and other environmental factors such as tree age, the level of tree maintenance, inherent site parameters, and site disturbance.

The project focuses on dieback in Claret Ash street trees in four suburbs, Ainslie (established in 1944), Narrabundah (est. in 1947), Weetangera (est. 1970) and Gowrie (est.1981).

DISMUT (decision information system for the management of urban trees), 1997-2000 showed dieback in these suburbs varied from 5% and 11%. The present survey in 2002 showed 29% and 54% respectively indicating that dieback in these suburbs is rapidly increasing and is therefore a major problem in Canberra's urban forest.

The average diameter at breast height of trees varies across the four suburbs. When looking at the effect of dbh on dieback it was found that in the 0-5cm dbh class, healthy trees exceed trees with dieback. For those trees in the 6-14cm dbh class, trees with dieback are generally equal or exceed healthy trees.

A statistical analysis of the data collected from the survey suggests that large diameter trees are more likely to suffer from dieback than small diameter trees. Trees are also more likely to suffer from dieback if their roots are not exposed. Another interesting result was that trees growing on slopes are more likely to suffer from dieback than those trees growing on level ground.

As the second part of this project, the duration and severity of dieback on tree growth will be examined by studying the annual growth rings.