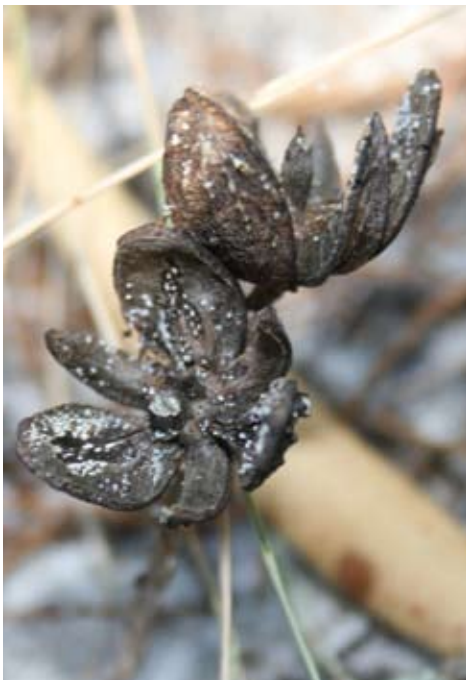


Coastal Cypress Pine Forest in the NSW North Coast Bioregion

Introduction

These guidelines provide background information to assist landholders to identify remnants of Coastal Cypress Pine Forest in the NSW North Coast Bioregion. For more detailed information refer to the NSW Scientific Committee's Determination for Coastal Cypress Pine in the NSW North Coast Bioregion.



Martin Kendall

Coastal Cypress Pine fruit

What is an Endangered Ecological Community?

An ecological community is a group of plants and animals that occur together in a particular area and includes trees and understorey plants. An Endangered Ecological Community (EEC) is a particular group of plants and animals 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 Coastal Cypress Pine Forest?

Coastal Cypress Pine Forest characteristically has a closed to open canopy of Coastal Cypress Pine (*Callitris columellaris*), which may be mixed with eucalypts, wattles, banksias and/or rainforest trees, and an open to sparse understorey of shrubs, sedges and herbs.

Where is Coastal Cypress Pine Forest found?

Coastal Cypress Pine Forest is typically found on coastal sand plains, north from the Angourie area on the far north coast of NSW. It occurs on the inland side of the coastal sandplain on low backbarrier dunes (Morand 1996). The soils are generally deep, freely draining sandy podsols, loam or clay soils associated with basalt or, less commonly, fine-grained sedimentary rocks and similar substrates. Currently known occurrences of the community are generally within 35 km of the coast and below 100 m elevation. In NSW, Coastal Cypress Pine Forest is currently known from the local government areas of Tweed, Byron, Ballina and Richmond Valley, but may occur elsewhere within the bioregion.



Why is it important?

A number of threatened species have been recorded in Coastal Cypress Pine Forest. These include Scented Acronychia (*Acronychia littoralis*), White Lace Flower (*Archidendron hendersonii*), Pink Nodding Orchid (*Geodorum densiflorum*), Stinking Cryptocarya (*Cryptocarya foetida*), Durobby (*Syzygium moorei*) and Basket Fern (*Drynaria rigidula*).

Only small areas of the original distribution of Coastal Cypress Pine Forest remain. Sand mining, agriculture and coastal development continue to threaten at least half of the remaining community that occurs outside of conservation reserves. Other threats that affect the community include weed invasion, human interference such as trampling, easement maintenance and illegal rubbish dumping. The community is fire sensitive and fire regimes that are either too frequent or not frequent enough threaten Coastal Cypress Pine Forest.



Martin Kendall

Coastal Cypress Pine foliage

How can I tell if I have Coastal Cypress Pine Forest on my property?

The following is a list of key characteristics for use in determining whether Coastal Cypress Pine Forest occurs on your property.

- Is the site north of Angourie within 35 kms of the NSW coast and below 100 m elevation?
- Is the site on the coastal sandplain?
- Does the canopy contain Coastal Cypress Pine?
- Is the vegetation open to closed forest with a sparse understorey?

If you answer yes to the above questions, your site is likely to consist of Coastal Cypress Pine Forest.



Martin Kendall

Disturbed Coastal Cypress Pine forest

Description of the community

The tree layer

Coastal Cypress Pine Forest is dominated by a dense to open canopy of Coastal Cypress Pine (*Callitris columellaris*), sometimes with Pink Bloodwood (*Corymbia intermedia*), Blackbutt (*Eucalyptus pilularis*), Scribbly Gum (*Eucalyptus signata*), Salwood (*Acacia disparrima* subsp. *disparrima*), Black She-oak (*Allocasuarina littoralis*), Coast Banksia (*Banksia integrifolia* subsp. *integrifolia*) or Old-man Banksia (*Banksia serrata*).

The shrub layer

The typically sparse layer of shrubs may include Prickly Moses (*Acacia ulicifolia*), Pink Beard-heath (*Leucopogon ericoides*), *Leucopogon leptospermoides*, Tree broom-heath (*Monotoca elliptica*) and juveniles of the canopy species.

The ground layer

The typically sparse groundcover comprises scattered graminoids (grasses and similar), including Three-awn Speargrass (*Aristida vagans*), Brown's Lovegrass (*Eragrostis brownii*), Blady Grass (*Imperata cylindrica* var. *major*), *Paspalidium distans*, Plume Rush (*Baloskion tetraphyllum* subsp. *meiostachyum*) and Spiny-headed Mat-rush (*Lomandra longifolia*), and herbs including Blue Flax Lily (*Dianella caerulea*) and *Pomax umbellata*.

Characteristic species

A list of canopy trees and understorey plants that characterise Coastal Cypress Pine Forest is provided below. Not all the species listed need to occur at any one site for it to be considered Coastal Cypress Pine Forest, and additional species not included in the list may occur.

Species List

Coastal Cypress Pine 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 history. Note that not ALL the species listed below need to be present at any one site for it to constitute Coastal Cypress Pine Forest.

Scientific Name	Common Name
Trees	
<i>Araucaria cunninghamii</i>	Hoop Pine
<i>Callitris columellaris</i>	Coastal Cypress Pine
<i>Corymbia intermedia</i>	Pink Bloodwood
<i>Eucalyptus pilularis</i>	Blackbutt
<i>Eucalyptus resinifera</i> subsp. <i>resinifera</i>	Red Mahogany
<i>Eucalyptus signata</i>	Scribbly Gum
<i>Euroschinus falcatus</i> var. <i>falcata</i>	Ribbonwood
<i>Halfordia kendack</i>	Saffron Heart
Shrubs & Small Trees	
<i>Acacia disparrima</i> subsp. <i>disparrima</i>	Salwood
<i>Acacia ulicifolia</i>	Prickly Moses
<i>Acronychia imperforata</i>	Logan Apple
<i>Acrotriche aggregata</i>	Red Cluster Heath
<i>Allocasuarina littoralis</i>	Black She-oak
<i>Alyxia ruscifolia</i>	Prickly Alyxia
<i>Astroloma humifusum</i>	Native Cranberry
<i>Austromyrtus dulcis</i>	Midgen Berry
<i>Banksia integrifolia</i> subsp. <i>integrifolia</i>	Coast Banksia
<i>Banksia serrata</i>	Old-man Banksia
<i>Cyclophyllum longipetalum</i>	Coast Canthium
<i>Leptospermum polygalifolium</i> subsp. <i>polygalifolium</i>	Taotoon
<i>Leucopogon ericoides</i>	Pink Beard-heath
<i>Leucopogon leptospermoides</i>	
<i>Leucopogon margarodes</i>	
<i>Monotoca elliptica</i>	Tree Broom-heath

Scientific Name	Common Name
<i>Notelaea longifolia</i>	Large Mock-olive
<i>Oxylobium robustum</i>	Tree Shaggy Pea
<i>Persoonia stradbrogensis</i>	Geebung
<i>Zieria smithii</i>	Sandfly Zieria
Graminoids (grasses and similar)	
<i>Abildgaardia vaginata</i>	
<i>Aristida</i> spp.	Wiregrass
<i>Baloskion tetraphyllum</i> subsp. <i>meiostachyum</i>	Plume Rush
<i>Bulbostylis barbata</i>	
<i>Cymbopogon refractus</i>	Barbed Wire Grass
<i>Cyperus stradbrogensis</i>	
<i>Dianella caerulea</i>	Blue Flax-lily
<i>Eragrostis brownii</i>	Brown's Lovegrass
<i>Imperata cylindrica</i> var. <i>major</i>	Blady Grass
<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
<i>Paspalidium distans</i>	
Herbs & Ferns	
<i>Acianthus caudatus</i>	Mayfly Orchid
<i>Acianthus exsertus</i>	Mosquito Orchid
<i>Chiloglottis</i> spp.	Orchid
<i>Commelina cyanea</i>	Native Wandering Jew
<i>Platycerium bifurcatum</i>	Elkhorn
<i>Pomax umbellata</i>	
<i>Pteridium esculentum</i>	Common Bracken
<i>Pterostylis nutans</i>	Nodding Greenhood
<i>Pterostylis pedunculata</i>	Maroonhood
<i>Hoya australis</i>	Natve Hoya

Variation in the community

The community may have a distinctive litter layer with patches of compressed Coastal Cypress Pine branchlets. Undisturbed stands of the community may have a woodland or forest structure, with Coastal Cypress Pine dominating the canopy, although larger trees, such as eucalypts may be emergent. Stands of the community that have been partially cleared in the past may be reduced to scattered trees. Fires may also influence the structure of the community, as the dominant tree species, Coastal Cypress Pine, is generally killed when burnt. Post-fire regeneration of the community may therefore create a shrubland or heathland.



Disturbed forest with Asparagus Fern ground layer

Martin Kendall



What does this mean for my property?

As a listed EEC under the *Threatened Species Conservation Act 1995*, Coastal Cypress Pine Forest has significant conservation value and some activities will require consent or approval. In addition, the community can contain threatened species. Please contact the Department of Environment and Climate Change 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 that have been disturbed in the past by clearing, or fire are still considered to be important remnants of Coastal Cypress Pine Forest and meet the criteria of being an EEC. Where difficulties arise when faced with decisions on whether particular sites are Coastal Cypress Pine 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

For further assistance

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

The references listed below also provide further information on EECs.

- Botanic Gardens Trust plant identification assistance: http://www.rbgsyd.nsw.gov.au/plant_info/identifying_plants/plant_identification_service
- 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, Kensington NSW.
- Moreland, DT 1996, *Soil Landscapes of the Murwillumbah – Tweed Heads 1:100,000 sheet*, Department of Land and Water Conservation Sydney.
- 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.



Regrowth Coastal Cypress Pine forest

Andrew Bennell



Mature Coastal Cypress Pine forest

Andrew Bennell

Disclaimer: The Department of Environment and Climate Change has prepared this document as a guide only. The information provided is not intended to be exhaustive. It does not constitute legal advice. Users of this guide should do so at their own risk and should seek their own legal and other expert advice in identifying endangered ecological communities. The Department of Environment and Climate Change accepts no responsibility for errors or omissions in this guide or for any loss or damage arising from its use.