White Box–Yellow Box–Blakely's Red Gum Woodland

Introduction

These guidelines provide background information to assist landholders to identify remnants of White Box-Yellow Box-Blakely's Red Gum Woodland (known as Box-Gum Woodland). For more detailed information refer to the NSW Scientific Committee's Determination Advice at http://www.nationalparks.nsw.gov.au/npws.nsf/Content/Final+determinations

What is an Endangered Ecological Community?

An ecological community is a group of trees, shrubs and understorey plants that occur together in a particular area. An Endangered Ecological Community (EEC) is an ecological community listed under the *Threatened Species Conservation Act* 1995 as being at risk of extinction unless threats affecting these areas are managed and reduced.

What is Box–Gum Woodland?

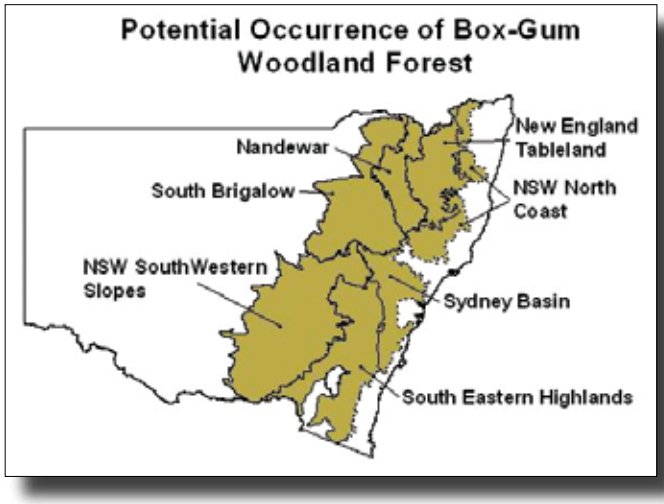
Box-Gum Woodland is an open grassy woodland characterised by the presence or prior occurrence of White Box (*Eucalyptus albens*), Yellow Box (*Eucalyptus melliodora*) or Blakely's Red Gum (*Eucalyptus blakelyi*). It has a ground layer of native tussock grasses and herbs, and a sparse, scattered shrub layer. In some locations however, these characteristic tree species may now be absent from the tree layer as a result of recent clearing or thinning and, at these locations, only other tree species may be present. These locations are still considered Box-Gum Woodland EEC as long as the area has the natural soil layer and seedbank intact, and therefore may recovery with appropriate management.

The community is important habitat for a diverse range of threatened animals, particularly where there are large, older trees with hollows. Examples include the Squirrel Glider, Barking Owl, Superb and Swift Parrots and the Regent Honeyeater.

Where is Box–Gum Woodland found?

Box-Gum Woodland is found on relatively fertile soils on the tablelands and western slopes of NSW, extending from an altitude of approximately 170m on the lower slopes up to 1200m on the northern tablelands. The community occurs within the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands and South Western Slopes Bioregions.

Box-Gum Woodland containing White Box trees are most common on undulating areas of the western slopes while woodland containing Blakely's Red Gum and Yellow Box trees are more common in the grassy woodlands on the tablelands.



Why is it important?

Areas of Box-Gum Woodland have been drastically reduced since European settlement and what remains is often degraded and highly fragmented. For example, in some areas the community has been reduced to less than 1% of its original extent, while in other areas it is estimated that only between 4% and 7% of the original extent remains. Many remnants of the community are degraded as a consequence of past disturbance. Some remnants have had

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many of the canopy trees removed, and conversely, others which still retain the original trees mostly intact, have had the shrub or ground layers degraded or removed by grazing or pasture modification.

Box-Gum Woodland remnants continue to be threatened by clearing, timber harvesting, firewood cutting, grazing, weed invasion, fire, soil disturbance and increased nutrient loads, soil acidification, salinity, and loss of connectivity with other vegetated areas.

Box-Gum Woodland is poorly represented in conservation reserves within the State.

Portrait view of EEC

Blakely's Red Gum Bark

John Turbill

Description of the community

The tree layer

The characteristic trees include White Box, Yellow Box and/or Blakely's Red Gum. There can be one or more of these trees in varying densities and combinations present at any site. Other eucalypts that may occur include Apple Box (*E. bridgesiana*), Red Box (*E. polyanthemos*), Candlebark (*E. rubida*), Snow Gum (*E. pauciflora*), Argyle Apple (*E. cinerea*), Brittle Gum (*E. mannifera*), Red Stringybark (*E. macrorhyncha*), Grey Box (*E. microcarpa*), Cabbage Gum (*E. amplifolia*) and possibly others. A few other tree species may occur in areas where there has been past clearing or thinning, for example, White Cypress Pine (*Callitris glaucophylla*).

The shrub layer

Shrubs are generally sparse or absent, but may be common in some sites. Examples of shrubs that may be present include various Wattles, Black Cypress Pine (*Callitris endlicheri*), White Cypress Pine, Blackthorn (*Bursaria spinosa*), Dogwood (*Cassinia quinquefaria*), Cherry Ballart (*Exocarpos cupressiformis*), Wilga (*Geijera parviflora*), and Native Olive (*Notelaea microcarpa*).

Landscape view of EEC

John Turbill

How can I identify an area of Box-Gum Woodland?

The following is a list of key characteristics to help identify an area of Box-Gum Woodland.

- Is the site on the tablelands or western slopes of NSW?
- Does the site contain, or would the site have recently been likely to contain, White Box, Yellow Box or Blakely's Red Gum?
- Is the ground layer mainly grassy?
- If the site has been degraded, is there potential for assisted natural regeneration of the tree layer or the understorey (e.g. by removing grazing, weeds, etc)?

If you answer yes to the above questions, the area is likely to be Box-Gum Woodland.

The ground layer

The ground layer may be highly modified by grazing or other disturbances. In more natural sites, a diversity of native grasses and herbs occurs, including Kangaroo Grass (*Themeda australis*), Poa Tussock (*Poa sieberiana*), Wallaby grasses (*Austrodanthonia spp.*), Common Everlasting (*Chrysocephalum apiculatum*), Scrambled Eggs (*Goodenia pinnatifida*) and Small St John's Wort (*Hypericum gramineum*).

Characteristic species

A list of canopy trees and understorey plants that characterise a patch of Box-Gum Woodland is provided in the Table below. Not all the species listed need to occur at any one site for it to be considered Box-Gum Woodland.

Variation in the community

At heavily disturbed sites only some of the species which characterise the community may be present. In addition, above ground plants of some species may not be present, but may be represented below ground in the soil seed banks or as bulbs, corms, rhizomes or rootstocks. As such, disturbed remnants may still be considered to form part of the community. This includes sites where either the shrub layer and/or tree layer would respond, under appropriate management, to natural regeneration (ie. where the natural soil and associated seed bank are still mostly intact).

Species List

Box-Gum Woodland is characterised by the species listed in the Table below. The species present at any site will be influenced by the size of the site, recent rainfall or drought conditions and by its disturbance (including fire and logging) history. Note that NOT ALL the species listed below need to be present at any one site for it to constitute Box-Gum Woodland.

Scientific Name	Common Name
Trees	
Brachychiton populneus	Kurrajong
Callitris endlicheri	Black Cypress Pine
Callitris glaucophylla	White Cypress
Eucalyptus albens	White Box
Eucalyptus amplifolia	Cabbage Gum
Eucalyptus blakelyi	Blakely's Red Gum
Eucalyptus bridgesiana	Apple Box
Eucalyptus conica	Fuzzy Box
Eucalyptus goniocalyx	Bundy
Eucalyptus mannifera	Brittle Gum
Eucalyptus melliodora	Yellow Box
Eucalyptus microcarpa	Gum-topped Box
Eucalyptus nortonii	Large-flowered Bundy
Eucalyptus polyanthemos	Red Box
Shrubs	
Acacia buxifolia	Box-leaved Wattle
Acacia implexa	Hickory Wattle
Acacia paradoxa	Kangaroo Thorn
Alectryon oleifolius	Western Rosewood
Allocasuarina verticillata	Drooping Sheoak
Atalaya hemiglauca	Whitewood
Bursaria spinosa	Blackthorn
Capparis mitchellii	Wild Orange
Cassinia longifolia	
Cassinia quinquefaria	
Dodonaea viscosa	Hop Bush
Ehretia membranifolia	Peach Bush
Eremophila mitchellii	False Sandalwood
Exocarpos cupressiformis	Native Cherry
Hibbertia linearis	
Hibbertia obtusifolia	
Jacksonia scoparia	Dogwood
Lissanthe strigosa	Peach Heath
Melichrus urceolatus	Urn Heath
Notelaea microcarpa	Native Olive
Olearia elliptica	Sticky Daisy Bush
Olearia viscidula	Wallaby Weed
Pimelea curviflora	
Stackhousia monogyna	Creamy Candles
Stackhousia viminea	Slender Stackhousia
Swainsona galegifolia	Smooth Darling Pea
Templetonia stenophylla	Leafy Templetonia
Grasses	
Aristida behriana	Bunch Wiregrass
Aristida ramosa	
Austrodanthonia auriculata	Lobed Wallaby Grass
Austrodanthonia bipartita	Bandicoot Grass
Austrodanthonia racemosa	
Austrodanthonia richardsonii	Wallaby Grass
Austrostipa aristiglumis	Plains Grass
Austrostipa blackii	
Austrostipa nodosa	
Austrostipa scabra	Speargrass
Bothriochloa macra	Red Grass
Chloris truncata	Windmill Grass
Chloris ventricosa	Tall Chloris
Cymbopogon refractus	Barbed Wire Grass
Dichanthium sericeum	Queensland Bluegrass
Dichelachne micrantha	Shorthair Plumegrass
Dichelacne sciurea	
Echinopogon caespitosus	Hedgehog Grass
Elymus scaber	Wheatgrass
Eulalia aurea	Silky Browntop
Panicum queenslandicum	Coolibah Grass
Poa labillardieri	Tusssock
Poa sieberiana	Snow Grass
Sorghum leiocladum	Wild Sorghum
Themeda australis	Kangaroo Grass
Herbs and Ferns	
Asperula conferta	Common Woodruff
Brachyloma daphnoides	
Bracteantha viscosa	Sticky Everlasting
Brunoniella australis	Blue Trumpet
Bulbine bulbosa	Golden Lily
Cheilanthes sieberi	Forest Fern
Chrysocephalum apiculatum	Yellow Buttons
Dianella longifolia	A flax lily
Dianella revoluta	A flax lily
Diuris dendrobioides	
Geijera parviflora	Wilga
Geranium solanderi	Native Geranium
Gonocarpus elatus	
Goodenia pinnatifida	
Hypericum gramineum	Small St John's Wort
Leptorhynchos squamatus	Scaly Buttons
Lomandra filiformis	A mat rush
Microseris lanceolata	
Oxalis perennans	
Plantago debilis	
Plantago gaudichaudii	
Rostellularia adscendens	
Rumex brownii	Swamp Dock
Sida corrugata	
Wahlenbergia communis	Native Bluebell
Vines	
Glycine clandestina	
Glycine tabacina	
Glycine tomentella	Woolly Glycine
Jasminum lineare	Desert Jasmine
Jasminum suavissimum	
Pandorea pandorana	Wonga Vine
Parsonsia eucalyptophylla	Gargaloo

What does this mean for my property?

As a listed Endangered Ecological Community under the *Threatened Species Conservation Act 1995*, Box-Gum Woodland has significant conservation value and some activities may require consent or approval. Please contact the Department of Environment and Climate Change (DECC) for further information.

Determining the conservation value of remnants

The degree of disturbance (i.e. condition) of many remnants can vary from almost pristine to highly modified. It is important to note that even small patches or areas that have had past disturbance such as selective logging, fire or grazing may still be important remnants of Box-Gum Woodland and be considered the EEC. Where difficulties arise when faced with decisions on whether particular sites are Box-Gum Woodland, expert advice may be needed.

Retaining mature native vegetation or EECs for conservation purposes may attract incentive funding. Funding is allocated to landholders by the local Catchment Management Authority (CMA) according to the priorities set out in their Catchment Action Plan and strategies. For more information contact your local CMA or email: info@nativevegetation.nsw.gov.au

For further assistance

This and other EEC guidelines are available on the DECC website: at www.environment.nsw.gov.au

Useful Web Sites

- Botanic Gardens Trust plant identification assistance: http://www.rbgsyd.nsw.gov.au/information_about_plants/botanical_info/plant_identification
- Department of Environment and Climate Change (NSW) Threatened Species profiles: http://www.threatenedspecies.environment.nsw.gov.au/tsprofile/index.aspx
- Fact sheet on Box-Gum Woodland: www.nationalparks.nsw.gov.au/PDFs/Box-gum_Factsheet.pdf
- Identification Guidelines for Box-Gum Woodland: www.nationalparks.nsw.gov.au/PDFs/box-gum_id_guidelines.pdf
- Information on Bioregions of New South Wales: http://www.nationalparks.nsw.gov.au/npws.nsf/content/bioregions
- NSW Scientific Committee Determinations: http://www.nationalparks.nsw.gov.au/npws.nsf/Content/Final+determinations

John Turbill

Yellow Box Bark

Toni McLeish

Grassy Box Woodland

Department of Environment and Climate Change
1300 361 967
environment.nsw.gov.au
info@environment.nsw.gov.au | August 07
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