

# White Gum Moist Forest in the NSW North Coast Bioregion

## Introduction

These guidelines provide background information to assist landholders to identify remnants of White Gum Moist Forest. For more detailed information, refer to the NSW Scientific Committee's Determination Advice at <http://www.environment.nsw.gov.au/committee/FinalDeterminations.htm>



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Regrowth White Gum moist forest

## What is an Endangered Ecological Community?

An ecological community is a group plants and animals that occur together in a particular area including trees, shrubs and understorey plants. An Endangered Ecological Community 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 White Gum Moist Forest?

When mature, White Gum Moist Forest typically has a tall open canopy of a number of eucalyptus species with a diverse understorey.

This forest occurs on the escarpment slopes and foothills of north-east NSW, associated with relatively fertile soils. It is typically found in gullies and lower slopes. It has also been found on upper slopes and basalt ridges.

The trees which characterise this community are White Gum (*Eucalyptus dunnii*), sometimes occurring with Sydney Blue Gum (*Eucalyptus saligna*), Tallowood (*Eucalyptus microcorys*) and/or Brush Box (*Lophostemon confertus*). The understorey typically includes a diverse range of rainforest trees, vines, palms, ferns and herbs. Mature stands of the community feature a structurally diverse understorey. Regrowth stands, or recently disturbed stands, may take on the structure of low closed forest or scrub, or may have a simplified understorey structure, depending on the nature of the disturbance and the time elapsed since.

## Where is White Gum Moist Forest found?



White Gum Moist Forest occurs in the NSW North Coast bioregion (Thackway & Cresswell 1995), as well as adjacent regions in south-east Queensland. In NSW, White Gum Moist Forest is known to occur in two

restricted areas: one in the upper northern reaches of the Richmond River catchment; and the other in the north-eastern foothills of the Dorrigo plateau. The community may also occur elsewhere in the North Coast bioregion.

### Why is it important?

Only a very small amount of healthy White Gum Moist Forest remains and mature stands are rare. It has undergone a significant reduction in area and structure through land clearing and forestry operations. The community continues to be threatened by clearing, particularly where it occurs on fertile soils in valleys and on river flats that are suitable for agriculture and plantation forestry. It is further threatened by Bell Miner associated eucalypt forest dieback, frequent fire, weed invasion, and grazing. A number of threatened fauna species are supported by this community such as Koala, Powerful Owl and Red-legged Pademelon.



Mature White Gum moist forest Yabbarra NP



Roadside remnant of White Gum moist forest

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### The ground layer

The ground layer contains ferns, herbs and graminoids (grasses and similar). The ferns include Giant Maidenhair (*Adiantum formosum*), Rasp Fern (*Doodia aspera*) and Shield Ferns (*Lastreopsis* spp.). Herbs include Native Yam (*Dioscorea transversa*) and Native Ginger (*Alpinia caerulea*); and graminoids include Blady Grass (*Imperata cylindrica* var. *major*) and Spiny-headed Mat rush (*Lomandra longifolia*).

## Description of the community

### The tree layer

The most common trees occurring in the canopy of White Gum Moist Forest are White Gum (*Eucalyptus dunnii*), Sydney Blue Gum (*Eucalyptus saligna*), Tallowood (*Eucalyptus microcorys*) and Brush Box (*Lophostemon confertus*).

### The shrub layer

The shrub layer of White Gum Moist Forest includes a diverse stratum of rainforest trees and shrubs including Lilli Pilli (*Acmena smithii*), Common Acronychia (*Acronychia oblongifolia*), Broad-leaved Palm Lily (*Cordyline petiolaris*), Green Cascarilla (*Croton verreauxii*), Murrogun (*Cryptocarya microneura*), Native Tamarind (*Diploglottis australis*), Bolwarra (*Eupomatia laurina*), Guoia semiglauca, Cockspur Thorn (*Maclura cochinchinensis*), Orange Thorn (*Pittosporum multiflorum*), Celery Wood (*Polyscias elegans*) and Rose-leaf Bramble (*Rubus rosifolius*). Vines including Water Vines *Cissus Antarctica* and *Cissus hypoglauca*, Scrambling Lily (*Geitonoplesium cymosum*) and Lawyer Vine (*Smilax australis*), commonly grow over and amongst the understorey shrubs and trees. Lantana is often present in the shrub layer.

### Characteristic species

A list of trees and plants that characterise White Gum Moist Forest is provided below. Not all the species listed need to occur at any one site for it to be considered White Gum Moist Forest.

## How can I identify an area of White Gum Moist Forest?

The following is a list of key characteristics to help identify an area of White Gum Moist Forest.

- Is the site in the upper northern reaches of the Richmond River catchment or in the north-eastern foothills of the Dorrigo plateau?
- Is the vegetation open forest with a diverse moist understorey or a disturbed understorey?
- Does the tree layer contain White Gum?

If you answer yes to the above questions, the area is likely to be White Gum Moist Forest.

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## Species List

White Gum Moist Forest is characterised by the species listed 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 White Gum Moist Forest.

Species Name	Common Name
<b>Trees</b>	
<i>Eucalyptus dunnii</i>	White Gum
<i>Eucalyptus saligna</i>	Sydney Blue Gum
<i>Eucalyptus microcorys</i>	Tallowwood
<i>Lophostemon confertus</i>	Brush Box
<b>Small Trees/Shrubs</b>	
<i>Acacia maidenii</i>	Maidens Wattle
<i>Acmena smithii</i>	Lilli Pilli
<i>Acronychia oblongifolia</i>	Common Acronychia
<i>Alectryon subcinereus</i>	Native Quince
<i>Archontophoenix cunninghamiana</i>	Bangalow Palm
<i>Breynia oblongifolia</i>	Coffee Bush
<i>Cordyline petiolaris</i>	Broad-leaved Palm Lily
<i>Croton verreauxii</i>	Green Cascarilla
<i>Cryptocarya glaucescens</i>	Jackwood
<i>Cryptocarya microneura</i>	Murrogun
<i>Daphnandra micrantha</i>	Socketwood
<i>Dendrocnide excelsa</i>	Stinging Tree
<i>Dendrocnide photinophylla</i>	Shiny-leaved Stinger
<i>Diploglottis australis</i>	Native Tamarind
<i>Diospyros australis</i>	Black Plum
<i>Dysoxylum fraserianum</i>	Rosewood
<i>Eupomatia laurina</i>	Bolwarra
<i>Euroschinus falcatus</i> var. <i>falcata</i>	Ribbonwood
<i>Guioa semiglauc</i>	Native Quince
<i>Hibiscus heterophyllus</i> subsp. <i>heterophyllus</i>	Native Rosella
<i>Maclura cochinchinensis</i>	Cockspur Thorn
<i>Mallotus philippensis</i>	Red Kamala
<i>Melicope micrococca</i>	Hairy-leaved Doughwood

Species Name	Common Name
<i>Morinda jasminoides</i>	Sweet Morinda
<i>Neolitsea australiensis</i>	Green Bolly Gum
<i>Neolitsea dealbata</i>	White Bolly Gum
<i>Omalthus populifolius</i>	Bleeding Heart
<i>Pittosporum multiflorum</i>	Orange Thorn
<i>Polyscias elegans</i>	Celery Wood
<i>Rubus rosifolius</i>	Rose-leaf Bramble
<i>Rhodamnia rubescens</i>	Scrub Turpentine
<i>Synoum glandulosum</i> subsp. <i>glandulosum</i>	Scentless Rosewood
<b>Vines</b>	
<i>Cayratia clematidea</i>	Native Grape
<i>Cissus antarctica</i>	Water Vine
<i>Cissus hypoglauc</i>	Water Vine
<i>Derris involuta</i>	Derris
<i>Geitonoplesium cymosum</i>	Scrambling Lily
<i>Pandorea pandorana</i>	Wonga Wonga Vine
<i>Smilax australis</i>	Lawyer Vine
<i>Stephania japonica</i> var. <i>discolor</i>	Snake Vine
<b>Ferns</b>	
<i>Adiantum formosum</i>	Giant Maidenhair
<i>Doodia aspera</i>	Rasp Fern
<i>Lastreopsis</i> spp.	Shield Ferns
<i>Pteridium esculentum</i>	Bracken Fern
<b>Herbs</b>	
<i>Dioscorea transversa</i>	Native Yam
<i>Alpinia caerulea</i>	Native Ginger
<i>Alocasia brisbanensis</i>	Cunjevoi
<b>Graminoids (grasses and similar)</b>	
<i>Imperata cylindrica</i> var. <i>major</i>	Blady Grass
<i>Lomandra longifolia</i>	Spiny-headed Mat rush

## Variation in the community

At heavily disturbed sites only some of the species which characterise the community may be present. In addition, above ground individuals of some species may not be present, but the species may be represented below ground in the soil seed bank 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 (i.e. where the natural soil and associated seed bank are still mostly intact).



Crown of White Gum

Brett Snelson

## What does this mean for my property?

As a listed Endangered Ecological Community under the *Threatened Species Conservation Act 1995*, White Gum Moist Forest 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 White Gum Moist Forest and be considered EEC. Where difficulties arise when faced with decisions on whether particular sites are White Gum Moist Forest, 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](mailto:info@nativevegetation.nsw.gov.au)

## For further assistance

This and other EEC guidelines are available on DECC website at [www.environment.nsw.gov.au](http://www.environment.nsw.gov.au)

The references listed below also provide further information on EECs.

- Benson, JS & Hager T 1993, The distribution, abundance and habitat of *Eucalyptus dunnii* (Myrtaceae) (Dunn's White Gum) in New South Wales. *Cunninghamia* 3, 123-145.
- Botanic Gardens Trust plant identification assistance: [http://www.rbgsyd.nsw.gov.au/plant\\_info/identifying\\_plants/plant\\_identification\\_service](http://www.rbgsyd.nsw.gov.au/plant_info/identifying_plants/plant_identification_service)
- Brooker, M & Kleinig, D 1990, *Field Guide to Eucalypts of South-eastern Australia*, Vol 1. Inkata, Melbourne.
- Department of Environment and Climate Change (NSW) Threatened Species profiles: <http://www.threatenedspecies.environment.nsw.gov.au/tsprofile/index.aspx>
- Harden, G (ed) 1990-2002, *Flora of NSW Vols 1 – 4*, NSW University Press.
- Harden, G, McDonald, W & Williams, J 2006, *Rainforest Trees and Shrubs – A Field Guide to their identification*, Gwen Harden Publishing, Nambucca Heads.
- NSW Scientific Committee Determinations: <http://www.environment.nsw.gov.au/committee/finaldeterminations.htm>
- Thackway, R & Cresswell, ID (Eds) 1995, *An Interim Biogeographic Regionalisation for Australia: a framework for establishing the national system of reserves*, Version 4.0, Australian Nature Conservation Agency, Canberra.



Brett Sneddon

Disturbed White Gum moist forest



Penny Kendall

Leaves and fruit of White Gum

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