

# PLANT COMMUNITY FIELD GUIDE



Coastal Sand Apple-  
Blackbutt Forest



Map  
Unit  
33



# HCCREMS Extant Vegetation Mapping

Vegetation communities this guide have been classified and mapped according to Hunter Central Coast Regional Environment Management Strategy (HCCREMS) Vegetation Survey, using Mapping Units (MU). For more comprehensive and up-to-date information on this survey please contact HCCREMS.

<http://www.hccrems.com.au>

When you are starting out regenerating a bushland site, it may be that you don't know a lot of native species, but if you can provide a council vegetation officer, community support officer or local native plant nursery with some of the information from the Field Data sheet, it is likely that they would be able to identify the broader vegetation community.

The Site Orientation Booklet in this series has a useful contact list including:

Coastcare Officers

Landcare and Community Support Officers

National Parks Officers

Land Managers

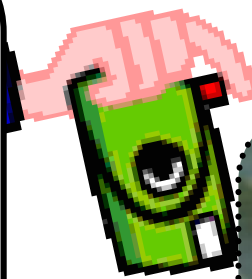
# Field Data Sheet

Habitat Type: <i>please circle</i>			
River bank	Wetland	Floodplain	Drainage line
Open Forest	Closed Forest	Rainforest	Disturbed / Grazed (Livestock)
Shrub(2-4m)	Heath (< 2m)	Grassland	Other:
Position on Slope : <i>please circle</i>			Altitude in metres
Watercourse	Flat	Lower Slope	Upper Slope
		Crest	Dune
Geology		Aspect: <i>please circle</i>	
		N NE E SE S SW W NW	
Soil Description			
Colour	Type	pH	Sand
			Clay Loam
Vegetation Description			
Vegetation community, association, type		Weed Invasion: <i>please circle</i>	
		High Medium Low	
Dominant upper storey species		Species diversity: <i>please circle</i>	
		High Medium Low	
Dominant middle storey species		Species diversity: <i>please circle</i>	
		High Medium Low	
Dominant lower storey/groundcover species		Species diversity: <i>please circle</i>	
		High Medium Low	

# Common Coastal Vegetation

On many sites, there may be some overlapping of these species and other species.

You need to make a decision as to which species is most numerous on the site. If you are not sure, then take a photo and collect some foliage (not just one leaf) and capsules, and consult your support network.



*Eucalyptus robusta*  
Swamp Mahogany



*Eucalyptus robusta*  
Swamp Mahogany

In areas where natural vegetation communities remain or have been reinstated, foredune areas are fairly well-vegetated with

*Spinifex*, *Scaevola*, *Carpobrotus* and *Acacia*, while the hind-dunes are generally a mix of native plant species; *Banksia integrifolia*, *Banksia serrata*, *Leptospermum spp.*, *Monotoca elliptica*, *Melaleuca nodosa*, *Allocasuarina distyla*.

*Scaevola calendulacea*  
Scented Fan Flower



*Carpobrotus*  
Pigface

In some cases, at Redhead and Frenchman's Beach for example, the *Acacia sophorae*-*Banksia integrifolia*-*Leptospermum laevigatum* dune thicket has been reconstructed over large areas and Bitou weed control has formed a substantial component of dune maintenance work.

In these reconstructed native plant communities, low species diversity is a common issue, though the opportunity now exists for enrichment planting of mosaics of unrepresented local dunal communities to be established as part of Landcare/Dunecare's follow-up of dune maintenance and weed control works.



*Acacia sophorae*  
Coastal Wattle



*Banksia integrifolia*  
Coastal Banksia



*Leptospermum laevigatum*  
Coastal Tea tree



*Chrysanthemoides monilifera*  
Bitou Bush



Before and after Bitou Bush removal

# HCCREMS Extant Vegetation Mapping

The following summary does not include the NPWS lands- Wallarah, Awabakal, Glenrock, Worimi Conservation Lands or Tomaree. NPWS have their own vegetation mapping, management recommendations, and support officers for volunteer workers.

Any volunteer group contemplating work within any of the NPWS estate should first contact the relevant NPWS officer. Contact details are in the Site Orientation workbook

HCCREMS mapping lists the following vegetation communities for the coastal zone:

- **Catherine Hill Bay (east of Flowers Drive)**  
MU34 Coastal Sand Wallum Woodland-Heath  
MU53 Beach Spinifex
- **Caves Beach/Hams Beach (east of Pacific Drive), Frenchman's Beach, Crabs Creek, Swansea Heads**  
MU34 Coastal Sand Wallum Woodland-Heath  
MU50 Coastal Sand Scrub
- **Blacksmiths**  
MU34 Coastal Sand Wallum Woodland-Heath
- **Redhead**  
MU34a Heath  
MU34 Coastal Sand Wallum Woodland-Heath  
MU37 Swamp Mahogany-Paperbark Forest  
MU50 Coastal Sand Scrub  
MU53 Beach Spinifex
- **Dudley**  
MU1 Coastal Wet Gully Forest  
MU6 Coastal Narrabeen Moist Forest  
MU15 Coastal Foothills Spotted Gum Ironbark Forest  
MU48 Coastal Clay Heath  
MU51 Coastal Headland Complex
- **Stockton Bight**  
MU33 Coastal Sand Apple- Blackbutt Forest-Beach Sand/ Sand

Remember that working any part of our coast or coastal lake or estuary system is likely to involve working on a site of potential Aboriginal heritage. A starting point for any project is consultation with the LALC, and you need to remember that grant funding usually allows for a cultural assessment of your site by an appropriate officer.

As the Map Unit Profiles are necessarily generalizations, the accuracy of this mapping is questionable in some sites, and there is no mapping as such for the immediate Newcastle coastal zone. There are important omissions of quite small remnants of some significant vegetation communities:

**Endangered Ecological Community- Littoral Rainforest**

There are some small disconnected remnants of littoral rainforest communities at Swansea Heads- at Little Beach on the slope from the headland down to the beach, at Illawong Park a remnant dwarfed to three metres by wind-shear, at Crabs Beach as a regrowth mosaic beneath Casuarina and Banksia, and at Salts Bay. There are similar disconnected remnants on Dudley Bluff.

**Endangered Ecological Community- Themeda grasslands on seacliffs and coastal headlands**

There are poorly managed remnants of this community at Illawong Park, at Swansea Heads near the Coastguard station, at Dudley Bluff, and at King Edward Park. Trees In Newcastle is currently working in and near the remnant in King Edward Park with funding through Newcastle City Council.



Salts Bay  
stabilisation  
work

# A description of a plant community

Abridged [http://www.lhccrems.nsw.gov.au/biodiversity/mu32\\_34.html#mu34](http://www.lhccrems.nsw.gov.au/biodiversity/mu32_34.html#mu34)

## MU33.Coastal Sand Apple-Blackbutt Forest

**Canopy Label:** *A. costata* / *E. pilularis* / *Banksia serrata*

**Structural Classification (Specht):** Open Forest

### Description

Coastal Sand Apple-Blackbutt Forest occurs principally on Holocene sands, where protection from direct coastal salt-laden winds is available. It occupies dunes of higher elevations with improved soil development. Typically it takes the form of an open forest with a moderately open, shrubby understorey.

*Angophora costata* and *Eucalyptus pilularis* are the key canopy species, the presence and abundance of each in the canopy is variable, and it is not uncommon for one to almost completely dominate. It has been found in a study of sand communities of the Eurundree Sandmass that *Angophora costata* often dominates where the water table is close to the surface (Myerscough & Carolin, 1986).

The shrub stratum is highly dependent on recent fire history however where present it is often composed of *Banksia serrata*, *Acacia ulicifolia*, and *Dillwynia retorta*. A combination of herbs, ferns and grasses inhabit the understorey. *Pteridium esculentum* is the most dominant however others such as *Gonocarpus teucrioides*, *Aotus ericoides* and *Themeda australis* are usually associated.

This assemblage is widespread across the Tomago-Stockton Sandmass in the Port Stephens Shire. It extends along the narrow sand coastal strip south of Newcastle to the Central Coast wherever conditions are optimal. Map Unit 34 Wallum Heath Woodland is the most floristically similar assemblage within the region although structurally they are distinct. A number of canopy and shrub species are common to both assemblages including *Acacia ulicifolia*, *Dillwynia retorta*, *Angophora Costata*, *Corymbia gummifera* and *E. signata*.

Sandmining and urban development has cleared or altered some of the former extent of this community. In some areas Map Unit 50 Coastal Sand Scrub has replaced this. On the North Coast Forest Ecosystem 27 Coastal Sands Blackbutt (NPWS, 1999(a)) closely matches the floristic and structural features of Coastal Sand Apple- Blackbutt Forest. A similar assemblage is also described by Myerscough and Carolin (1986) in the Myall Lakes Region.

## MU33 Coastal Sand Apple- Blackbutt Forest

Stratum	Species	% within community	Common Name
<b>Tallest</b>	<i>Angophora costata</i>	97%	
	<i>Eucalyptus pilularis</i>	76%	
	<i>Corymbia gummifera</i>	46%	
	<i>Eucalyptus signata</i>	11%	
	<i>Eucalyptus piperita</i>	4%	
	<i>Eucalyptus umbra</i>	4%	
<b>Mid</b>	<i>Banksia serrata</i>	83%	
	<i>Acacia ulicifolia</i>	79%	
	<i>Dillwynia retorta</i>	74%	
	<i>Bossiaea rhombifolia</i>	46%	
	<i>Macrozamia communis</i>	39%	
	<i>Acacia terminalis</i>	37%	
	<i>Banksia aemula</i>	11%	
<b>Lowest (&lt;1m)</b>	<i>Pteridium esculentum</i>	97%	
	<i>Gonocarpus teucroides</i>	72%	
	<i>Aotus ericoides</i>	69%	
	<i>Themeda australis</i>	69%	
	<i>Dianella caerulea</i>	62%	
	<i>Imperata cylindrica var major</i>	53%	
<b>Rare/endangered Species : Tetratheca juncea</b>			

A picture guide to plants in  
MU33 Coastal Sand Apple-  
Blackbutt Forest

Tall trees



*Angophora  
costata*  
Smooth-  
barked Apple



Mid Storey



*Acacia ulicifolia*  
Prickly Moses



*Banksia  
serrata*  
Old Man  
Banksia



A picture guide to plants in  
MU33 Coastal Sand Apple-  
Blackbutt Forest

Mid storey



*Dillwynia retorta*  
Eggs and Bacon



*Bossiaea rhombifolia*



*Macrozamia communis*  
Burrawang



A picture guide to plants in  
MU33 Coastal Sand Apple-  
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Lowest storey



*Pteridium  
esculentum*  
Bracken Fern



*Gonocarpus  
teucroides*  
Raspwort



*Themeda  
australis*  
Kangaroo  
Grass



*Dianella  
caerulea*  
Flax Lily



*Imperata  
cylindrica*  
Blady Grass



# References

Hunter Councils Inc (2003) Lower Hunter and Central Coast Regional Environmental Strategy [http://www.lhccrems.com.au/biodiversity/mu32\\_34.html#mu34](http://www.lhccrems.com.au/biodiversity/mu32_34.html#mu34) (Accessed 12.05.07)

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# Image credits

All plant photographs unless otherwise stated are by Peter Saunderson, TIN volunteer.

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Cover - Botanical Clip Art -Down Under Collection Deluxe CD-New Horizons Educational Software .[www.nh.com.au](http://www.nh.com.au)

Page 3- Google Earth Images of Newcastle coastline, Lake Macquarie Coastline, Glenrock SRA (accessed 29/7/07)

Page 4- Images of Newcastle Beaches- NCC

Page 5 Google Earth Image of Port Stephens (accessed 6/8/07)

# Useful people

The Site Orientation Booklet in this series has a useful contact list including

Coastcare Officers,

Landcare and Community Support Officers,

National Parks Officers, Land Managers



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