

## **Eucalypt decline in the absence of fire**

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The frequency of prescribed fire is critical to management policy for prescribed ecological and fuel reduction burning. Recently concern has been raised regarding overstorey eucalypt decline in temperate woodlands and forests. One hypothesis is that this is linked to the long absence of fire. Review of the scientific literature supports this: the long absence of fire is associated with a significant development of understorey (usually of only a few species) and soil litter, and the decline of overstorey eucalypts. The objectives of this project are to survey vegetation understorey and litter characteristics, soil physical and chemical status, tree health and nutrition in sites that have had either a history of a long absence of fire or a history of relatively frequent prescribed fire. It is hypothesised that altered nutrient cycling and eucalypt nutrient uptake may underpin the decline. Woodlands/forests with either a history of a long absence of fire or a history of frequent prescribed fire have been replicated at the site level in *Eucalyptus gomphocephala* Woodland (WA) and, *E. delegatensis* (Tas) and *E. amygdalina* forests (Tas). In addition to site history effects, half of each site was burnt in autumn 2007 to study the immediate effects of prescribed fire on nutrient cycling and tree health. Preliminary results are presented.