

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.

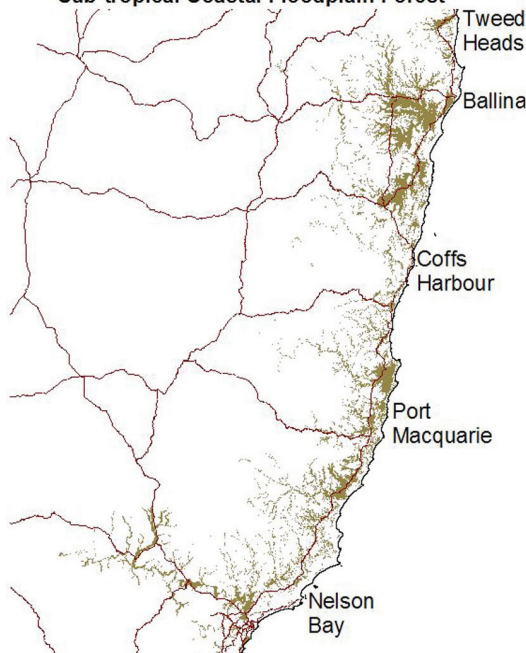
Where is Sub-tropical Coastal Floodplain Forest found?

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.

Potential Occurrence of Sub-tropical Coastal Floodplain Forest



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

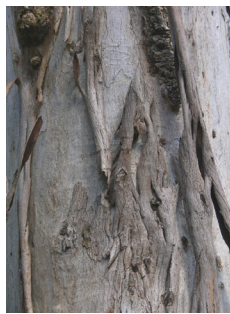
A layer of small trees may be present, including Forest Oak, Red Ash, Cheese Tree, Bottlebrushes (*Callistemon* spp.), Paperbarks (*Melaleuca* spp.) and Swamp Oak (*Casuarina glauca*).

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

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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
Trees	
<i>Angophora paludosa</i>	
<i>Angophora subvelutina</i>	Broad-leaved Apple
<i>Angophora woodsiana</i>	
<i>Allocasuarina torulosa</i>	Forest Oak
<i>Alphitonia excelsa</i>	Red Ash
<i>Brachychiton populneus</i>	Kurrajong
<i>Callitris columellaris</i>	A native Cypress Pine
<i>Casuarina cunninghamiana</i>	River Oak
<i>Casuarina glauca</i>	Swamp Oak
<i>Corymbia intermedia</i>	Pink Bloodwood
<i>Drypetes australasica</i>	Yellow Tulipwood
<i>Glochidion ferdinandii</i>	Cheese Tree
<i>Elaeocarpus reticulatus</i>	Blueberry Ash
<i>Eucalyptus acmenoides</i>	White Mahogany
<i>Eucalyptus amplifolia</i>	Cabbage Gum
<i>Eucalyptus moluccana</i>	Grey Box
<i>Eucalyptus propinqua</i>	Grey Gum
<i>Eucalyptus resinifera</i>	Red Mahogany
<i>Eucalyptus robusta</i>	Swamp Mahogany
<i>Eucalyptus seeana</i>	Narrow-leaved Red Gum
<i>Eucalyptus siderophloia</i>	Small-fruited Grey Gum
<i>Eucalyptus tereticornis</i>	Forest Red Gum
<i>Ficus macrophylla</i>	Moreton Bay Fig
<i>Ficus obliqua</i>	Small-leaved Fig
<i>Ficus superba</i> var. <i>henneana</i>	Deciduous Fig
<i>Lophostemon suaveolens</i>	Swamp Box
<i>Mallotus philippensis</i>	Red Kamala
<i>Melaleuca quinquenervia</i>	Broad-leaved Paperbark
Small trees/shrubs	
<i>Acacia concurrens</i>	Curracabah
<i>Acacia disparrima</i>	
<i>Breynia oblongifolia</i>	Coffee Bush
<i>Callistemon salignus</i>	White Bottlebrush
<i>Callistemon viminalis</i>	Weeping Bottlebrush
<i>Commersonia bartramia</i>	Brown Kurrajong
<i>Commersonia fraseri</i>	Brush Kurrajong
<i>Cordyline congesta</i>	Tooth-leaved Palm Lily
<i>Cupaniopsis anacardioides</i>	Tuckeroo
<i>Cupaniopsis parviflora</i>	Small-leaved Tuckeroo
<i>Hibiscus diversifolius</i>	Swamp Hibiscus
<i>Hibiscus tiliaceus</i>	Cottonwood Hibiscus
<i>Hovea acutifolia</i>	A native pea
<i>Melaleuca alternifolia</i>	A tea tree
<i>Melaleuca decora</i>	A tea tree
<i>Melaleuca nodosa</i>	A tea tree
<i>Melaleuca styphelioides</i>	Prickly-leaved Tea Tree
<i>Notelaea longifolia</i>	Native Olive
<i>Persoonia stradbrokeensis</i>	A Geebung
<i>Pimelea linifolia</i>	Rice Flower
<i>Pittosporum revolutum</i>	Hairy Pittosporum
<i>Wikstroemia indica</i>	

Scientific Name	Common Name
Grasses	
<i>Aristida vagans</i>	Threeawn Speargrass
<i>Cymbopogon refractus</i>	Barbed Wire Grass
<i>Dichelachne micrantha</i>	Shorthair Plumegrass
<i>Digitaria parviflora</i>	Small-flowered Finger Grass
<i>Echinopogon caespitosus</i>	Hedgehog Grass
<i>Entolasia marginata</i>	Bordered Panic
<i>Entolasia stricta</i>	Wiry Panic
<i>Eragrostis leptostachya</i>	Paddock Lovegrass
<i>Imperata cylindrica</i> var. <i>major</i>	Blady Grass
<i>Microlaena stipoides</i>	-
<i>Panicum simile</i>	Two Colour Panic
<i>Themeda australis</i>	Kangaroo Grass
Herbs and Ferns	
<i>Brunoniella australis</i>	Blue Trumpet
<i>Centella asiatica</i>	Pennywort
<i>Cheilanthes sieberi</i>	Forest Fern
<i>Cymbidium suave</i>	Snake Orchid
<i>Commelina cyanea</i>	Native Wandering Jew
<i>Cyperus enervis</i>	
<i>Dianella caerulea</i>	Blue Flax Lily
<i>Dianella longifolia</i>	A flax lily
<i>Dichondra repens</i>	Kidney Weed
<i>Gahnia aspera</i>	
<i>Gahnia clarkei</i>	
<i>Lomandra filiformis</i>	A mat rush
<i>Lomandra longifolia</i>	Spiny-headed Mat Rush
<i>Lomandra multiflora</i>	A mat rush
<i>Oplismenus aemulus</i>	
<i>Oplismenus imbecillis</i>	
<i>Pratia purpurascens</i>	Whiteroot
<i>Pteridium esculentum</i>	Bracken Fern
<i>Vernonia cinerea</i>	
<i>Viola hederacea</i>	Native Violet
<i>Lagenifera stipitata</i>	
<i>Laxmannia gracilis</i>	
<i>Phyllanthus virgatus</i>	
<i>Sigesbeckia orientalis</i>	
<i>Tricoryne elatior</i>	
Vines	
<i>Cissus hypoglauca</i>	Water Vine
<i>Desmodium rhytidophyllum</i>	
<i>Desmodium varians</i>	Slender Tick-trefoil
<i>Eustrephus latifolius</i>	Wombat Berry
<i>Geitonoplesium cymosum</i>	Scrambling Lily
<i>Glycine clandestina</i>	
<i>Hardenbergia violacea</i>	False Sarsparilla
<i>Hibbertia scandens</i>	Climbing Guinea Flower
<i>Kennedia rubicunda</i>	Red Kennedy Pea
<i>Maclura cochinchinensis</i>	Cockspur Thorn
<i>Morinda jasminoides</i>	Morinda Vine
<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
- Brooker, M. and Kleinig, D. (1990) Field Guide to Eucalypts of South-eastern Australia, Vol 2. Inkata, Melbourne.
- 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.



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

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