Waterplant Guide

A guide to help ranger groups with the 'Waterplants' section of the I-Tracker Cape York Rapid Wetland Assessment

National Environmental Research Program

NORTHERN AUSTRALIA HUB

NAILSMA

NORTH AUSTRALIAN INDIGENOUS LAND AND SEA MANAGEMENT ALLIANCE

South Cape York Catchments

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Introduction

The I-Tracker Cape York Rapid Wetland Assessment was designed to assist Indigenous land and sea managers to monitor the ecological condition of freshwater habitats on their country by undertaking regular wetland assessments.

The rapid assessment method is based largely on an existing method, the Cape York Freshwater Wetland Assessment developed by the Cape York Marine Advisory Group Environmental Inc. (CYMAG) in 2009. The CYMAG method is an in-depth process that provides detailed data on wetland condition. The I-Tracker rapid assessment provides a method for groups to independently carry out a robust, scientific wetland assessment within a few hours using digital data collection tools and an accompanying scoring system modelled on the CYMAG method.

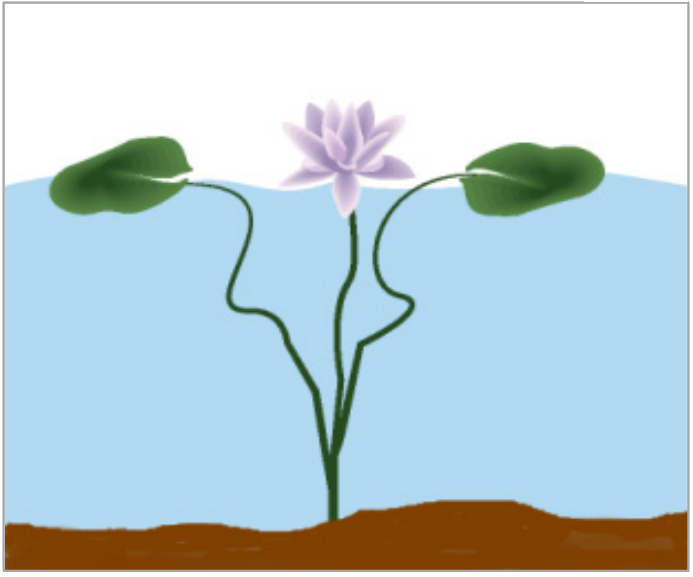
This booklet will help you complete the Waterplants section of the I-Tracker Cape York Rapid Wetland Assessment. The assessment asks you to count the different types of waterplants (also known as macrophytes) at the wetland you are assessing. You don't have to know all the names of all the species, just recognise the different plants. The waterplants are divided into four different groups, based on how they grow. These groupings also give you an idea of the habitat they are creating underwater.

The 4 waterplant groups

Attached, sits on surface

Most of the plant floats on the surface of the water, roots attached to soil.

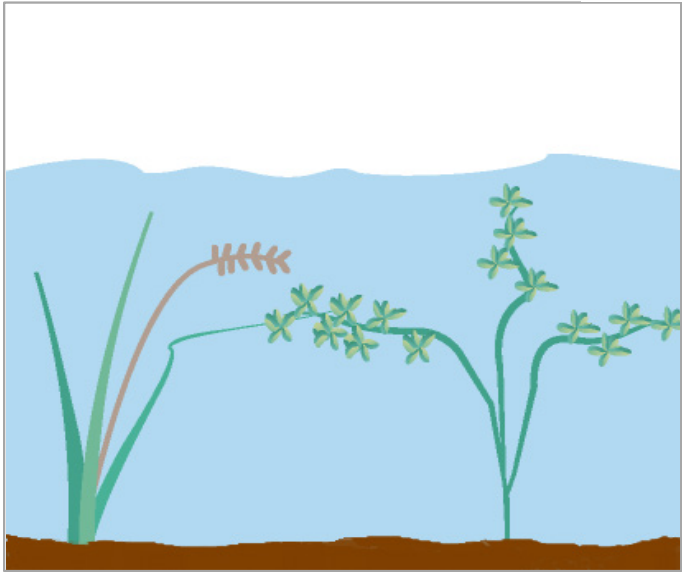
A



Submerged

Most/all of the plant is below the surface of the water, roots attached to soil, i.e. Blyxa

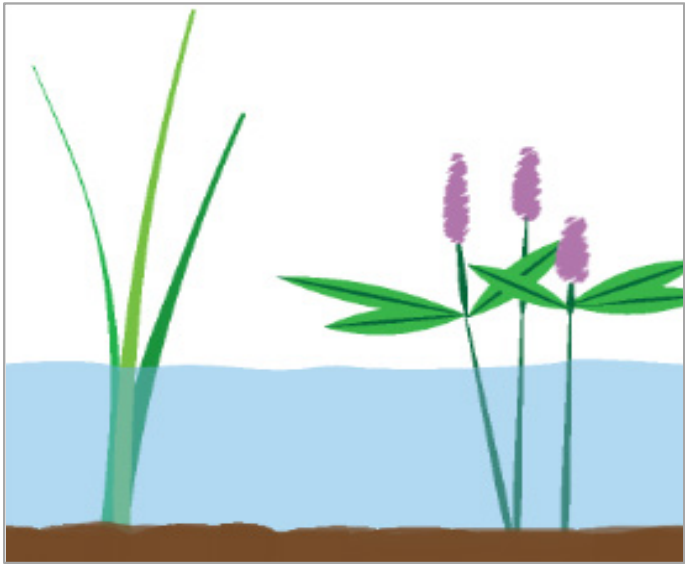
S



Emergent

E

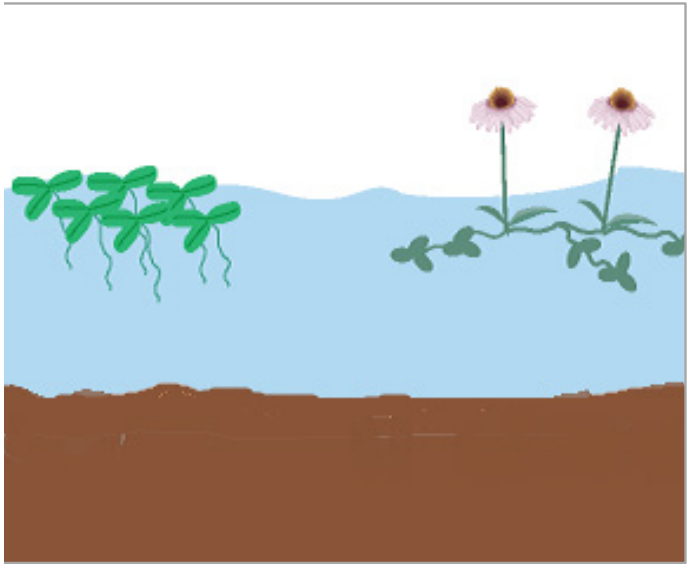
Most of the plant is held above the surface, roots attached to soil.



Floating free

F

No roots attached to bottom, might sit on surface, or float just below.



Attached, sits on surface

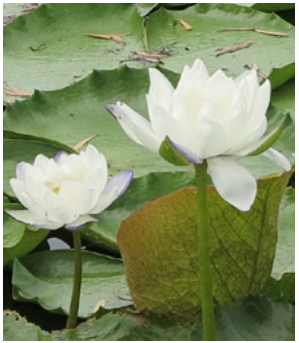
A

Nymphoides - Water snowflakes & Marshworts

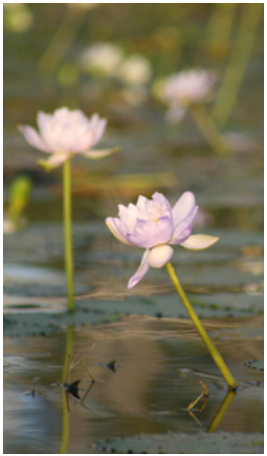
Resemble miniature lilies. There are a number of *Nymphoides* species in Cape York. *Nymphoides indica* has small white 'snowflake' like flowers, other species have yellow flowers. Roots are submerged and large green leaves float on water surface. Some can grow around the wetland margins after the water recedes.

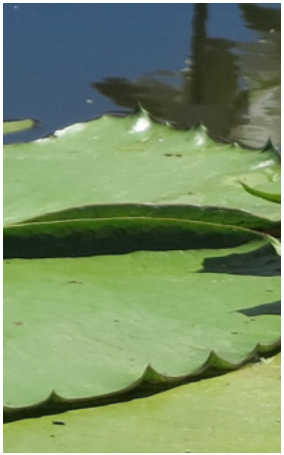
Attached, sits on surface

Nymphaea - Water Lily



Flowering aquatic plant with attractive (often perfumed) flowers and large green leaves that float on water surface. Anchored to the bottom by thick roots. There are a number of different species of *Nymphaea* across Cape York. They can be tricky to identify but you may be able to pick that there are 2 or 3 different types at 1 wetland. Look at the shape and size of the petals, the shape, size and edge (smooth or spikey) of the leaves. Colour of the flower can vary within a species.



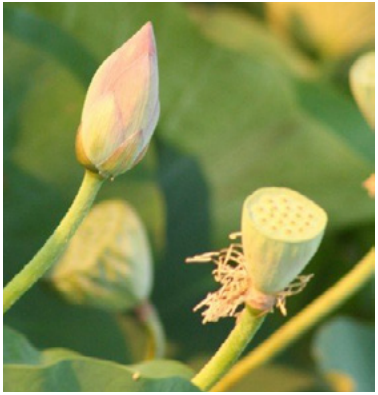


Attached, sits on surface

A

Nelumbo nucifera - Lotus/Red Lily

Flowering aquatic plant, large pink flowers held above the water surface. Thick leathery leaves may sit on surface or be held above as water level falls. Distinctive seed pods containing edible seeds used for cooking.



Attached, sits on surface

Caldesia

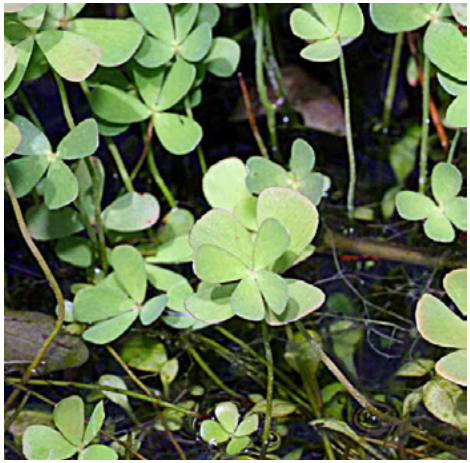
An aquatic herb with broad floating leaves and tall branched flower spikes with many small white flowers.

Attached, sits on surface

A

Marsilia - Nardoo

Looks like a four-leaf clover. There are several species on the Cape. Leaves sit on surface when growing in water. Also grows on the bank, where leaves are held up by short stems.



Submerged

Blyxa

Aquatic macroalgae - generally whole plant is submerged, occasionally foliage emerges above water surface. Thin, long leaves radiate from a central point with an obvious central vein running the length of the leaf. Ranges in colour from bright green to a brown-maroon.

Submerged

Utricularia - Bladderwort

Flowering aquatic plant, bright flowers including yellow and orange. When growing in water it is submerged, with only flowers emerging above the surface on thin stalks.

Sometimes grows around the waters edge, or in damp poor soils.

Emergent

Astonia

An uncommon flowering aquatic herb. It has large, round green leaves. Female plants have flower stalks that bend over to drop seeds into water. Male flower-stalks remain upright. Grows in water up to 1 metre deep.

Emergent

Eleocharis - Bulburu Sedge

A group of native sedges that grow in water up to 2 metres deep. The dark green foliage of some species can grow to height of 2 metres above the water surface. It can form very thick stands. The rhizome/bulb is a favourite food of Magpie Geese and other waterbirds.

Emergent

Philydrum - Frogsmouth

Clumping aquatic plant, grows upright with tuft-like spongy leaves up to 80 cm long. The green, furry flower spikes grow higher than leaves, opening to yellow flowers. Grows in water up to 2 metres deep and also along the margins.

Emergent

Monochoria - Native Water Hyacinth

Aquatic flowering plant, grows in shallow water and along waters edge. Flowers in wet season – large blue/purple flowers. Green leaves and stalks.

E

Emergent

Burmannia

Flowering aquatic herb. Purple to blue flowers. Found on wetland edges in shallow water or on bank. Flowers atop tall stalks. Bright green leaves.

Emergent

Oryza - Wild Rice

An aquatic grass which is a vivid green colour. It grows to 2 metres tall. Found on edges of wetlands in shallow water. The seeds provide a valuable food for waterbirds including ducks and Magpie Geese.

Emergent

Persicaria - Smartweed

An aquatic plant that grows in shallow water and on margins. The long, narrow leaves that grow directly off the stalk are often furry. Many very small white to pale pink flowers grow in dense spikes.

Emergent

Baloskion - Tassel Cordrush

Tall rush with tufts of thin stalks and reddish-brown seed heads. Grows in shallow water at wetland edge, and on banks. Grows to 1.5 metres in clumps.

Emergent

Pseudoraphis

An aquatic grass with sparse, long leaves. It is often very tough and can have sharp edges (cutting grass). Flowers throughout the year.

Emergent

Lindernia

A small, aquatic herb with solitary, attractive flowers in varying colours. Found in still, shallow waters.

Emergent

Hymenachne amplexicaulis - Olive hymenachne (WEED)

An invasive aquatic grass, grows in water to 2 metres deep. Distinctive broad leaves 3-6 cm wide. Cylindrical flower heads are spike-like, 20-40 cm long. Grows in clumps that can choke out areas of wetland.

Floating free

Azolla

A small aquatic fern which floats freely on water surface. Ranges in colour from bright green to browny-red. Fronds (leaves) made up of many small overlapping leaves.

Floating free

Salvinia molesta - Salvinia (WEED)

An aggressive aquatic fern that floats on water surface. Leaves are round, usually in pairs and have hairs on the surface. Can spread across the entire surface of the waterbody excluding sunlight, preventing all other plants from growing.

National Environmental Research Program

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Improving biodiversity conservation in northern Australia

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