trees IN NEWCASTLE

PLANT COMMUNITY FIELD GUIDE

Coastal Sand Scrub

HCC REMS

Map Unit 50

Hunter-Central Rivers CMA CATCHMENT MANAGEMENT AUTHORITY

Natural Heritage Trust
Helping Communities Helping Australia
An Australian Government Initiative

CITY OF Lake Macquarie

LANDCARE

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: *please circle*			
River bank	Wetland	Floodplain	Drainage line
Open Forest	Closed Forest	Rainforest	Disturbed / Grazed (Livestock)
Shrub(2-4m)	Heath (< 2m)	Grassland	Other:

Position on Slope :*please circle*	Altitude in metres
Watercourse Flat Lower Slope Upper Slope Crest Dune	

Geology	**Aspect**: *please circle*
	N NE E SE S SW W NW

Soil Description			
Colour	Type	pH	Sand Clay Loam

Vegetation Description	
Vegetation community, association, type	Weed Invasion: *please circle* High Medium Low
Dominant upper storey species	Species diversity: *please circle* High Medium Low
Dominant middle storey species	Species diversity: *please circle* High Medium Low
Dominant lower storey/groundcover species	Species diversity: *please circle* 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 from http://www.lhccrems.com.au/biodiversity/mu49_54.html#mu50

MU50. Coastal Sand Scrub

Canopy label:

Leptospermum laevigatum, Banksia integrifolia subsp integrifolia

Structural Classification (Specht):

Heathland Closed Scrub Open Scrub

Description

Coastal Sand Scrub occurs on deep Quaternary sands usually on fore-dunes. It is a relatively dense, low community subject to desiccating salt winds.

Floristically it is quite simple with *Leptospermum laevigatum* occurring with a very high frequency to form the main canopy species alongside *Banksia integrifolia subsp integrifolia*, *Myoporum boninense subsp australe*, and *Acacia sophorae* amongst others. Where more nutrients and shelter are available *Angophora costata* (often Mallee from) can occur as a small tree.

Fleshy ground covers such as *Carpobrotus glaucescens* and *Scaevola calenulace* are widespread and often occur with *Monotocca elliptica* and *Lomandra longifolia*.

Coastal Sand Scrub occurs along the coast from Port Stephens to Gosford. It has been heavily cleared and modified by urban development and sandmining. In some instances e.g. Munmorah SRA, some species of this assemblage have been used in regeneration.

This community generally merges with Map Unit 33 and 34 where shelter and soil podzolisation is increased on the leeward side of the dunes (Myerscough & Carolin, 1986). Coastal Sand Scrub is a feature of most coastal environments along NSW. A similar assemblage described as Beach Dune Thicket is present in the Myall Lakes Area (ibid).

MU 50 Coastal Sand Scrub

Stratum	Species	% in community	Common name
Tallest	*Angophora costata*	9	
Mid	*Leptospermum laevigatum*	90	
	Banksia integrifolia subsp integrifolia	36	
	Myoporum boninense subsp australe	9	
	Acacia sophorae	27	
	Banksia serrata	27	
	Cupaniopsis anacardioides	36	
	Banksia oblongifolia	9	
	Banksia aemula	9	
Lowest (<1m)	*Carpobrotus glaucescens*	72	
	Monotoca elliptica	72	
	Lomandra longifolia	54	
	Correa reflexa var reflexa	36	
	Scaevola calendulacea	18	
	Rhagodia candolleana subsp candolleana	9	

A picture guide to plants in MU 50 Coastal Sand Scrub

Tallest

Angophora costata

Smooth-barked Apple

Mid storey

Leptospermum laevigatum

Coastal Tea-Tree

A picture guide to plants in MU 50 Coastal Sand Scrub Mid Storey

Acacia sophorae Coastal Wattle

Banksia integrifolia Coastal Banksia

Cupaniopsis anacardioides Tuckeroo

Banksia serrata Old Man Banksia

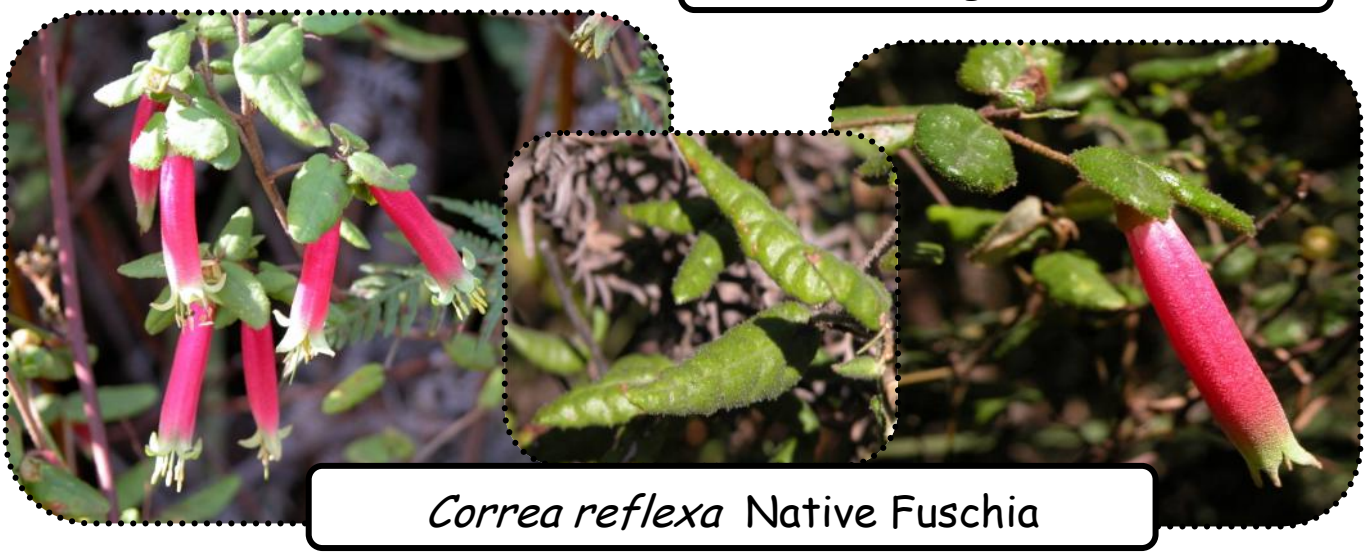
A picture guide to plants in MU 50 Coastal Sand Scrub

Lowest storey <1m

Carpobrotus glaucescens
Pig Face

Monotoca elliptica
Tree Broom-heath

Lomandra longifolia Mat Rush



Correa reflexa Native Fuschia

References

Hunter Councils Inc (2003) Lower Hunter and Central Coast Regional Environmental Strategy http://www.lhccrems.com.au/biodiversity/mu49_54.html#mu50 (Accessed 12.06.07)

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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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