

Plants are an important part of the Hunter Wetlands Centre, why not spend a little time getting to know at least a few in a bit more detail.

1. Plants in the Car Park

The largest tree, growing along the fence is a Spotted Gum *Corymbia maculata*; the slightly smaller rough barked tree is an Ironbark *Eucalyptus paniculata*. Both species occur naturally on the higher ground that isn't likely to be submerged by water. A number of bird species nest in the hollows of the spotted gum.



A diversity of native trees and shrubs have been donated and planted by the Society for Growing Australian Plants (Newcastle Branch). Many of these species are not indigenous to the site (although they are still native to Australia) but have been planted around the building as feature plants that look colourful and attract birds.

2. BHP Pond



Two of the more abundant plants are:
Eel Grass - *Vallisneria gigantea*

This aquatic species is growing in dense underwater forests. This plant grows in a wide variety of habitats and actually thrives in shallow water up to 4 metres deep. It is capable of very rapid growth, and may cause problems to farmers and irrigators. Parts of the plant appear to be favoured as food by Black Swans.

Cumbungi - *Typha orientalis*

This species, also called Cat Tail or Bullrush grows in fairly dense beds around the edges of some of our swamps. It also grows in a couple of spots along the edge of the BHP Pond, near the garden seat. It can grow to 4 metres high and develops a familiar brown furry flower spike which can produce up to 200,000 seeds. It provides valuable food and shelter for many species of animals.



3. Water Ribbon Swamp

This area is dominated by:

Water Ribbons - *Triglochin procerum*

The leaves of this plant grow to between 0.5 & 2 meters long and may be semi erect or float upon the surface of the water. Flowers are



produced on a fairly dense packed spike which grows to 300 mm long. Most of the growth and flowering takes place in spring and summer, with fruiting occurring in late summer to autumn. This plant is used to a large extent by nesting swans.

Duckweed - *Lemnaceae*

These are very small floating plants that form a green mat and cover the surface of the water. When this happens it is usually an indication of eutropic (high nutrient) conditions. Some species of Duckweed are an important source of food for humans in certain parts of the world. Dried plants of one species of Duckweed contain 20% protein and 40% carbohydrates, and are a nutritious food.

4. Melaleuca Swamp

Broad-leaved Paperbark - *Melaleuca quinquinervia*



This tree, which grows in the Egret Rookery can attain a height of 15 metres. The trunk consists of layers of papery sheets, hence the name paperbark. The Broad-leaved Paperbark flowers in summer and the seeds are then released the following spring or summer, or after a fire. Several species of bats assist in pollination.

One of the management problems the HWC faces is that the regeneration rate of these paperbarks in the Egret Rookery is rather low, so that the species is not adequately replacing itself. Plantings of juvenile trees have been carried out to help overcome this problem.

If you would like to know more about wetland plants a handy book to consult or buy is:

Waterplants in Australia - A Field Guide

Expanded 4th Edition, by G.R. Sainty & S.W. L. Jacobs

Available from the Nokomis at: www.nokomis.com.au

HUNTER WETLANDS CENTRE

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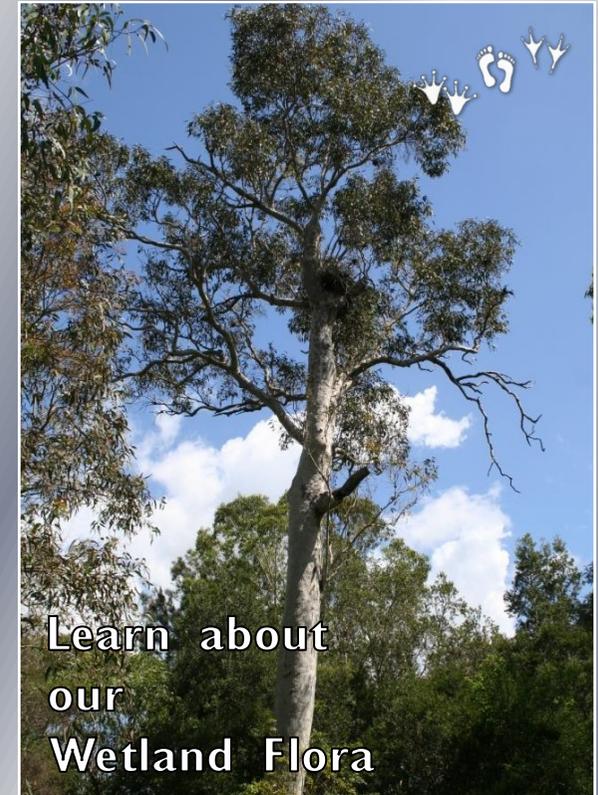


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NATIVE PLANTS AT THE HUNTER WETLANDS CENTRE



Learn about
our
Wetland Flora



A Haven for Wildlife and People

NATIVE PLANTS AT THE HUNTER WETLANDS CENTRE

The Hunter Wetlands Centre hosts a high diversity of both endemic (original) and rehabilitated native plant communities. Over 150 native and exotic floral species have been recorded within the HWC.

These species occur within the 22 vegetation communities that occur on the 45 ha site. In addition to the remnant vegetation present on site, there has been a committed landscaping effort surrounding the Visitor Centre.

Prior to 1988, Greening Australia (Hunter Valley) planted 2,290 trees. Since then, under the direction of the Australian Plants Society, over 55,000 trees have been propagated, planted and documented. Planting is guided by a Site Management Plan 2002 - 2009 which divides the site into four zones:

- Visitor Centre Zone Plants from throughout Australia
- Constructed Wetland Plants from throughout Lower Hunter Region
- Natural Wetlands Plants indigenous to the site
- A reconstructed rainforest zone for educational use

The success rate has been excellent. The plantings have significantly changed the landscape, enhancing biodiversity, hydrology and natural processes on the site.

The mosaic of plant communities at Shortland Wetlands has significant value for biodiversity. The Melaleuca Swamp provides nesting and roosting habitat for Egrets, Herons and Ibis. Reedy margins provide breeding areas for native waterfowl. Vegetation in shallow pond margins provides foraging sites for shorebirds.

Vegetation plays a vital role in hydrological processes. Wetland plants stabilise shorelines, reducing soil erosion. They filter and trap sediment from stormwater inflows, reducing turbidity and sedimentation in the receiving waters of Ironbark Creek, Hexham Swamp and the Hunter Estuary.

The rehabilitation of wetland and terrestrial plant communities serves as a demonstration site for community involvement in vegetation management. Bush regeneration activities on the site provide training opportunities for volunteers including TAFE students, Green Reserves and Australian Conservation Volunteers.

Plants on the site have education values, providing opportunities for a range of interpretive themes including backyard biodiversity, stormwater improvement and wildlife habitat.

HWC hosts the Australian Plant Society's (Newcastle Branch) nursery which is open to the public every Thursday between 9am and 12noon.

Revegetation at the HWC

The original composition and extent of the vegetation of HWC is difficult to determine due largely to the lack of information on the site and partly due to the amount of reclamation and alteration that had taken place.

The dominant vegetation was Swamp Oak *Casuarina glauca* forest and Common Reed *Phragmites australis*, with the Reeds becoming more dominant in the wetter 'swamp' communities to the west.

These communities were almost totally cleared. The swamp communities on the eastern edge were also cleared and reclaimed, although the extent of the filling is unknown.



There were significant changes in the upland vegetation with most of the trees being removed and the natural understorey being replaced by pasture species in most areas. Remnant native species suggest that the original upland vegetation comprised an open forest dominated by Spotted Gum *Corymbia maculata* and Grey Ironbark *Eucalyptus paniculata*, with an understorey of various sclerophyllus shrubs.

In order to obtain baseline data of the original vegetation for future planting purposes, a flora inventory of the whole HWC site was undertaken. The entire site was mapped and divided into zones.

Native plant species that were not endemic to the Hunter region were planted around the Visitors' Centre building, while local native species representative of the existing plant community were planted around the human-altered ponds and other areas including other buildings.

Members of the Australian Plant Society and the HWC volunteers (Wetlands Centre Wonder Weeders) and supporters have undertaken most of the planting. The Jesmond Lions Club, Newcastle North and Newcastle Rotary Clubs, Green Corps, Green Reserve and local Scout groups have also provided assistance. There are three registered Landcare groups on the site including 'The Wetland Wonder Weeders, Thursday Mob' and the 'Butcherbird Gully Group'.

A grant from the Steel Industries Assistance Program facilitated the planting of vegetation from the Visitors Centre to Ironbark Creek. The planting of species such as *Casuarina glauca*, *Melaleuca stypheloides*, *M. quinquenervia*, *M.*

nodosa, *M. linearifolia*, *Crinum pedunculatum*, *Ficus coronata*, *Elaeocarpus obovatus*, *Callistemon salignus* stabilised the clay banks of the canoe trail and provide a more aesthetically pleasing buffer of vegetation.

In other areas, *Eucalyptus tereticornis* and *E. robusta* were extensively planted as means of attracting Koalas to the site. Supplementing these Eucalypts was the planting of 3,000 trees to form a wildlife corridor from the Melaleuca Swamp through to Ironbark Creek. Plants from genera such as *Eucalyptus spp.*, *Acacia spp.*, *Leptospermum spp.*, *Ficus spp.*, *Syncarpia spp.*, *Alphitonia spp.*, have all been established and have shown substantial growth in these areas.

Bush Regeneration

An enormous amount of work has been undertaken over the 15 years at the HWC. Main work (majority by the volunteers Thursday mob) has involved removal of Pampas Grass, Lantana, Cestrum, Honeysuckle, Blackberry, Moth Vine, Madeira Vine, Ochna and Castor Oil. There are an inordinate number of other exotic grasses and herbs. You can join a Landcare team or the site maintenance team at the HWC.

Plants were obtained early on by donation and purchased with Australian Plant Society funds. Now plants are propagated on site for use at the HWC and these plants are on sale to the general public.



Rainforest at the HWC

Prior to the opening of the HWC in 1985, a remnant rainforest that was in poor condition, existed on the western edge of the site. It had once been part of a much larger rainforest community that grew on the outer edges of Hexham Swamp.

The rainforest suffered from clearing for agriculture and urban development and invasion by weed species such as *Lantana camara*.

Recently the core of the remnant has been supplemented by the planting of native rainforest species around the edges increasing the size of the remnant to approximately 1ha.

Native rainforest species from northern NSW and QLD were planted as a means of increasing the knowledge of rainforest species within the region. The rainforest supports 71 species from 42 families of planted natives, planted exotics, remnant/native and weeds.

The rainforest is a legacy of the hard work and effort by the team of volunteers. Come and discover the diversity of rainforest trees, shrubs and herbs on the rainforest walk.