

Sub-tropical Coastal Floodplain Forest

Introduction

These guidelines provide background information to assist landholders to identify remnants of Sub-tropical Coastal Floodplain Forest. 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 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 Sub-tropical Coastal Floodplain Forest?

Sub-tropical Coastal Floodplain Forest is a tall mixed forest occurring on coastal floodplains on the north coast of NSW. The most widespread and abundant dominant trees include Forest Red Gum (*Eucalyptus tereticornis*), Grey Ironbark

(*E. siderophloia*), Pink Bloodwood (*Corymbia intermedia*) and, north of the Macleay floodplain, Swamp Turpentine (*Lophostemon suaveolens*). A layer of small trees may be present, including Forest Oak (*Allocasuarina torulosa*) and a range of rainforest species such as Red Ash (*Alphitonia excelsa*) and Cheese Tree (*Glochidion ferdinandii*). Scattered shrubs and occasional vines may also be present. The groundcover is composed of abundant herbs, scramblers and grasses.

Where is Sub-tropical Coastal Floodplain Forest found?

Sub-tropical Coastal Floodplain Forest occurs north from Port Stephens. It has been recorded from all coastal and near-coastal local government areas.

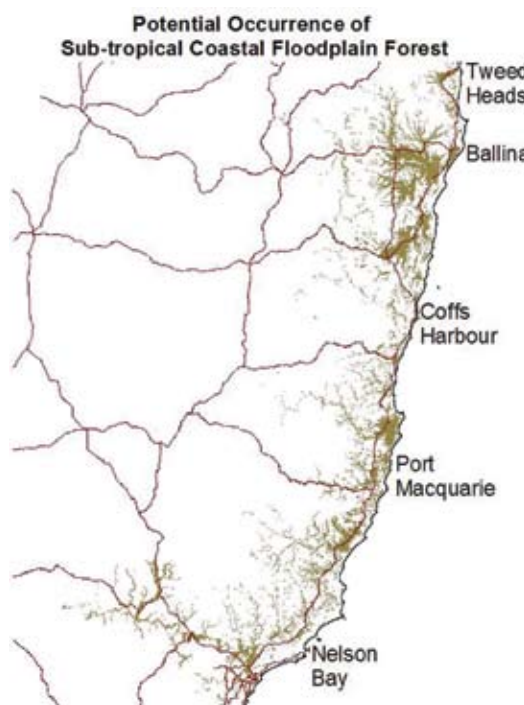
Why is it important?

Only a small area (less than 30%) of the original distribution of Sub-tropical Coastal Floodplain Forest remains, and these areas are often highly fragmented and threatened by clearing for cropping and pasture, timber harvesting, drainage works, pollution from urban runoff and weed invasion.

What is the Coastal Floodplain?

Floodplains are level landform patterns on which there may be active erosion and deposition by flooding where the average interval is 100 years or less.

Coastal floodplains include coastal river valleys, alluvial flats and drainage lines below the escarpment of the Great Dividing Range. While most floodplains are below 20m in elevation, some may occur on localised river flats up to 250m elevation. Compared with the surrounding landscape, floodplains are generally quite flat. However, there may be local variation associated with river channels, local depressions, natural levees and river terraces. The latter are areas that rarely flood anymore due to deepening or widening of streams.



Description of the community

The tree layer

The tree layer of Sub-tropical Coastal Floodplain Forest varies considerably, however, the most widespread and abundant dominant trees include Forest Red Gum, Grey Ironbark, Pink Bloodwood and, north of the Macleay floodplain, Swamp Turpentine.

Other less common trees may also be present, particularly where soil type is influenced from rocks upslope. These include Grey Box (*Eucalyptus moluccana*), Grey Gum (*E. propinqua*), Narrow-leaved Red Gum (*E. seeana*), Broad-leaved Apple (*Angophora subvelutina*), Swamp Mahogany (*E. robusta*), Red Mahogany (*E. resinifera* subsp. *hemilampra*), White mahogany (*E. acmenoides*), *Angophora woodsiana*, *A. paludosa* and rainforest trees such as Figs (*Ficus* spp.) and Tuckeroos (*Cupaniopsis* spp). A number of other Eucalypt species may also occasionally occur.

The shrub layer

A layer of small trees may be present, including Forest Oak, Red Ash, Cheese Tree, Bottlebrushes (*Callistemon* spp.), Paperbarks (*Melaleuca* spp.) and Swamp Oak (*Casuarina glauca*).

Scattered shrubs include Coffee Bush (*Breynia*

oblongifolia), Curracabah (*Acacia concurrens*), (*Commersonia* spp.), and Native Hibiscus (*Hibiscus* spp.). Vines such as Wombat Berry (*Eustrephus latifolius*), Scrambling Lily (*Geitonoplesium cymosum*) and Common Silkpod (*Parsonsia straminea*) may occur occasionally.

The ground layer

The ground layer is made up of herbs, scramblers and grasses. These include Blady Grass (*Imperata cylindrica*), Kangaroo Grass (*Themeda australis*), Blue Flax Lily (*Dianella caerulea*), Whiteroot (*Pratia purpurascens*), Forest Fern (*Cheilanthes sieberi* subsp. *sieberi*), and Kidney Weed (*Dichondra repens*). The composition and structure of the ground layer is influenced by disturbances such as grazing and fire history, and may have a substantial component of weed species.



Forest Red Gum

Pink Bloodwood

Swamp Turpentine

John Turbill

How can I identify an area of Sub-tropical Coastal Floodplain Forest?

The following is a list of key characteristics to help identify an area of Sub-tropical Coastal Floodplain Forest:

- Is the site north of Port Stephens?
- Is the site on the coastal floodplain (see "What is the Coastal Floodplain" on previous page)?
- Is the tree layer made up of mixed eucalypts?
- Does the tree layer contain any of the following: Forest Red Gum, Grey Ironbark, Pink Bloodwood or, north of the Macleay floodplain, Swamp Turpentine?
- Are rainforest trees or shrubs scattered throughout?
- Are there relatively low numbers of *Casuarina* species, *Melaleuca* species and Swamp Mahogany?

If you answered yes to the above questions, the area is likely to be Sub-tropical Coastal Floodplain Forest.

Characteristic species

A list of canopy trees and understorey plants that characterise a patch of Sub-tropical Coastal Floodplain Forest is provided in the Table below. Not all the species listed need to occur at any one site for it to be considered Sub-tropical Coastal Floodplain Forest. Conversely, other species not listed may also form part of this community.

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.

What does this mean for my property?

As a listed Endangered Ecological Community under the *Threatened Species Conservation Act 1995*, Sub-tropical Coastal Floodplain Forest has significant conservation value and some activities may require consent or approval. Please contact the Department of Environment and Conservation for further information.

Species List

Sub-tropical Coastal Floodplain Forest 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 Sub-tropical Coastal Floodplain Forest.

Scientific Name	Common Name	Scientific Name	Common Name
Trees		Grasses	
<i>Angophora paludosa</i>		<i>Aristida vagans</i>	Threeawn Speargrass
<i>Angophora subvelutina</i>	Broad-leaved Apple	<i>Cymbopogon refractus</i>	Barbed Wire Grass
<i>Angophora woodsiana</i>		<i>Dichelachne micrantha</i>	Shorthair Plumegrass
<i>Allocastrum torulosa</i>	Forest Oak	<i>Digitaria parviflora</i>	Small-flowered Finger Grass
<i>Alphitonia excelsa</i>	Red Ash	<i>Echinopogon caespitosus</i>	Hedgehog Grass
<i>Brachychiton populneus</i>	Kurrajong	<i>Entolasia marginata</i>	Bordered Panic
<i>Callitris columellaris</i>	A native Cypress Pine	<i>Entolasia stricta</i>	Wiry Panic
<i>Casuarina cunninghamiana</i>	River Oak	<i>Eragrostis leptostachya</i>	Paddock Lovegrass
<i>Casuarina glauca</i>	Swamp Oak	<i>Imperata cylindrica var. major</i>	Blady Grass
<i>Corymbia intermedia</i>	Pink Bloodwood	<i>Microlaena stipoides</i>	-
<i>Drypetes australasica</i>	Yellow Tulipwood	<i>Panicum simile</i>	Two Colour Panic
<i>Glochidion ferdinandii</i>	Cheese Tree	<i>Themeda australis</i>	Kangaroo Grass
<i>Elaeocarpus reticulatus</i>	Blueberry Ash	Herbs and Ferns	
<i>Eucalyptus acmenoides</i>	White Mahogany	<i>Brunoniella australis</i>	Blue Trumpet
<i>Eucalyptus amplifolia</i>	Cabbage Gum	<i>Centella asiatica</i>	Pennywort
<i>Eucalyptus moluccana</i>	Grey Box	<i>Cheilanthes sieberi</i>	Forest Fern
<i>Eucalyptus propinqua</i>	Grey Gum	<i>Cymbidium suave</i>	Snake Orchid
<i>Eucalyptus resinifera</i>	Red Mahogany	<i>Commelina cyanea</i>	Native Wandering Jew
<i>Eucalyptus robusta</i>	Swamp Mahogany	<i>Cyperus enervis</i>	
<i>Eucalyptus seeana</i>	Narrow-leaved Red Gum	<i>Dianella caerulea</i>	Blue Flax Lily
<i>Eucalyptus siderophloia</i>	Small-fruited Grey Gum	<i>Dianella longifolia</i>	A flax lily
<i>Eucalyptus tereticornis</i>	Forest Red Gum	<i>Dichondra repens</i>	Kidney Weed
<i>Ficus macrophylla</i>	Moreton Bay Fig	<i>Gahnia aspera</i>	
<i>Ficus obliqua</i>	Small-leaved Fig	<i>Gahnia clarkei</i>	
<i>Ficus superba var. hemeana</i>	Deciduous Fig	<i>Lomandra filiformis</i>	A mat rush
<i>Lophostemon suaveolens</i>	Swamp Box	<i>Lomandra longifolia</i>	Spiny-headed Mat Rush
<i>Mallotus philippensis</i>	Red Kamala	<i>Lomandra multiflora</i>	A mat rush
<i>Melaleuca quinquenervia</i>	Broad-leaved Paperbark	<i>Oplismenus aemulus</i>	
Small trees/shrubs		<i>Oplismenus imbecillis</i>	
<i>Acacia concurrens</i>	Curracabah	<i>Pratia purpurascens</i>	Whiteroot
<i>Acacia disparrima</i>		<i>Pteridium esculentum</i>	Bracken Fern
<i>Breynia oblongifolia</i>	Coffee Bush	<i>Vernonia cinerea</i>	
<i>Callistemon salignus</i>	White Bottlebrush	<i>Viola hederacea</i>	Native Violet
<i>Callistemon viminalis</i>	Weeping Bottlebrush	<i>Lagenifera stipitata</i>	
<i>Commersonia bartramia</i>	Brown Kurrajong	<i>Laxmannia gracilis</i>	
<i>Commersonia fraseri</i>	Brush Kurrajong	<i>Phyllanthus virgatus</i>	
<i>Cordyline congesta</i>	Tooth-leaved Palm Lily	<i>Sigesbeckia orientalis</i>	
<i>Cupaniopsis anacardioides</i>	Tuckeroo	<i>Tricoryne elatior</i>	
<i>Cupaniopsis parviflora</i>	Small-leaved Tuckeroo	Vines	
<i>Hibiscus diversifolius</i>	Swamp Hibiscus	<i>Cissus hypoglauca</i>	Water Vine
<i>Hibiscus tiliaceus</i>	Cottonwood Hibiscus	<i>Desmodium rhytidophyllum</i>	
<i>Hovea acutifolia</i>	A native pea	<i>Desmodium varians</i>	Slender Tick-trefoil
<i>Melaleuca alternifolia</i>	A tea tree	<i>Eustrephus latifolius</i>	Wombat Berry
<i>Melaleuca decora</i>	A tea tree	<i>Geitonoplesium cymosum</i>	Scrambling Lily
<i>Melaleuca nodosa</i>	A tea tree	<i>Glycine clandestina</i>	
<i>Melaleuca styphelioides</i>	Prickly-leaved Tea Tree	<i>Hardenbergia violacea</i>	False Sarsparilla
<i>Notelaea longifolia</i>	Native Olive	<i>Hibbertia scandens</i>	Climbing Guinea Flower
<i>Persoonia stradbrokeensis</i>	A Geebung	<i>Kennedia rubicunda</i>	Red Kennedy Pea
<i>Pimelea linifolia</i>	Rice Flower	<i>Maclura cochinchinensis</i>	Cockspur Thorn
<i>Pittosporum revolutum</i>	Hairy Pittosporum	<i>Morinda jasminoides</i>	Morinda Vine
<i>Wikstroemia indica</i>		<i>Parsonia straminea</i>	Common Silkpod
		<i>Smilax australis</i>	Native Sarsparilla
		<i>Smilax glycyphylla</i>	Sweet Sarsparilla
		<i>Stephania japonica</i>	Snake Vine

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 been disturbed in the past by activities such as selective logging, fire or grazing may still be important remnants of Sub-tropical Coastal Floodplain Forest and be considered the EEC. Where difficulties arise when faced with decisions on whether particular sites are Sub-tropical Coastal Floodplain 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.

- NSW Scientific Committee Determinations: <http://www.nationalparks.nsw.gov.au/npws.nsf/Content/Final+determinations>
- Department of Environment and Climate Change (NSW) Threatened Species profiles: <http://www.threatenedspecies.environment.nsw.gov.au/tsprofile/index.aspx>
- Botanic Gardens Trust plant identification assistance: http://www.rbgsyd.nsw.gov.au/information_about_plants/botanical_info/plant_identification
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- Harden, G. (ed) Flora of NSW Vols 1 – 4 (1990-2002). NSW University Press.
- Harden, G., McDonald, W. and Williams, J. (2006) Rainforest Trees and Shrubs – A Field Guide to their identification. Gwen Harden Publishing, Nambucca Heads.



John Turbill

Examples of Sub-tropical Coastal Floodplain Forest Endangered Ecological Community at Urunga Lagoon

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.

Department of Environment and Climate Change
1300 361 967

[environment.nsw.gov.au](http://www.environment.nsw.gov.au)

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