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Fact Sheet

Native Wetland Plants

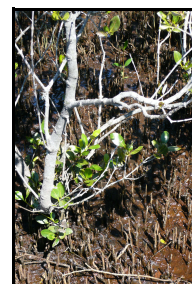
Wetland plants range greatly in size and shape but they all require soils that are saturated for some period of time to grow and reproduce. Native wetland plant communities on the Central Coast and Lake Macquarie are grouped according to the type of wetland they live in.

Estuarine Wetland Plants

Mangroves

Mangroves are trees which live along the muddy shorelines of rivers and estuaries where they are inundated by tides. Mangroves deal with their saline environment by excreting salt from specialised glands in their leaves. All mangroves have specialised root structures (sometimes called pneumatophores) to allow the plant to take in oxygen. Mangrove roots also help to settle silt particles out of the water, protect banks from erosion by binding the muddy soil together and provide an ecosystem for marine animals. Mangrove forests are important nursery areas for fish, prawns, crabs and other marine invertebrates.

Grey Mangrove *Avicennia marina* and River Mangrove *Aegiciras corniculatum* are the two types of mangroves found in wetland areas in Gosford, Lake Macquarie and Wyong.



Grey Mangrove showing pneumatophores

Reeds

Reeds are tall stiff grasses with hollow stems which are rooted deep into the wet ground and emerge out of the salty or brackish water. The main species in NSW wetlands is the Common Reed *Phragmites australis* which can grow in water over 1m deep and is often used as a nesting site by small birds. Reeds are important stabilisers for wetland banks as without these deep rooted plants, much of the mud and soil along the edges of wetlands would be eroded away during times of high rainfall. They also trap polluted sediment flowing into wetlands and help remove excess nutrients.



Common Reed

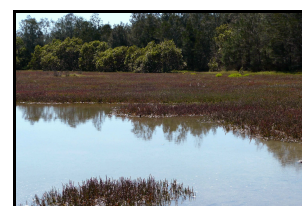
Rushes

Rushes are aquatic flowering plants, with long cylindrical stems, that belong to the Juncaceae family. The most common local species being Sea Rush *Juncus kraussii*. They are emergent plants which play an important role in filtering the polluted runoff which flows into our waterways and offer sources of food for aquatic and terrestrial animals. They also act as shelter for water birds, fish, insects and crabs.

Saltmarshes

Saltmarsh areas contain communities of plants which grow in marine tidal zones. They often occur behind mangrove forests. Plants commonly found include Samphire Grass *Sarcocornia quinqueflora*, Streaked Arrowgrass *Triglochin striatum*, Salt Couch *Sporobolus virginicus*, Seablite *Suaeda australis* and Creeping Brookweed *Samolus repens*. The well known tree Swamp Oak *Casuarina glauca* often grows along the landward side of saltmarshes.

Saltmarshes act as a buffer and filtration system for sediments and nutrients as well as providing important habitat for some juvenile commercial fish species.



Saltmarsh at Davistown

Saltmarshes are listed as Endangered Ecological Communities in NSW as they are in danger of becoming extinct unless immediate action is taken to protect them.

Melaleucas

Melaleucas are water-loving trees which belong to the Myrtaceae family, the same family as the eucalypts. They are commonly called Paperbarks due to their distinctive paper-like layers of bark. The most common of the Melaleuca species in the Central Coast Region is known as the Broad-leaved Paperbark *Melaleuca quinquenervia*, a significant winter flowering plant which provides shelter and breeding sites for waterbirds, amphibians and insects, and nectar for endangered species such as the Squirrel Glider. *Melaleuca biconvexa* is another important wetland plant species and it is currently under threat from land clearing, filling and excavation. Other important Melaleuca species include the salt water tolerant species *Melaleuca stypheloides*, Swamp Paperbark *M. ericifolia*, and *M. nodosa*, and the predominantly freshwater species *M. linariifolia*.

Casuarinas



Casuarinas are trees which belong to the She-oak family, Casuarinaceae. They are often referred to as 'native pines' as their foliage resembles pine needles but unlike pines, casuarinas are true flowering plants. Of most importance in wetlands within the Central Coast Region is the large Swamp Oak *Casuarina glauca* which grows in brackish conditions along coastal streams and lakes. Casuarinas occur as male and female trees. In winter, female trees produce small tuft-like red flowers and male trees produce small rusty-coloured flowers at the ends of their branches. Swamp Oak nuts are an important food source for Black Cockatoos.

Palms

Palms belong to the family Arecaceae. One species found extensively in wetlands along the NSW coast is the Australian Cabbage Tree Palm *Livistonia australis*. The Cabbage Tree Palm is a tall attractive tree, sometimes called a Fan Palm, which grows in sandy waterlogged soils and is susceptible to fire. It is an important summer flowering food source for the Grey-headed Flying Fox and the Topknot Pigeon.



Riparian Wetland Plants

Coastal Freshwater Lakes/Lagoons

Freshwater Swamps are permanently or semi-permanently covered with water and are dominated by plants such as reeds, sedges and grasses. Common Reed *Phragmites australis*, Jointed Twig-rush *Baumea articulata* and Cumbungi *Typha orientalis* are three of the four major types of reeds on the Central Coast and in Lake Macquarie which occur in freshwater swamps. They are vigorous growers that usually dominate shallow areas. Common Reed is often used as a nesting site by many small birds and can grow in water over 1m deep. Cumbungi provides excellent shelter for aquatic invertebrates, reptiles, amphibians and waterbirds.



Jointed Twig-rush

Sedges & Reeds

Sedgeland are communities of plants dominated by sedges and are found in freshwater wetlands. Sedges look like grasses but have hard solid triangular or round stems. Sedgeland are dominated by plants of the Cyperaceae family and include species such as Tall Rush *Carex appressa*, Shore Club-rush *Schoenoplectus litoralis* Lake Club-rush *Schoenoplectus validus* and Bare Twigrush *Baumea Juncea*.

In contrast reeds have round hollow stems and belong to the Poaceae family. They usually occur in areas which are inundated for extended periods of time.

Upland Swamps



Swamp Banksia

Upland wetlands, also known as hanging swamps, occur in elevated regions where soils are periodically waterlogged with fresh water and have low oxygen. The plants living in these areas are generally dense, prickly shrubs and include Swamp Banksia *Banksia robur*, Needle Hakea *Hakea teretifolia*, Crimson Bottlebrush *Callistemon citrinus* and Prickly Teatree *Leptospermum juniperinum*. They also include the pretty Christmas Bells *Blandfordia grandiflora*, Red-fruited Sawsedge and Restioides such as *Empodisma minus*, *Leptocarpus tenax* and *Lepyrodia scariosa*. Hanging swamp plants are important nectar food sources for birds, bats and insects.

Water Plants

Water plants include those that are completely submerged below the water and those that float on the water surface, and occur in many wetland habitats.

Native free floating wetland plants include the Duckweeds *Azolla spp.*, *Spirodela spp.*, *Wolffia spp.* and Common Duckweed *Lemna dispersa*. These plants are important food sources for waterbirds and provide food and shelter for small molluscs, crustaceans and insect larvae.



Duckweed

Water plants which have their foliage entirely below the water surface include Curly Pondweed *Potamogeton crispus*, and Ribbonweed *Vallisneria gigantea*. Invertebrates and diving ducks eat these plants which are also a food source and cover for crustaceans and molluscs.

Some water plants have their roots attached but their leaves float on the surface of the water. Included in this group are Water Primrose *Ludwigia peploides*, Nardoo *Marsilea mutica*, Native Waterlily *Nymphae violacea* and Floating Pondweed *Potamogeton tricarinatus*. These plants are food sources for aquatic molluscs, especially crustaceans, and their seeds are the major food source for waterfowl.

Sources: Dept. of the Environment, Water, Heritage and the Arts; NSW Dept. of Environment & Climate Change; NSW Dept. of Natural Resources ; <http://bugs.bio.usyd.edu.au/Mangroves/mangrove.html>