



Watershed Landcare

Native Plant ID Basics



Some people can just walk around and identify most plants that they encounter. Do not be deceived. Apart from having fine-tuned observation skills, these people are not endowed with anything magical. It takes years of experience and study to be able to do this.

The first thing that needs to be done is to sharpen your observation skills. Look at the plant closely; a notebook is invaluable to ensure you catch and record everything. Memory is often unreliable. There are, however, a few 'Tips & Tricks' for some species that are quite obvious:

Drooping She-oak (*Allocasuarina verticillata*), usually found on well-drained to dry rocky sites, is a small, often ratty-looking tree with drooping foliage. The cones are, however, a dead giveaway. They are large with sharp valves.

River She-oak (*Casuarina cunninghamiana*), usually found in pure stands near freshwater, is a tallish, somewhat pine-like tree. The cones are tiny and globular, to 10mm long.

Swamp Oak (*Casuarina glauca*) swampy/brackish/saline water to major river valleys, ± coastal distribution therefore not very common in the area. An erect, grey-green tree 6-30m frequently produces root suckers. The cones are small (14mm long) with a distinctly flattened apex. The root suckers and the flattened apex of the cones are the giveaways.

The **Eucalypts** require many features to be identified correctly. Key ID features are in *italics*

Yellow Box (*Eucalyptus melliodora*) Favours better quality loams on lower parts of slopes. To 30m, usually straight trunk and a dense crown of grey-green foliage. This species is highly variable, especially its bark. A key characteristic of Yellow Box is that *the inner surface of the bark is yellow.* The outer bark can vary from gum to thickly furrowed, dark & ironbark. However, the bark is usually yellowish-brown and fibrous, peeling in short ribbons.

White Box (*Eucalyptus albens*) Soils of moderate to high fertility, upper slope from Yellow Box. To 25m, dense spreading crown. The distinctive foliage, fruit and buds make this species easier to spot. *Adult leaves broad lance-shaped 9-15cm x 2.5 to 5cm, thick, grey or blue-green.* Juvenile leaves are oval-shaped to ± rounded, blue-grey, thick with a waxy feel. Bark pale grey with white patches, finely matted & fibrous. *Buds longish, angled with several longitudinal ridges, powdery grey-green, similar to a hand of bananas. Fruits long, cylindrical to urn-shaped*, no pedicel, rim depressed, *valves deeply recessed*.

Blakelys Red Gum (*Eucalyptus blakelyi*) Occurs over a wide altitudinal range. Preferred soils good quality compact loams which do not dry out in summer, often associated with *E. melliodora*. To 20m, large spreading grey-green crown. Bark smooth, *shedding in large flakes or irregular sheets*, new bark deep cream. The older bark is pale grey with darker blotches. Juvenile leaves are broadly oval-shaped, alternate after the first 2 or 3 pairs. Adult leaves are narrow, lance-shaped, *drooping*. However, many trees may carry mainly juvenile foliage due to extensive defoliation by insects. Usually, seven buds per umbel, *cap or operculum conical, about 2 or 3 times as long as the base*. Fruits 4-8mm diameter, rim raised, *valves prominently exserted*.



DAISIES (The Asteraceae family) What looks like a single flower is a head of small florets.

The Burr-daisy group have as their fruits/seeds spherical clusters of small brown burrs.

Yellow Burr-daisy (*Calotis lappulacea*) is a twiggy perennial to 30cm. Basal leaves soon withering, stem leaves linear to oblanceolate. Widespread & common.

Purple Burr-daisy (*Calotis cuneifolia*) perennial to 60cm, woody at the base. Flower heads may be white, blue or purple. This plant derives its name from the shape of the leaves, cuneate, wider at the apex. Also widespread & common.

The Fuzz-weed group has attached to its fruits a 'pappus' of fine bristles, leaves & stems hairy.

Fuzzweed (*Vittadinia cuneata*) Woody annual or perennial 10-40cm, leaves cuneate to oblanceolate, stems & leaves densely hairy. Flowerheads pale blue to mauve/yellow centres.

Narrow-leaf New Holland Daisy (*Vittadinia muellleri*) Erect perennial to 10cm. Leaves are densely clustered, narrow, deeply divided into three lobes. Hairs on leaf margins and mid-ribs only. Flowerheads mauve/yellow centres, solitary at the end of stems.

Woolly New Holland Daisy (*Vittadinia gracilis*) Erect perennial 10-40cm with dense, fine white hairs on the leaves & woody stems. Leaves narrower than above, usually not with lobes. Flowerheads purple/yellow centres.

There are three Cassina (Sifton bush relatives) within 25km of Mudgee.

Sifton Bush (*Cassinia sifton*) Multi-stemmed shrub, young twigs with white hairs. Leaves spicy aromatic, to 15mm x 0.7mm. Mid-green upper surface, underneath densely covered in cottony hairs, margins strongly rolled under. The inflorescence is a significant, loose, elongated spike-like panicle. Young flowerheads are greenish-white, becoming shiny reddish-brown at maturity.

Cassinia (*Cassinia quinquefaria*) erect stemmed sticky shrub 1-3m. Leaves narrow linear, 2-4cm x 1-1.5mm wide, sticky. The inflorescence is a dense ± erect pyramidal panicle, not drooping. Florets creamy white, becoming straw coloured with age.

Cassinia hewsoniae Erect shrub 0.8 to 2m. Young stems green to reddish, sticky, covered in dense short hairs. Leaves terete (rounded in cross-section) sticky when young. The inflorescence is a flat or rounded corymb (sort of like a cauliflower) mild honey scent, borne at the ends of branches.

BLUEBELLS (Wahlenbergia sp.) are mostly tufted perennials.

Tufted Bluebell (*Wahlenbergia communis*) 5-75cm. Leaves alternate, linear or lowest oblanceolate. Plant glabrous/hairless to sparsely hairy. Fl. Blue, tubular, 5 spreading lobes

Tall Bluebell (*Wahlenbergia stricta*) 10-90cmLeaves hairy, opposite, becoming alternate up the stem, margins usually undulate. Flowers as above but more open, sometimes white outside. Often found in partially shaded areas.



Yellowish Bluebell (*Wahlenbergia* luteola) 6-80cm, hairless to sparsely hairy, lower leaves opposite and linear. Flowers blue inside splashed with mustardy yellow/brown outside.

Gum trees (species of Eucalypts, Angophoras and Coymbia) can generally be identified by describing

the bark, leaves, buds and fruit (capsules/gum nuts). These different attributes differ in size, texture, and shape. To accurately identify trees, we first need to understand some of these terms.

Provided in these pages is a basic description of these different attributes.

<u>Bark</u>

The type/texture of bark:

Bark can be **stringy, smooth, ribbon-like, tessellated, spongy** or hard and **iron-like**. Many trees' common names often refer to the type/texture of the bark -Ironbarks, Stringybarks, and Box.

The amount of bark

This refers to the amount of bark on the tree. Some trees have bark that goes all the way to the top of the limbs, whilst others have bark that extends only a little way up the tree. Words like 'full bark' or 'part-bark' will describe the amount of bark. How 'persistent' the bark is sometimes used instead.

The colour of the bark

The colour of bark varies markedly and can differ between species of the same tree. For this reason, it's not always the most reliable indicator. The colour of the bark is described in general terms.

Leaves

The size, shape, colour of the leaves and pattern of the veins are used to describe the leaves of different trees. These attributes can vary based on the tree's age, and things like leaf size will always be represented as a range of values (5-l0cm *1.5-2 cm). For this reason, leaf characteristics help provide an overall picture of typical leaves. Rarely will all the leaves conform to this picture.

Some of the terms are easy to decipher, but some of the terms used for some attributes (like leaf shape) can be very difficult to remember.

Colour

Colour will be described based on the general colour of the leaf and the colour 'pattern' on the leaves. Leaves that are the same colour on the top and the bottom are described as concolourous; leaves with different colours on the top and bottom are called discolourous.







Shape

This bit comes with a warning :) Due to the variability in leaf shape across different species, the terminology used to describe leaf shape is quite extensive. It's helpful to use a glossary when describing leaf shape.

Venation

This describes the pattern of veins within the leaf. These may refer to the arrangement of the veins (parallel or angular) or how close the veins are to one another.

Length and width

These attributes are relatively self-explanatory, only to say, however, that they're probably best approached by averaging the length of several leaves.

Buds

Buds refer to the flowering structures before they open. When we describe buds, it's often the size, shape, and number of buds that is important. To identify buds, we need to learn the names of these parts.

It's also helpful to understand the names of the structure making up the buds - the size, shape, colour of the operculum, peduncle and pedicel are often described.



<u>Fruit</u>

When we refer to the fruit, we refer to the gumnut or capsule. The shape, size and arrangement of the different features are described. These terms are the same as those used to describe the buds above. To identify fruit, we need to learn the names of these parts.



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Example

The Plantnet website provides the following description of White Box. It's pretty confusing to the untrained eye, but we can hopefully add a little clarity by breaking it down.

'Description: Tree to 25 m high; bark persistent on the full trunk, grey with whitish patches, fibrous-flaky ('box'), smooth above, grey, shedding in short ribbons.

Juvenile leaves disjunct, ovate to orbiculate, glaucous.

Adult leaves are disjunct, lanceolate or broad-lanceolate, 9-15 cm long, 2-5.5 cm wide, grey-green to glaucous, dull, discolourous. Conflorescence compound; umbel/asters 7jlowered; peduncle narrowly flattened or angular, 10-18 mm long; pedicels terete, 0-5 mm long. Buds cylindrical or fusiform, glaucous, 10-18 mm long, 4-7 mm diam., scar absent; calyptra conical, as long and wide as hypanthium. All stamens are fertile.

Fruit cylindrical or urceolate, 6-15 mm long, 5-10 mm diam.; disc depressed; valves enclosed.'

Plant part/ ID feature		Description for White Box
Bark	Amount of bark	Bark persistent on full trunk
	Texture of bark	Fibrous-flaky ('box')
	Colour of bark	Grey with whitish patches
Leaves	Shape	Lanceolate or broad-lanceolate
	Colour	Grey-green to glaucous, dull,
		discolourous
	Size	9-15cm long, 2-5.5 cm
	Arrangement	Adult leaves disjunct
Buds	Shape	Peduncle narrowly flattened or
		angular, 10-18mm long; pedicels
		terete, 0-5mm long. Buds cylindrical
		or fusiform
	Number	7-flowered
	Size	10-18mm long, 4-7 mm diam
Fruit	Size	6-15 mm long, 5-10 mm diam
	Shape	Fruit cylindrical or urceolate; disc
		depressed; valves enclosed.

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Where can I find more information?

This is not an exhaustive list, but these resources are pretty valuable. They will with your ID and are an excellent place to start. We've intentionally made the list short, so you're not bombarded with too much information!

General overview

The Australian National Botanic Gardens has a site called Euclid. It has an excellently written description with pictures of the different identification features. The site is

http://www.anbg.gov.au/cpbr/cd-keys/Euclid/sample/html/learn.htm

Glossary Information

As you've seen above, many terms are used in plant identification, and it's virtually impossible to remember them all. Books and websites that have plant information should have their glossary, but WA's FloraBase has a tremendous online glossary

https://florabase.dpaw.wa.gov.au/help/glossary

Eucalypt keys and identification

- The NSW government site PlantNET is the State's online herbarium. <u>https://plantnet.rbgsyd.nsw.gov.au/</u>
- Can either use identification keys or
- Use spatial search to get the list of species found near a location

World Wide Wattle - <u>http://worldwidewattle.com/</u>

- 1. Click on the image gallery
- 2. Click on the letter of the species name
- 3. Find it in the list

Books

- Native trees and shrubs of south-eastern Australia Leon Costermans
- Plants of Western New South Wales GM Cunningham, WE Mulham, PL Milthorpe & JH Leigh.
- A field guide to eucalypts Volume 1: south-eastern Australia, second edition By M.I.H. Brooker and D.A. Kleinig. This is half picture book, half technical plant key. *Very handy and comprehensive book.*

Facebook group - *NSW Native Plant Identification* – is a great resource full of ecologists and other professionals, and enthusiasts. You can post photos with location, and members of the group will help ID the plant (Always remember to post lovely clear photos with as many parts of the plant as possible, i.e. habit, leaves, flowers, bark and fruit)

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