

Coppice Regrowth

Fact Sheet

What is coppice?

Regrowth from a cut tree stump or the base of a damaged stem is known as “coppice”. Coppice growth arises from buds or lignotubers that lay dormant beneath the bark. Diagram 1 shows coppice regrowth in a eucalypt forest after a fire

Lignotubers are swellings that develop at ground or below ground level (Diagram 2) and where food is stored, allowing new growth to sprout if the tree is damaged. Lignotubers contain a mass of hidden buds. When the seedling, sapling or tree is damaged by fire or by felling, new shoots grow from the lignotubers enabling the plant to survive.

Many eucalyptus species, including Blue Gum (*Eucalyptus globulus*) and Manna Gum (*E. viminalis*) that are found at Wye River and Separation Creek, have the ability to coppice, as well as an the ability to resprout epicormically (see Epicormic Fact Sheet). Some woody shrub species also resprout from lignotubers (e.g. *Banksia serrata*).

Why ‘coppice’?

The resprouting location on the plant is in response to the severity of the burn. In other words, as the severity increases, resprouting moves from the axils of leaves, to epicormic buds (older stems and branches) and finally the lignotuber buds. Shorter woody species, like multi-stemmed (mallee) eucalypts or shrubs and those with thinner bark are more likely to be ‘decapitated’ by higher severity fires and resprout from the lignotuber.

Ability to ‘coppice’ after fires

The ability to “coppice’ depends on the tree species, age and site conditions. Until lignotubers are large enough, young tree are vulnerable to a fire, as are old senescing trees, with physiologically compromised lignotubers. Favourable post-fire conditions, like sufficient rainfall and low grazing or browsing levels, also encourage ‘coppicing’. ‘Coppicing’ is more likely to be successful on productive sites, where water and nutrients are easily accessed.

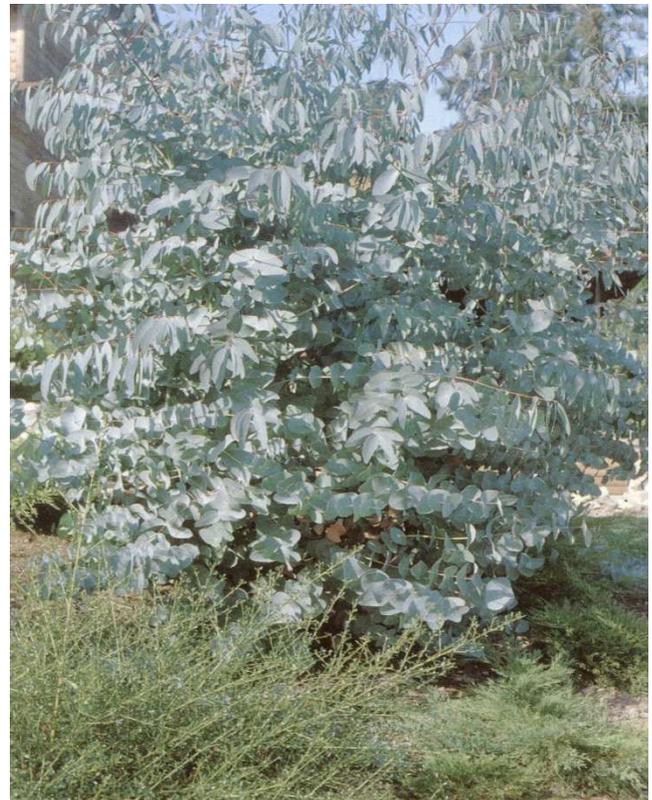


Diagram 1: ‘Coppicing’ of spinning gum (*E. perriniana*) (Source: www.pacifichorticulture.org)

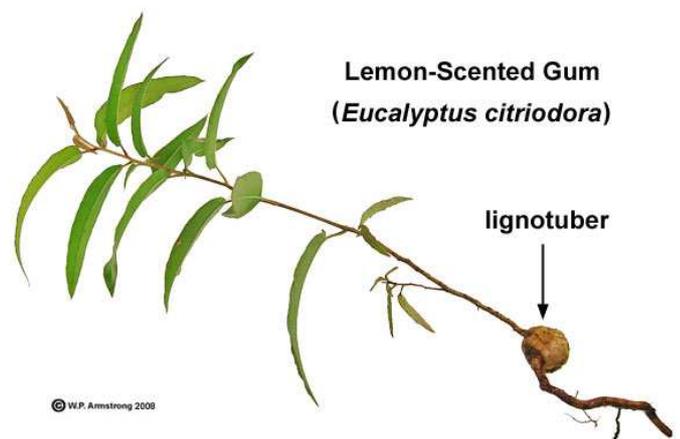


Diagram 2: Lignotuber on a eucalypt seedling (Source: <http://waynesword.palomar.edu/arbim6.htm>)

Reference: Burrows, GE (2013) Buds, bushfires and resprouting in the eucalypts. *Australian Journal of Botany*, 61, pp. 331-349.