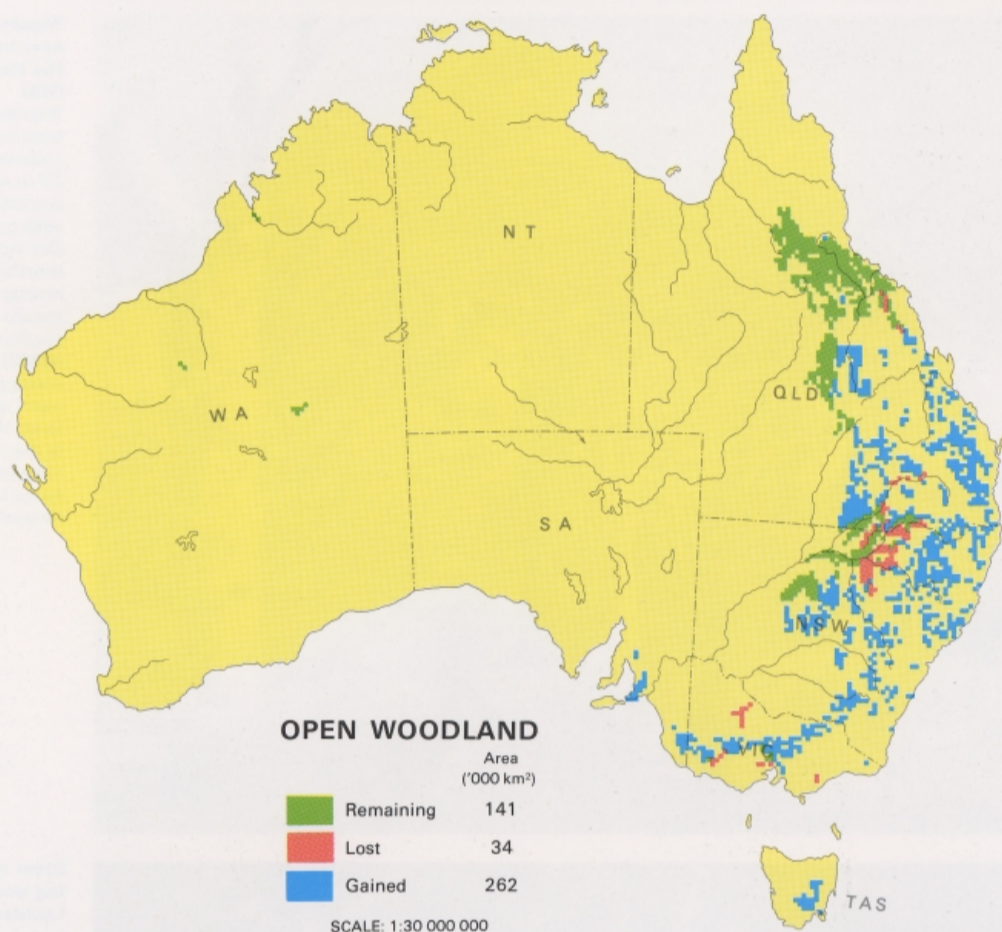


# Open woodland

Trees 10–30 m high; <10% foliage cover

M1



## Dawson gum over lancewood, central Qld

In several parts of eastern Australia this vegetation type (**eM1wL**) is mapped where scattered eucalypts emerge above a dense low tree understorey. In central Qld the natural occurrences are mostly in mixed brigalow areas, but also involve other *Acacia* species such as *A. shirleyi* or lancewood, pictured here with emergent Dawson gum (*E. cambageana*).



## Yellow jacket open woodland over eastern spinifex

*Eucalyptus similis*, with its distinctive yellow scaly bark, is found on sloping tablelands to the west of the Great Dividing Range in central Qld. It often forms groved open woodlands with a ground cover of eastern spinifex (*Triodia mitchellii*), as in this scene (far right) of **eM1tH** near Jericho.

The largest natural occurrences of open woodland are the eucalypt-studded grasslands on the floodplains of the upper tributaries of the Darling River and on the undulating country extending inland from Townsville. Large-scale tree clearing in the agricultural areas of eastern Australia has resulted in the creation of extensive artificial open woodlands.

Open woodlands have lower strata that range from dense low trees to grasses and other herbaceous plants. Open woodlands with a low tree or tall shrub understorey, the layered open woodlands, are a distinct subform related to denser tree formations. The grassy open woodlands are important grazing

country. Many former open forests and woodlands have been thinned to encourage the growth of ground layer grasses, or partly cleared for cropping. The remaining scattered trees form open woodlands. Small areas of natural open woodland also occur on grassy alluvial plains throughout the country.

## Open woodland with low trees and tall shrubs

M1L–M1S

There are several mapped examples (**eM1wL**, **eM1wPL**, **eM1xL**, **epM1xS**) in Qld and NSW along the inland margins of the natural extent of the related layered woodlands (**eM2L**). Some are naturally occurring but others result from clearing within former open forests or layered woodlands.

*A. harpophylla* in the north, are often significant. *Callitris glaucophylla* is also prominent in the lower stratum in some areas and, as in the areas south of Byrock and around Cobar in western NSW, may be as tall as and co-dominant with *Eucalyptus*.

*Eucalyptus populnea* is widespread in the upper stratum, with *E. intertexta* more prominent in NSW and *E. melanophloia* in the northern-most areas in Qld. A wide range of genera occurs in the lower woody stratum. Species of *Acacia*, especially *A. aneura* in the south and *A. cambagei*, *A. coriacea* and

The understorey in the northern areas contains numerous other genera including lower eucalypts, *Eremophila*, *Carissa*, *Ventilago*, *Petalostigma*, *Alphitonia* and *Albizia*. The ground cover is primarily tussock grasses, though the hummock grass *Triodia mitchellii* is prominent in the northern *Eucalyptus melanophloia* open woodland.

## Open woodland with hummock grasses

M1H

This subform (**eM1tH**) occurs along the western margins of the *Eucalyptus* woodlands of central Qld. The characteristic trees include *Eucalyptus papuana*,

*E. similis* and *E. whitei*; the latter two often occur in groves. *Triodia mitchellii* is the principal hummock grass, but tussock grasses may also be present.



## M1

## Open woodland with tussock grasses

M1G

Examples of this subform (mainly **eM1yG**) are widespread in the present vegetation of eastern Australia within the general limits of open forests and woodlands. There are also a few isolated occurrences in northern and western Australia. Some examples, characterised by *Eucalyptus microtheca*, occur along intermittent watercourses in WA. An example near Darwin represents modification of the natural *Eucalyptus tetrodonta*-*E. miniata* forest (**eM3L**) of the Top End.

A large area of **eM1yG** in northern Qld is shown as essentially the same on both maps. This open woodland is characterised by such tree species as *Eucalyptus crebra*, *E. drepanophylla* and *E. dichromophloia*; the grassy layer includes *Themeda australis* and species of other genera such as *Bothriochloa*, *Aristida* and *Heteropogon*. This type has much in common with the adjacent grassy woodlands (**eM2G**) and may be associated with soils that are less favourable to tree growth.

Despite little active tree clearance in this area of northern Qld, the combination of burning and cattle grazing appears to have brought about an increase in *Heteropogon contortus* in the ground layer. This may in turn decline under heavy grazing and be replaced by the exotic *Bothriochloa pertusa* (Bisset 1980). The exotic shrubby weed *Ziziphus mauritiana* is invading some heavily grazed areas.

In much of the rest of eastern Australia the modification of former forests or woodlands has resulted

in the development of many areas of grassy open woodland, characterised by relics of the tree layers of the previous vegetation including species of *Eucalyptus*, *Acacia*, *Callitris* and *Casuarina*. Some areas of **eM1yG** shown on the Present Vegetation map are generalisations of discrete remnant patches within largely cleared lands.

The numerous grasses include *Themeda australis* and species of *Bothriochloa* and *Aristida*; also *Dichanthium* in the north and *Stipa* and *Danthonia* in the south. Many of the ground layers have been further modified by the introduction of some exotic pasture species or by the entry of pasture weeds. Some seasonal cropping is also practised within these open woodlands in better watered areas.

The Natural Vegetation map shows a large area of grassy open woodland on the heavy soils along the upper tributaries of the Darling River. The principal tree species was *Eucalyptus microtheca* and the characteristic grass was *Astrelba lappacea* (**eM1aG**). However, the proportion of *A. lappacea* has been reduced by grazing and some areas have been further modified by clearing and by seasonal cropping.

The limited occurrences of this subform shown on the Natural Vegetation map in Vic. and on the Eyre Peninsula in SA have been replaced by seasonal crops in association with native or exotic pastures, or by exotic pastures only. They were floristically similar to the grassy woodlands (**eM2G**) existing today in the same general areas.

## Open woodland with other herbaceous plants

M1F

Examples of this subform (**eM1yF**, **eM1yff**) are shown on the Present Vegetation map from north-eastern NSW to Tas. and SA. They result from the partial clearing of former forests and woodlands to enable the establishment of sown exotic pastures. Some seasonal cropping occurs in lower rainfall areas.

The ground layer is dominated by such perennial sward-forming grasses as *Phalaris aquatica*, *Lolium perenne* and *Paspalum*

*dilatatum*. The first is more prominent under lower rainfalls; the last under higher rainfalls in warmer areas. There are varying proportions of legumes, notably the perennial *Trifolium repens* in higher rainfall areas and the seasonal *T. subterraneum* under lower or less reliable rainfalls. Some native grasses may persist, especially species such as *Bothriochloa macra* which are capable of adopting the sward-forming habit under grazing.



**Open woodland of yellow gum with exotic pasture near Naracoorte (SA)**  
The natural grassy woodlands in the south-east of SA have been modified by tree thinning and the sowing of exotic pastures. This activity has created areas of open woodland, such as that pictured near Naracoorte, with yellow gum (*Eucalyptus leucoxylon*) over a pasture of subterranean clover (*Trifolium subterraneum*) and a number of introduced grasses.



**Grassy open woodland in the New England area of NSW**  
The foreground in the foreground would originally have carried woodland vegetation. Selective clearing and tree thinning have created the present agricultural open woodland (**eM1yG**) dominated by white box (*Eucalyptus albens*). There has also been some clearing for cropping in the lower areas, while the higher ridges are still covered by woodland.