trees IN NEWCASTLE

PLANT COMMUNITY FIELD GUIDE

Mangrove Estuarine Complex—Saltmarsh

HCC REMS

Map Unit 47

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 Estuarine plant communities in the Lower Hunter

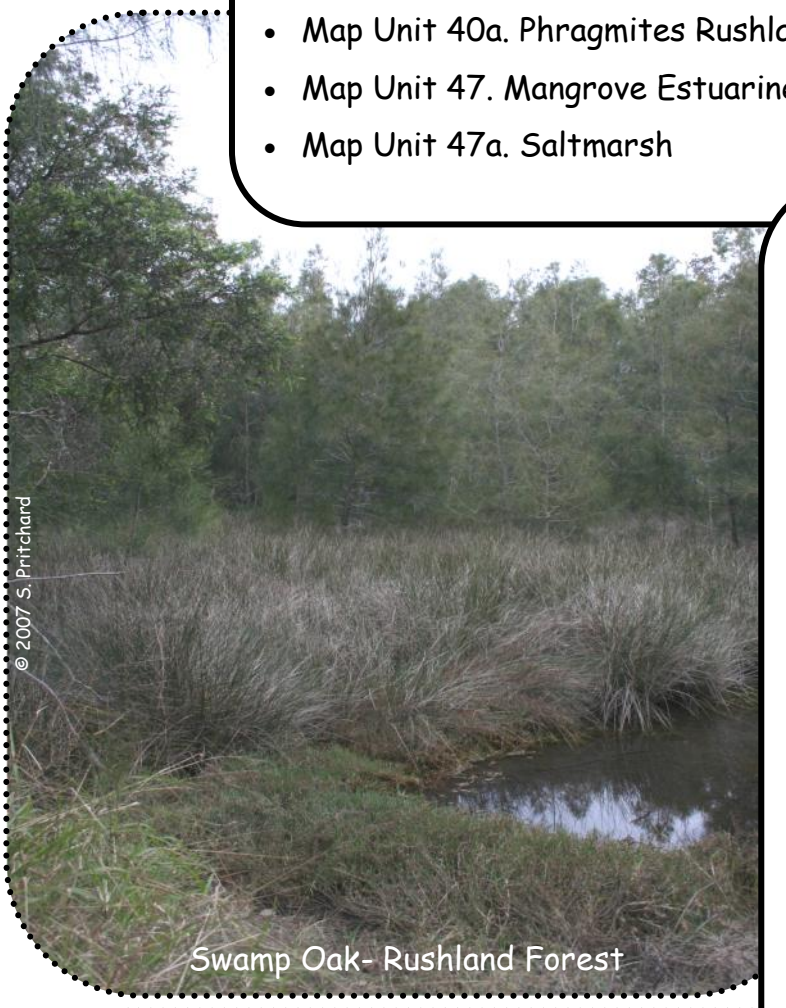
Estuarine vegetation communities are quite common around Lake Macquarie, the Hunter River estuary and Port Stephens. In the past, these vegetation communities have been highly impacted by development, and still suffer pressure through such things as road-widening (e.g. Five Islands' estuarine wetland and the Karuah by-pass), dredging and pollution (e.g. Tilligerry Creek).

Recent protection is afforded by Threatened Species listing for flora and fauna, Endangered Ecological Community listing, SEPP 14 listing and RAMSAR listings.

A long term estuarine project in the Lower Hunter is the Kooragang Wetland Rehabilitation Project, and their website and the Ash Island Mangrove Boardwalk are both worth visiting to gain an insight into the dynamics and complexity of estuarine wetlands. http://www.hcr.cma.nsw.gov.au/kooragang/

Estuarine wetlands are characterized by the following LHCCREMS Vegetation Communities:

- Map Unit 40. Swamp Oak- Rushland Forest
- Map Unit 40a. Phragmites Rushland
- Map Unit 47. Mangrove Estuarine Complex
- Map Unit 47a. Saltmarsh

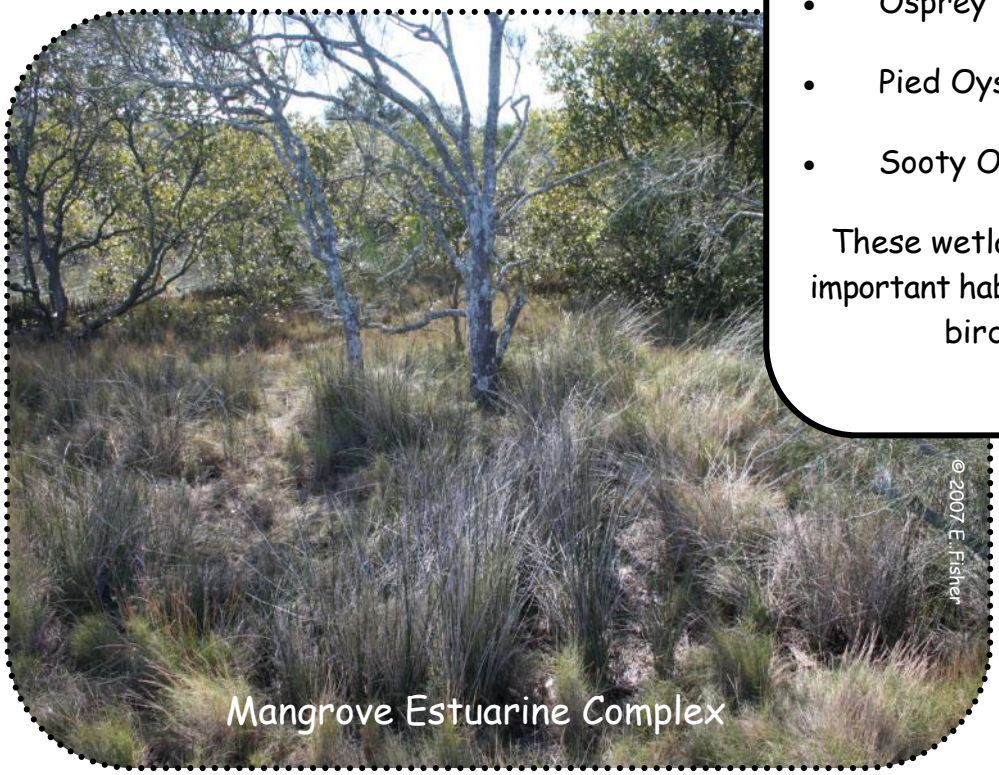


Swamp Oak- Rushland Forest

These wetlands also contain the following Endangered Ecological Communities, and Threatened Species include:

- Endangered Ecological Community- Saltmarsh
- Endangered Ecological Community- Swamp Oak Floodplain Forest
- Australasian Bittern
- Black Bittern
- Osprey
- Pied Oystercatcher
- Sooty Oystercatcher

These wetlands also contain important habitat for migratory bird species.



Mangrove Estuarine Complex

A description of a plant community

http://www.lhccrems.com.au/biodiversity/mu45_48.html#mu47

MU47.Mangrove Estuarine Complex
MU47a Saltmarsh

Canopy Label: *Avicennia marina subsp australasica / Sarcocornia quinqueflora subsp quinqueflora / Aegiceras corniculatum*

Structural Classification (Specht):
Low Open Forest Low Woodland Herbland

Description

Mangrove Estuarine Complex occurs on intertidal mudflats, saltwater estuaries and along tidal river edges. It encompasses a broad range of structural forms from bare mud or saltmarshes on mudflats, to low closed Mangrove forest. Bare mudflats are found in areas of recently deposited or reworked tertiary sediment, and are characterised by an almost total absence of vascular plants. Saltmarsh occurs on mudflats often in conjunction with Mangroves, and tolerates higher saline conditions than Mangroves. This variation is often found in landward depressions behind Mangroves where still shallow water and high evaporation rates result in increased relative salt content.

Saltmarsh is primarily characterised by *Sarcocornia quinqueflora subsp quinqueflora*, however in less saline conditions *Zoysia macrantha*, *Sporobolus virginicus*, *Triglochin striatum*, *Suaeda australis*, *Samolus repens* and *Juncus kraussii subsp australiensis* commonly occur. Where Mangroves occur, they may range structurally from scattered small trees over saltmarsh to low closed forest. There are two often co-occuring species of Mangrove in the study area: *Avicennia marina subsp australasica* and *Aegiceras corniculatum. Aegiceras corniculatum* prefers less saline conditions and therefore may extend further up tidal rivers.

MU 47 Mangrove Estuarine complex

MU 47a Saltmarsh

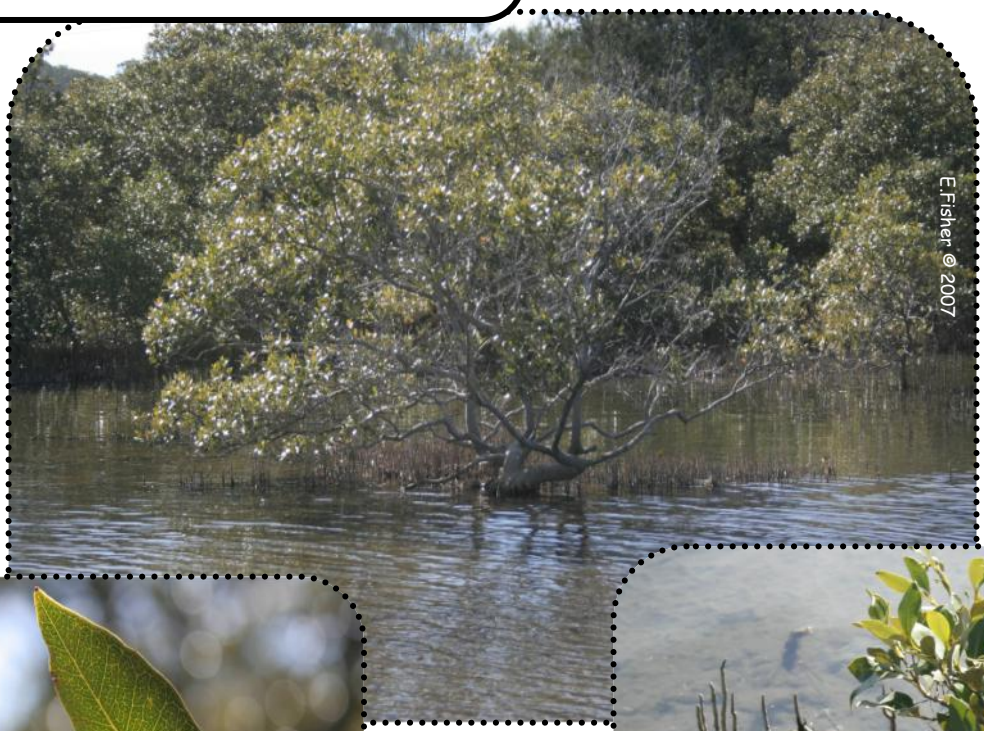
Stratum	Scientific name	% in commu-nity	Common name
Tallest	*Avicennia marina subsp australasica*	83	
	Aegiceras corniculatum	25	
Lowest (<1m)	*Sarcocornia quinqueflora subsp quinqueflora*	66	
	Sporobolus virginicus	66	
	Zoysia macrantha	25	
	Triglochin striatum	25	
	Suaeda australis	25	
	Samolus repens	16	
	Juncus kraussii subsp australiensis	16	

A picture guide to plants in
MU 47 Mangrove Estuarine complex
MU 47a Saltmarsh

Avicennia marina subsp australasica

Grey Mangrove

Tallest trees



A picture guide to plants in
MU 47 Mangrove Estuarine complex
MU 47a Saltmarsh

Lowest storey

Sarcocornia quinqueflora subsp quinqueflora

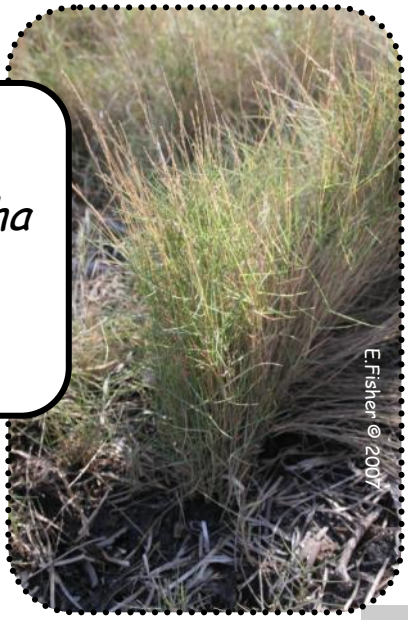
Samphire

Sporobolus virginicus

Sand Couch, Salt-grass

Zoysia macrantha

Coast Couch



A picture guide to plants in
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Lowest <1m

Juncus kraussii
Sea Rush

Samolus repens
Creeping Brookweed

References

Hunter Councils Inc (2003) Lower Hunter and Central Coast Regional Environmental Strategy http://www.lhccrems.com.au/biodiversity/mu45_48.html#mu47 (Accessed 10.05.07)

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

Bush Regeneration photos are from the TIN collection unless otherwise stated.

Cover – Botanical Clip Art -Down Under Collection Deluxe CD–New Horizons Educational Software .www.nh.com.au

Page 3–Five Islands and Kooragang Wetlands- Google Earth (accessed 31/7/07)

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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