September 2011

NRM Plan

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Native plant identification

In the Northern and Yorke Region

Basic plant identification is a vital skill for land managers. It assists in appreciating the vegetation around you and managing that vegetation. Does a plant belong on a site or is it a weed?

This fact sheet introduces some of the common plant groups of the Northern and Yorke Region and how to identify them. All living things have been categorized into what is known as the Linnaean System of classification. Plants are grouped using common attributes until each plant is given a unique Classification.

The steps of Classification are:

- Kingdom
- Division
- Class
- Order
- Family
- Subfamily
- Genus
- Species

This results in a unique Botanical or Scientific name consisting of Genus and Species. Some plants are further split into sub species.

Most plants have at least one common name. These are non scientific and often vary from region to region. Some plants may have the same common name, this often causes confusion so it is important to use the Botanical name.

The plants right would be referred to as *Eucalyptus leucoxylon subspecies leucoxylon* or the South Australian Blue Gum. This plant is known as Yellow Gum in Victoria.

Glossary of common botanical terms

Annual	A plant that completes its life within one year.
Awn	A narrow bristle projecting from a seed.
Fruit	A part of a plant which contains seeds.
Genera	Plural of genus.
Lanceolate	A part of the plant, often a leaf, which is far longer than wide and tapers to a point.
Ovate	A leaf form which is approximately twice as long as its width.
Perennial	A plant that takes at least 2 years to complete its lifecycle.
Pinnate	A leaf arrangement with a series of leaves opposite each other.
Prostrate	Growing flat on the ground.
Rhizome	A stem that runs below the ground, sending up new shoots.
Stolon	A stem that runs above the ground, dropping roots and sending up new shoots
sp.	Abbreviation for species, singular.
spp.	Abbreviation for species, plural.
ssp.	Abbreviation for the word subspecies.
Tussock	A grass form in which leaves grow from a central base, as opposed to rhizomes or stolons.

The Pea family – *Fabaceae*

The Pea family (*Fabaceae*) is one of the most diverse families of Australian native plants with around 55 genera in Australia, 20 of which occur in the Northern and Yorke Region. All members of this family are legumes. The roots host nitrogen-fixing bacteria and all plants produce hard seeds in a seed pod.

The Fabaceae family is divided into three subfamilies. In the Northern and Yorke Region the most common genera are:

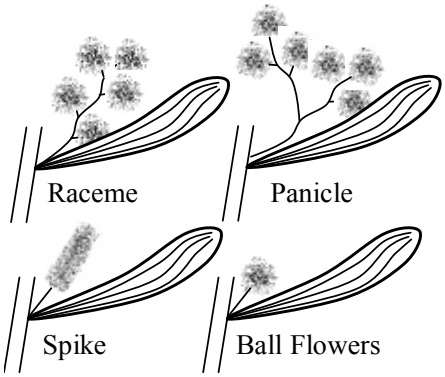
- Mimosoideae – *Acacia*
- Caesalpinioideae – *Senna*
- Faboideae – 18 genera

Mimosoideae – Acacia – 'Wattles'
Mimosoideae contains the genus Acacia, commonly named Wattles.

Flowers: All Acacias have distinctive fluffy yellow flowers. The way these are arranged is important. See photos and diagrams on right.

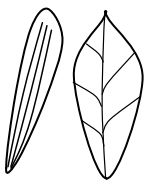
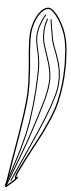
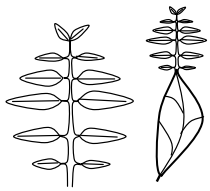
Leaves: The 'leaves' of Acacias are flattened stems and are referred to as phyllodes. Their shape is used in the identification of the species. The pattern of veins is also important. Pod shape and seed attachments are also used as final distinguishing features in some species.

See below for typical phyllode shapes of different Acacia species.



Pea seed pods

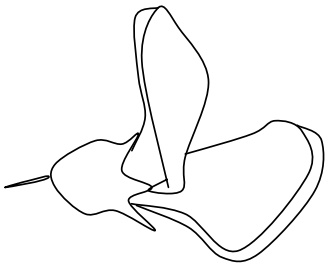
Growth Form: Acacias grow in many forms including trees, shrubs and groundcovers although the majority are shrubs.

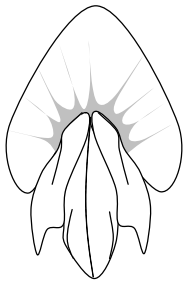
Oval / Round	Linear / Elliptical	Sickle	Needle Like	With Spines	Pinnate
					
acinacea anceps glandulicarpa	argrophylla brachybotrya hakeoides ligulata longifolia notabilis oswaldii retinodes salicina sclerophylla	myrtifolia notabilis pycnantha sclerophylla	calamifolia nyssophylla papyrocarpa rigens rupicola spinescens cyperophylla verticillata continua	paradoxa victoriae	immature Acacias Acacia baileyana* *NSW species

Faboideae - ‘Peas’

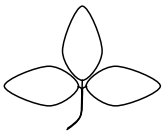
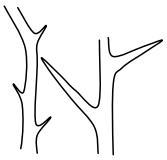
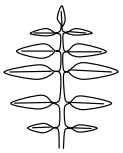
Flowers: Faboideae contains 18 genera of plants native to the Northern and Yorke Region, including *Aotus, Bossiaea, Cullen, Davesia, Dillwynia, Eutaxia, Glycine, Glycyrrhiza, Goodia, Hardenbergia, Hovea, Indigofera, Kennedia, Lotus, Pultenaea, Swainsona, Templetonia* and *Viminaria*. The family is distinctive due to its recognisable pea flowers which are often strikingly coloured in yellow, red, purple, pink, white or a combination of these. They appear in late winter to spring.

Leaves: Faboideae contains a vast diversity of leaf types and arrangements or they may have no obvious leaves at all. This can be a good starting point to identify different genera.





Growth Form: Faboideae grow in many forms including shrubs, groundcovers and climbers.

Trifoliate	Needlelike/ with Spines	Linear	Pinnate	Small, Linear	Acuminate	Cuneate
						
Cullen Kennedia Lotus Glycine Goodia	Davesia Pultenaea Templetonia Viminaria	Davesia	Swainsona Glycyrrhiza Indigofera	Eutaxia Dillwynia	Hardenbergia	Pultenaea Templetonia

Caesalpinioideae – Senna ‘Cassia’ or ‘Senna’

The most common Senna species in the Northern and Yorke Region is Senna artemisiodes. But it has five subspecies (artemisioides, coriacea, filifolia, petiolaris and sturtii).

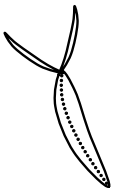
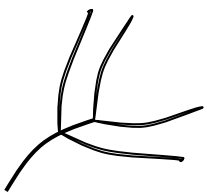
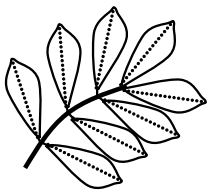
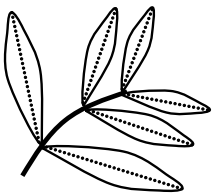
Flowers: The flowers on Sennas have five bright yellow petals in late winter to spring. These can appear fully open or partially closed into a cup shape.

Leaves: The five subspecies of Senna artemisioides can be distinguished by the shape of the leaves (see below).

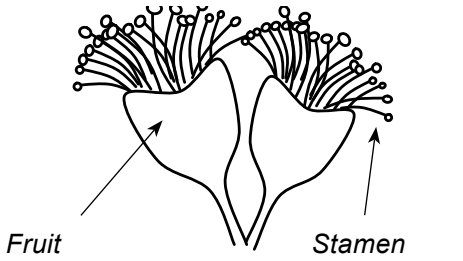
Seeds: Senna seed pods are papery, not hard.

Flowers

Seeds

artemisiodes	petiolaris	filifolia	coriacea	sturtii
				

The Myrtle family – *Myrtaceae*



Eucalyptus – 'Gum Trees'

There are over 25 species of Eucalypts naturally occurring in the Northern and Yorke Region. They vary enormously in form and appearance including large trees to small, multi-stemmed mallees.

Eucalypts can be hard to differentiate. Distinctive features include:

- Tree form: Single trunk (1) vs. mallee (2)
- Flower cap: Long, narrow, pointed, rounded, time of year, etc. (3)
- Leaves: ovate, linear, rounded, glossy, etc. (4)
- Fruit: wineglass shaped, ridged, number, etc. (5)
- Bark: rough, smooth, stringy, split, flaking, etc. (6)

Some species may require all of these features for identification.

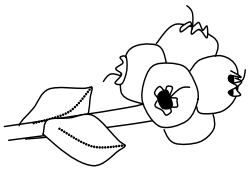



Kunzea – 'Muntries'

Kunzea pomifera is the only species within this genus to naturally occur in the Northern and Yorke Region. It can usually be found in sandy soils, and can be identified by it's prostrate habit. Flowers develop into fleshy green to red fruit.

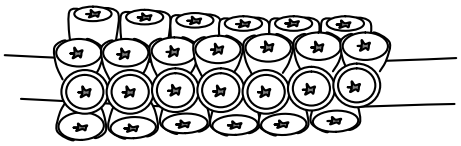
Leaves: The five subspecies of *Senna artemisioides* can be distinguished by the shape of the leaves.

Seeds: Senna seed pods are papery, not hard.



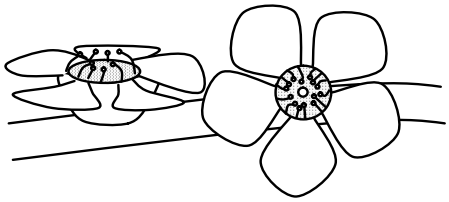
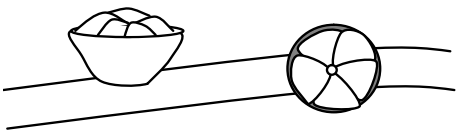
Melaleuca and Callistemon – 'Tea Trees and Bottle Brushes'

In the Northern and Yorke Region there are eight species of *Melaleuca* and three species of *Callistemon*. *Melaleuca* and *Callistemon* flowers usually resemble a bottlebrush, but can be just a small cluster at the end of a branch. The flowers of *Callistemon rugulosus* and *C. teretifolius* are red whereas the flowers of *C. sieberi* are white. *Melaleuca flowers* are white, cream or purple. Their fruit appears as small rounded pods usually in tight clusters attached to the stem.




Leptospermum, Baeckia and Thryptomene

Leptospermum, *Baeckia* and *Thryptomene* can be identified by their distinctive five petalled flowers above a woody fruit.

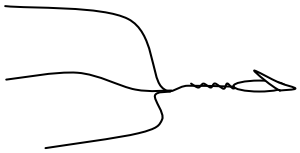



The Grass family – *Poaceae*

Grasses are an incredibly diverse family with no less than 38 genera naturally occurring in the Northern and Yorke Region. Of these the most common are *Aristida, Austrodanthonia, Austrostipa, Chloris, Distichylis, Elymus, Enneapogon, Enteropogon, Spinifex, Themeda* and *Triodia*. Usually identification to the genus level is acceptable as grass species within the same genus can be very difficult to tell apart.

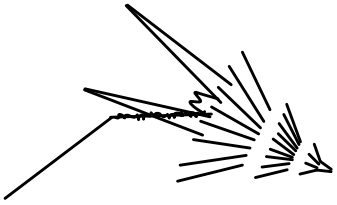
Aristida – Brushwire Grasses

Aristida grows in a low tussock form. It can be readily identified by its fluffy groups of seeds at ground level. The fluffy appearance is created by the three awns on each seed.



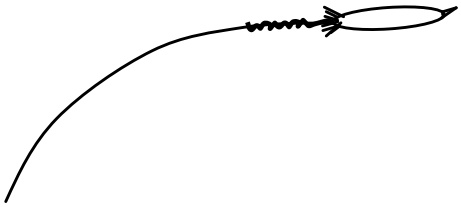
Austrodanthonia – Wallaby Grasses

There are 11 species of *Austrodanthonia* in the Northern and Yorke Region, all of which are upright tussocks. This genus can be identified by its fluffy white seed heads which form above the tussock in late spring/summer. When viewed under magnification they are said to resemble a ballerina in a tutu due to the hairs covering the seed. The appearance of these hairs can help distinguish between the species.



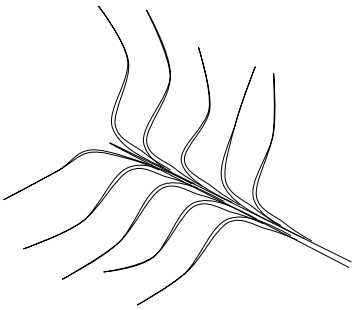
Austrostipa – Spear Grasses

There are 29 species of *Austrostipa* in the Northern and Yorke Region, all of which are upright tussocks. *Austrostipa* form feathery seed heads above the tussock in spring which matures into wiry balls as the seed dries. Each seed has a single long awn projecting from the back.



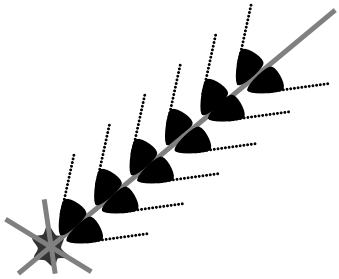
Elymus – Native Wheat-grass

Only two species of Elymus occur in the Northern and Yorke Region. This genera is easily identified by the wheat-like seed heads which project high above the tussock in spring.



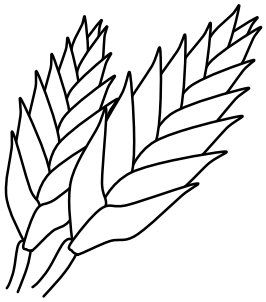
Chloris and Enterapogon - Windmill and Umbrella Grasses

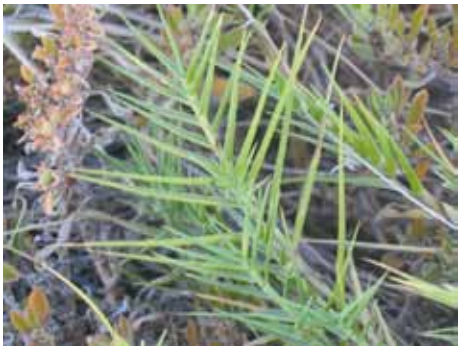
There are two species of Chloris and two species of Enteropogon naturally occurring in the Northern and Yorke region. Both genera appear very similar in low tussocks with distinctive windmill shaped seed heads and rows of seeds projecting from a central point.



Distichlis – Emu Grass

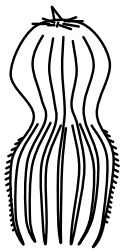
Only one species of Distichlis occurs in the Northern and Yorke Region, Distichlis distichophylla. This species spreads by rhizomes and usually appears in saline areas, particularly swamps. This species closely resembles the weed species Couch Grass (Cynodon dactylon) which can be distinguished by a windmill shaped seed head.





Enneapogon – Bottle-washers

Only two species of Enneapogon occur in the Northern and Yorke Region. They can be easily identified by the shape of their seed heads which resemble bottle-washers. These 'bottle-washers' turn from black to white as they mature until the many small seeds disperse.

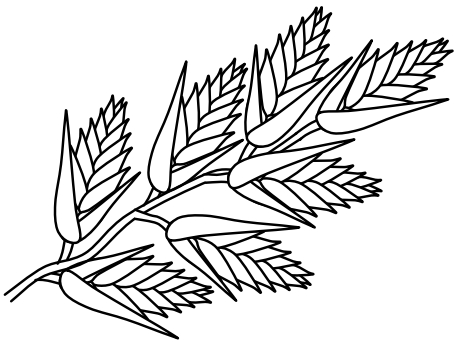


Themeda – Kangaroo Grass

Themeda can be readily identified by its bronze red seed heads which emerge in spring and can grow to 1m tall. These grasses are most active during summer.

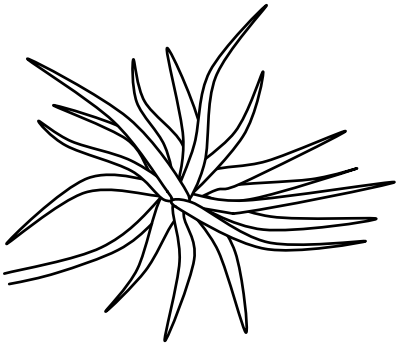
Triodia – Porcupine Grass

There are four species of Triodia native to the Northern and Yorke Region. All species grow from a distinctive prickly tussock, and can gradually spread into a ring as their growth radiates outward.



Spinifex

Spinifex can be readily identified. Only one species naturally occurs in the Northern and Yorke Region, Spinifex hirsutus, and it only grows along coastal sands in a low running habit (with rhizomes and stolons). The leaves are a silvery blue colour and the seeds can be observed rolling around sand dunes after becoming detached.



Government of South Australia
Northern and Yorke Natural
Resources Management Board

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The Lily family – *Liliaceae*

Lomandra – 'Mat-rushes'

Lomandras superficially resemble grasses because of their long green leaves growing in a spherical tussock. On closer inspection their leaves are far more rigid than grasses and they have clumps of small yellow or white flowers at the base of the plant in spring.

L. effusa has two sharp points at the tip of its leaves.

L. densiflora has pale to lime green coloured leaves. It is smaller with narrower leaves than *L. multiflora*.

L. multiflora ssp. dura has rounded leaf tips which often look burnt. It has more flowers than *L. densiflora*.

Dianella revoluta – 'Black-anther Flax-Lily'

Dianella revoluta grows in tussocks or spreads to cover up to 20 square metres. The leaves are a deep green to blue colour and are very fibrous. Purple and yellow flowers occur in spring, developing into purple berries in summer.

Further Information

Mid North Grasslands Working Group (2007). Grasses, Gums and Groundcovers. Custom Press

Berkinshaw, T. (2006). Native Vegetation of the Northern and Yorke Region. Finsbury Green.

Dashorst, G. and Jessop, J. (1990). Plants of the Adelaide Plains and Hills. Kangaroo Press.

www.plantguide.com.au

Other NRM Fact Sheets

Seed Collection
Plant Identification

Help and Assistance

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