



Gum Trees of Lake Macquarie



Lake Macquarie
Landcare



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City Council

Acknowledgements

This publication was prepared by Kate Meares from Lake Macquarie Landcare in collaboration with a wide range of contributors and reviewers. Special thanks to Graham Prichard, Carl Fulton, Anthony Marchment, Richard McFayden, Suzanne Pritchard, Ann Loughran, Rob Loughran, Craig Whitford and John Adkins.

All photos, scans and drawings by Kate Meares

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About this publication

This guide has been developed to assist Landcarers and other community members to identify gum trees (these include trees of the Eucalyptus, Angophora and Corymbia genera) in the Lake Macquarie Local Government Area (LGA). This edition includes 25 of the more common species of gum tree that naturally occur in Lake Macquarie (indigenous species) and does not include planted species that come from other areas. For further notes on species not included, see page 66.

Descriptions focus on distinguishing characteristics (especially in relation to other species of the region). The descriptions aim to be brief and simple without unexplained jargon so that the guide can be easily used by community members with limited botanical knowledge.

About Gum Trees

The term 'Gum Trees' commonly refers to trees of the Eucalyptus, Angophora and Corymbia genera and describes the gummy sap typical of these trees. There are around 800 species of Gum Trees in Australia and most of these species are found nowhere else in the world. The Sydney to Newcastle region has around 150 species of Gum Trees, making it one of the more diverse and rich regions.

Gum Trees occur in a large range of vegetation communities and are often used as the key species to describe and identify these communities.

As well as their inherent and iconic value in our landscape, they have a large range of important uses, such as:

- Hardwood for timber industry
- Nectar supports honey production
- Root systems provide soil stabilisation and leaf litter provides ground cover for soil (reducing soil erosion)
- Aboriginal Cultural value e.g. Scar Trees/ use for canoes and coolamons
- Carbon sequestration and storage
- Urban cooling and microclimate regulation
- Habitat for wildlife

Gum Trees and habitat

Gum Trees are excellent at providing habitat for wildlife because of their size, longevity and ability to form hollows (which often requires at least 50-100 years). They can provide homes for birds, microbats, reptiles and insects which can often not be found elsewhere.

Other important habitat features include:

- Nesting and roosting sites for birds
- High places with bare branches for birds to perch when watching for prey (e.g. raptors)
- Nectar, pollen, sap and seeds provide a food source for a range of insects, birds and mammals (e.g. Flying-foxes and gliders)
- Wood, bark and leaves provide food for many insects which in turn provide food for birds and other animals
- Leaf litter and other fallen material provide mulch and shelter for insects, reptiles and other animals



Gum Tree classification and features

Gum Tree species are classified under three genera within the Myrtaceae family: Angophora, Corymbia and Eucalyptus. Their defining features vary between the three genera as summarised below:

Feature	Angophora	Corymbia	Eucalyptus
Form	Varies	Varies	Varies
Bark	Rough or Smooth	Rough or Smooth	Rough or Smooth
Fruit	Ribbed	Urn-shaped	Shape varies
Buds/ flowers	No cap (has petals)	Has cap	Has cap
Leaves	Adult leaves opposite	Adult leaves alternate	Adult leaves alternate

As most people notice the tree's bark as its most prominent feature, the key used on the following pages of this guide divides species by their bark type first. Within each bark type, other features are described, with an emphasis on fruit shape (especially helpful when trying to identify Gum Trees).

Key to finding species within this guide

Note this key uses common bark, fruit and leaf features to help you narrow your search to species that share these features (within Lake Macquarie). The key is not intended to be accurate for all Australian Gum Tree species. Fruit ('gum nuts') are needed to accurately identify species. These are often too hard to reach on the tree but can be found below the tree of interest (be careful as fruit from other surrounding gums may also be found on the ground so multiple species may need to be checked to ensure the fruit matches all the other features in the description).

To identify a tree, first decide which bark choice is most accurate (from category 1). Then select which descriptions and pictures match best (from category 2). Go to the relevant page number/s to check the description of features.

1. Bark completely rough



2. Fully rough bark + ribbed fruit + adult leaves opposite
->Angophora Pg. 12-15



2. Fully rough bark + urn-shaped fruit + adult leaves alternate
->Corymbia Pg. 18-19



2. Fully rough bark + loosely grouped hemisphere-shaped fruit + adult leaves alternate
->Eucalyptus subgenus Eucalyptus (White Mahoganies) Pg. 24-27



2. Fully rough bark (stringy) + tightly clustered fruit with little or no stalks + adult leaves alternate
->Eucalyptus subgenus Eucalyptus (Stringybarks) Pg. 28-31



2. Fully rough bark (spongy) + long fruit + adult leaves alternate
->Eucalyptus subgenus Symphyomyrtus (Swamp Mahogany) Pg. 46-47



2. Fully rough bark + hemisphere (cup) shaped fruit with valves projecting above rim + adult leaves alternate
->Eucalyptus subgenus Symphyomyrtus (Red Mahogany) Pg. 50-51



2. Fully rough bark (deep furrows) + small cone-shaped or cup-shaped fruit + adult leaves alternate
->Eucalyptus subgenus Symphyomyrtus (Ironbarks) Pg. 56-61



2. Fully rough bark (almost stringy) + cone-shaped fruit + adult leaves alternate
->Eucalyptus subgenus Nothocalyptus (Tallowwood) Pg. 62-63

1. Bark mostly rough, some smooth bark at top



2. Half rough/ smooth bark + hemisphere-shaped fruit + adult leaves alternate

->Eucalyptus subgenus Eucalyptus (Blackbutt) Pg. 32-33



2. Mostly rough bark (smooth at ends) + egg-shaped fruit+ adult leaves alternate

->Eucalyptus subgenus Eucalyptus (Peppermints) Pg. 34-35



2. Mostly rough bark (very small branches smooth) + long fruit+ adult leaves alternate

->Eucalyptus subgenus Symphyomyrtus (Bangalay) Pg. 48-49

1. Smooth bark (may have small amount of roughness or ribbons)



2. Fully smooth bark + ribbed fruit + adult leaves opposite

->Angophora Pg. 10-11



2. Fully smooth bark + Urn-shaped fruit + adult leaves alternate

->Corymbia Pg. 20-21



2. Fully smooth bark + hemisphere-shaped fruit + adult leaves alternate

->Eucalyptus subgenus Eucalyptus (Scribbly Gums) Pg. 36-39



2. Smooth bark (but grainy patches) + hemisphere shaped fruit with valves projecting above rim + adult leaves alternate

->Eucalyptus subgenus Symphyomyrtus (Grey Gums) Pg. 42-45



2. Mostly smooth bark/ some roughness/ ribbons at base + round fruit with valves projecting above rim + adult leaves alternate

->Eucalyptus subgenus Symphyomyrtus (Red Gums) Pg. 52-55



2. Mostly smooth bark with some rough/ ribbons at base + bell-shaped fruit valves projecting above rim + adult leaves alternate

->Eucalyptus subgenus Symphyomyrtus (Blue Gum) Pg. 40-41



Angophora costata at Ivy Street Landcare Site, Dudley

Characteristics of Angophora

- Bark can be rough or smooth
- Fruit has ridges
- Flower buds have no cap - they just unfold
- Adult leaves are opposite



Species name: *Angophora costata*

Common name: Smooth-barked Apple

Occurrence: Common across Lake Macquarie. Mostly occurs in dry forests with sandy soils, often along with *C. gummifera*.

Special notes: An excellent hollow-bearing species.

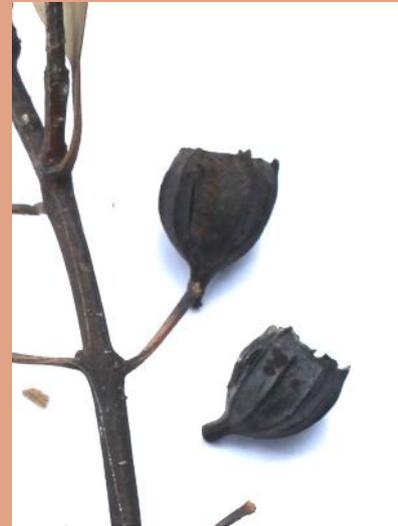
Bark

- Smooth with dimples
- Often pink tones
- Sheds in large flakes in Spring



Fruit (shown actual size)

- Ribbed
- Large fruit 1.2-1.5cm diameter



Flowers / buds

- White Flowers in November to December
- Ribbed buds with points



Leaves

- Opposite, slightly duller underneath, 9–17 cm long, 2–3.5 cm wide



Form

- Medium to large tree to 30m.



Angophora

A. costata at Kenibea Landcare Site showing a tall, straight form (left) and at Green Point Foreshore Reserve (right) showing a more gnarled form

Species name: *Angophora floribunda*

Common name: Rough-barked Apple

Occurrence: Common across Lake Macquarie. Found in a range of vegetation communities including within moist forest, dry forest and swamp forest communities. Mostly found on alluvial soils.

Bark

- Rough bark on all limbs, with short grey fibres



Fruit (shown actual size)

- Fruit 0.7-1cm diameter



Flowers / buds

- White flowers in November to February



Leaves

- Opposite, 2.5-3.5cm wide, 8-12cm long
- Dark green above, paler below



Form

- Medium to tall tree to 30m

Angophora



A. floribunda at Morisset

Species name: *Angophora inopina*

Common name: Charmhaven Apple

Occurrence: Rare - mostly restricted to area around Charmhaven and Morisset. Mostly occurs in dry forests with sandy soils but can also occur in wet heath or sedge woodland.

Special notes: Listed as a Threatened Species (Vulnerable) in NSW. Features can be similar to *A. floribunda* but *A. inopina* is usually less than 8m tall, found on sandy soils and in restricted areas.

Bark

- Rough on all limbs



Fruit (shown actual size)

- Ribbed capsules 0.9-1.4cm wide



Flowers / buds

- White to cream flowers in December (but generally poor and sporadic)



Leaves

- Opposite, 1-2.5cm wide and 4.5-12cm long
- Thick texture, green in colour, paler underneath



Form

- Small tree or shrub to 8m, often multi-stemmed



A. inopina at Awaba

Angophora



Gum Trees at Kenibea Bushland Reserve with *Corymbia maculata* prominent in foreground on the left and *Angophora costata* prominent in foreground on the right

Characteristics of Corymbia

- Bark can be smooth or rough
- Urn-shaped fruit with distinct rim
- Flower buds have a cap that falls off as flowering occurs
- Adult leaves are alternate

Previously, species in this genus were part of the *Eucalyptus* genus, e.g. *Corymbia maculata* used to be called *Eucalyptus maculata*. Most references now consider *Corymbia* to be its own genus rather than a subgenus of *Eucalyptus*.



Corymbia

Species name: *Corymbia gummifera*

Common name: Red Bloodwood

Occurrence: Common across Lake Macquarie. Found in dry forests often on low hills and ridges on sandy soils. Often associated with *A. costata* and *E. racemosa*.

Special notes: Important sap source to feed Squirrel Gliders.

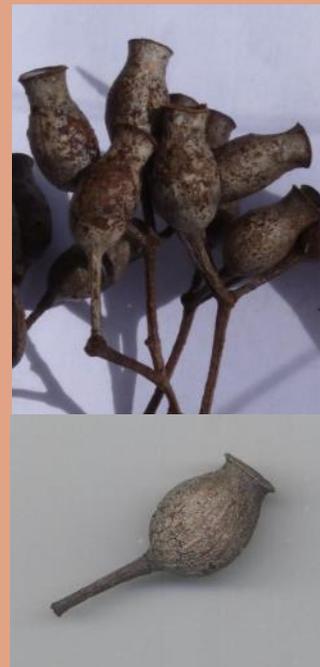
Bark

- Red-brown to grey
- Rough on all limbs
- Distinct tessellation with a 'tiled' appearance



Fruit (shown actual size)

- Large urn shaped, 1-1.7cm wide
- Enclosed valves
- Long stalks



Flowers / buds

- Cream
Flowers in
January to April
- Buds in
clusters of 3-7
- Bud cap has
pointed 'beak'



Leaves

- Thick cuticle
- Glossy green
above and paler
below
- 10-16cm long and
2-5cm wide
- Reticulation (veins)
very dense



Form

- Medium-sized woodland to tall forest tree 10-30m



Corymbia

C. gummifera at Awaba

Species name: *Corymbia maculata*

Common name: Spotted Gum

Occurrence: Common across Lake Macquarie. Often found in dry forests on coastal plains and hills. Can also be found in moist forests. Found on clay or shale-derived soils.

Special notes: Important winter flower source to feed Threatened pollinators such as the Regent Honeyeater, Little Lorikeet, Swift Parrot, Grey-headed Flying-fox, Yellow-bellied Glider and Squirrel Glider. Also excellent at forming hollows.

Bark

- Smooth, shedding to cream in irregular 'spots' and becoming dark grey with exposure



Fruit (shown actual size)

- Urn-shaped with valves deeply enclosed
- To 1.4 x 1.1cm



Flowers / buds

- White to cream flowers in May to September but also outside this period
- Buds to 0.7 x 1.1cm in groups of threes usually (though can be up to 7)
- Caps are usually beaked and often pink tinged



Leaves

- To 18cm long x 3cm wide
- Thick, green and glossy on both sides (concolorous)



Form

- Large tree to 40m

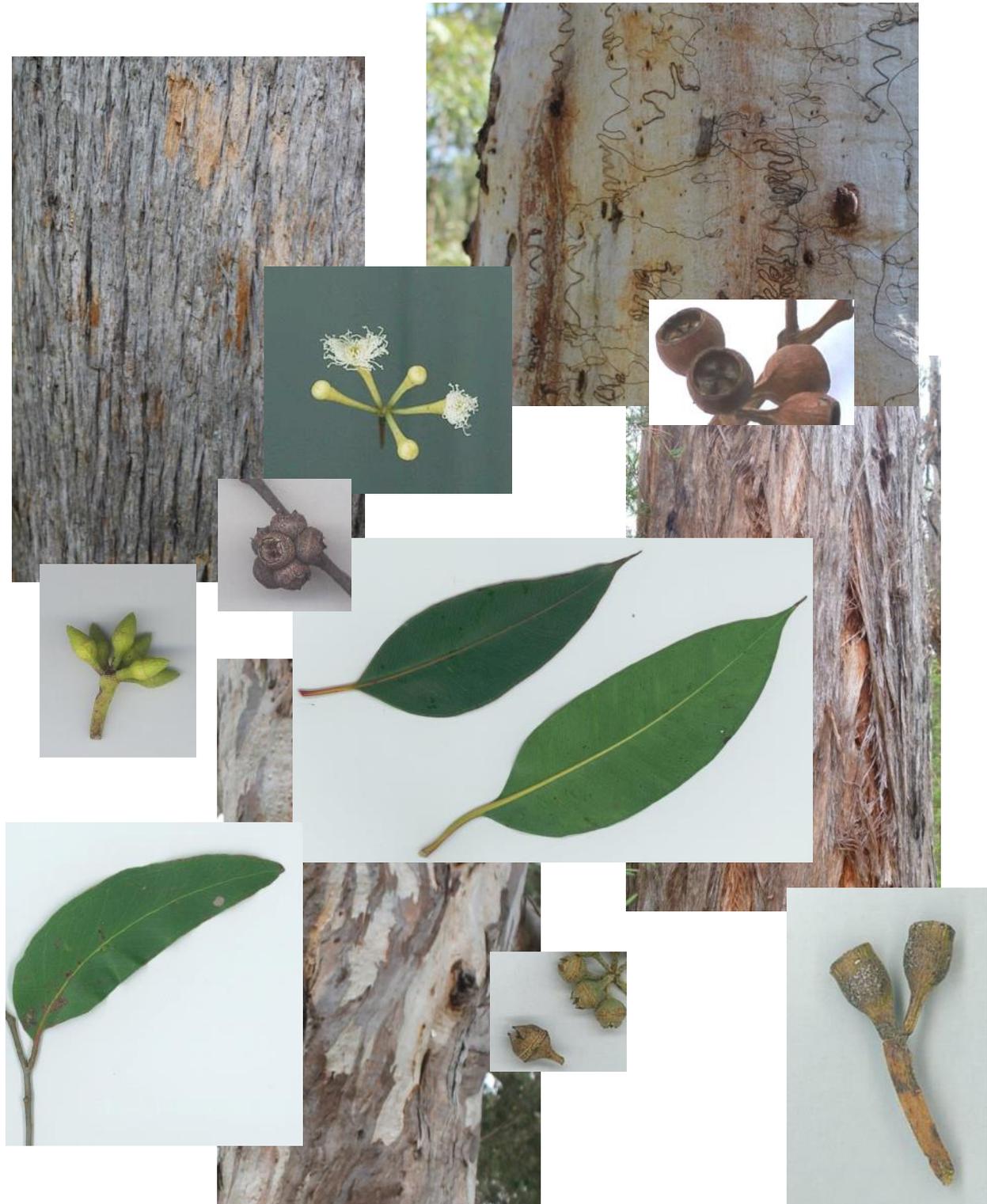


Corymbia

C. maculata at Teralba

Characteristics of Eucalyptus

- Bark can be smooth or rough
- Fruit shape varies amongst species groups and subgenera
- Flower buds have a cap that falls off as flowering occurs
- Adult leaves are alternate



The Eucalyptus genus has been broken into three subgenera. Within these subgenera are the categories that many people are familiar with as they relate to the species' common names.

Subgenus 'Eucalyptus'

- White Mahoganies
- Blackbutts
- Stringybarks
- Peppermints
- Scribbly Gums



Subgenus 'Symphyomyrtus'

- Blue Gums
- Grey Gums
- Swamp Mahoganies
- Red Mahoganies
- Red Gums
- Ironbarks



Subgenus 'Nothocalyptus' or 'Alveolata'

- Tallowwood

Eucalyptus

There are some similarities in the categories that come under each subgenus (e.g. subgenus Eucalyptus has fruit with valves mostly enclosed while subgenus Symphyomyrtus has fruit with valves that mostly project above the top of the fruit), however there are a lot of differences and exceptions too. Van Klaphake's publication 'Eucalypts of the Sydney Region' is an excellent reference for detail on how the subgenera are related and differ.

Species name: *Eucalyptus acmenoides*

Common name: White Mahogany

Occurrence: Quite common across Lake Macquarie. Found in moist forest or woodland on deeper soils of moderate fertility and regular moisture. Often found with *C. maculata*.

Bark

- Rough with tight fibrous appearance
- Grey-brown



Fruit (shown actual size)

- Wine-glass shaped, long stalks
- 3-5 valves, rim level or enclosed
- 0.7-0.8cm in diameter
- Similar to *E. umbra* fruit but *E. acmenoides* usually has a thinner disc (ring around edge of top of fruit) than *E. umbra*



Flowers / buds

- White flowers in November to January
- Buds in clusters of 9-15
- Buds have 'beaks' (thin points)



Leaves

- 8-12cm long x 1.5-2.5cm wide
- Leaves strongly discoloured (i.e. darker on top than underneath)
- Note that the similar species *E. umbra* leaves are the same colour on both sides



Form

- *E. acmenoides* is usually a taller tree than *E. umbra* (25-40m compared with 20m)
- Straight trunk



Eucalyptus - White Mahoganies
Subgenus Eucalyptus

E. acmenoides at Kenibea Landcare site, Charlestown

Species name: *Eucalyptus umbra*

Common name: Broad-leaved White Mahogany

Occurrence: Quite common across Lake Macquarie. Found in dry forests with shallow or sandy soils. Often found with *A. costata*, on ridges and plateaus that rise steeply from the Lake edge.

Bark

- Rough throughout with grey to greyish-brown flat strips
- Fibrous but less coarse than a stringybark



Fruit (shown actual size)

- Fruit is wine-glass shaped with 3-5 valves
- Size is about 0.7-0.9cm wide
- *E. umbra* usually has a broader disc (ring around top of fruit) than *E. acmenoides* but they are very similar



Flowers / buds

- White flowers in September to January
- Buds in clusters of 7 or more
- Buds have 'beaks' (thin points)



Leaves

- 10-18cm long x 2.5-4.5cm wide
- *E. umbra* leaves are a similar colour on both sides whilst *E. acmenoides* leaves are darker on top than underneath
- *E. umbra* leaves are also broader and thicker (more leathery)



Form

- Small to medium sized tree 20m



Eucalyptus - White Mahoganies
Subgenus Eucalyptus

E. umbra at Cardiff Heights

Species name: *Eucalyptus capitellata*

Common name: Brown Stringybark

Occurrence: Common across Lake Macquarie in dry forests on sandy/ poor soils. Often associated with *C. gummifera* and sometimes *E. haemastoma*.

Bark

- Rough throughout
- Greyish fibres over red-brown



Fruit (shown actual size)

- Sessile (no stalks to fruit) tight clusters with 'squashed' shaped fruit, 0.5-0.8 x 0.7-1.2cm (larger than *E. globoidea*)



Flowers / buds

- White flowers in December to February
- Buds to 0.8-0.9 x 0.4-0.5cm
- 7 or more buds per cluster
- Buds have strong angles/ ridges and no scar (dividing 'cap')



Leaves

- Thick (leathery) leaves, slightly lighter and less glossy underneath
- Abruptly narrowed at the tips or gently tapered
- 8-18cm long x 1.8-3.5cm wide



Form

- Small to medium tree 8-15m high



Eucalyptus - Stringybarks
Subgenus Eucalyptus

E. capitellata at Awaba

Species name: *Eucalyptus globoidea*

Common name: White Stringybark

Occurrence: Quite common across Lake Macquarie. Found mostly in dry sclerophyll forest or woodland on well-watered sandy or alluvial soils of moderate fertility.

Bark

- Rough throughout with stringy fibres
- Greyish over red-brown



Fruit (shown actual size)

- Sessile (without stalks), dense ball like clusters. Occasional fruit with very short stalks, obscured by crowded fruit
- Small (0.5-0.9cm diameter)



Flowers / buds

- White flowers in April to June
- Buds in clusters of 7 or more
- Buds smooth with no ridges or scar
- Very little or no stalks to each bud (less than 0.2cm long)



Leaves

- 7-13cm long, 1.2 to 2.5cm or more wide
- Same or similar colour on both sides



Form

- Small to tall tree (to 30m high)



Eucalyptus - Stringybarks
Subgenus Eucalyptus

E. globoidea at Coal Point

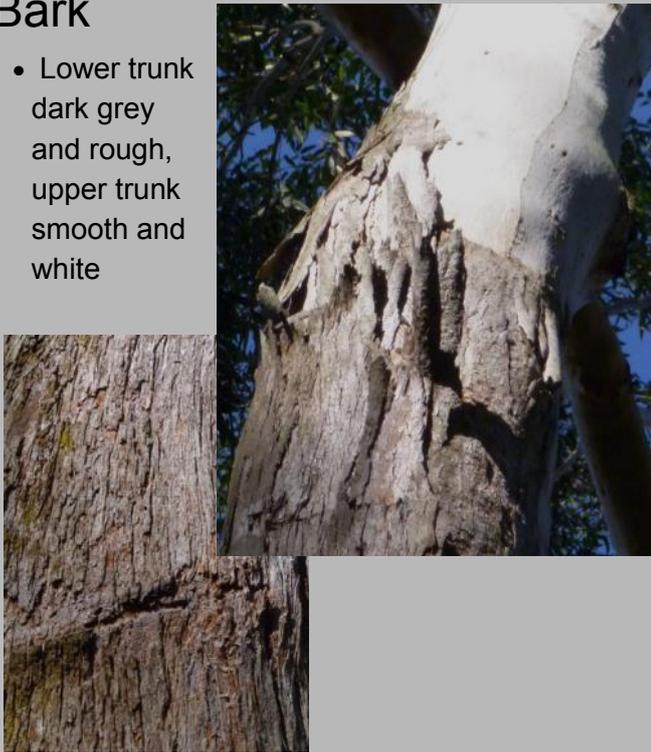
Species name: *Eucalyptus pilularis*

Common name: Blackbutt

Occurrence: Quite common across Lake Macquarie, particularly in the north-east of the LGA. Found in moist forest or drier coastal forest on a range of soils including clay soils on ridges and sandy soils on sheltered moist slopes.

Bark

- Lower trunk dark grey and rough, upper trunk smooth and white



Fruit (shown actual size)

- Hemispherical capsule usually with enclosed valves
- Up to 1.1 x 1.2cm



Flowers / buds

- Creamy white flowers in August to December
- Buds 0.7-1.1cm x 0.3- 0.5cm
- Clusters of 7-15



Leaves

- Glossy green on both sides
- 9-16cm long, 1.5-3cm wide



Form

- Tall tree 30-40m



Eucalyptus - Blackbutt
Subgenus Eucalyptus

E. pilularis at Dudley

Species name: *Eucalyptus piperita*

Common name: Sydney Peppermint

Occurrence: Varied, often found in dry sclerophyll forest or woodland on moderately fertile alluvial sandy soil. Also found on moist valley slopes and creek edges. Commonly found with *C. gummifera*, *A. costata*, or *Syncarpia glomulifera*.

Bark

- Rough grey trunk and most of branches – quite finely tessellated.
- Smooth white ends of branches



Fruit (shown actual size)

- Small egg-shaped or barrel-shaped with deeply enclosed valves
- To 0.8 x 0.7cm
- Can occur in clusters of up to 15



Flowers / buds

- White flowers in November to February
- Small buds 0.4-0.8cm x 0.2-0.3cm
- Clusters of 6-15



Leaves

- Often 'sickle-shaped', to 14 x 2.5cm
- Distinct peppermint smell when crushed
- Glossy green on both sides



Form

- Medium tree to 20m



Eucalyptus - Peppermint
Subgenus Eucalyptus

E. piperita at Tingira Heights

Species name: *Eucalyptus haemastoma*

Common name: Scribbly Gum

Occurrence: Found in dry sclerophyll woodland on shallow infertile sandy soil. Mostly on ridgetops and upper slopes in north-eastern parts of LGA. Often found with *C. gummifera* and *E. capitellata*.

Special notes: Can occur beside *E. racemosa* and in these cases the Scribbly Gums can hybridise.

Bark

- Smooth
- White or yellowish with scribble marks



Fruit (shown actual size)

- Pear-shaped with broad disc
- Larger than other scribbly gum fruit 0.6-0.9cm x 0.6-0.9cm



Flowers / buds

- White flowers in September to December (can spot flower at other times)
- Buds 0.6-0.8cm x 0.4-0.5cm
- Clusters of 7-20



Leaves

- Dull grey-green on both sides
- Broad leaves, 2-4cm wide and 8-12cm long (broader than *E. racemosa*)



Form

- Small to medium tree - 15m



E. haemastoma at Wyee

Eucalyptus - Scribbly Gums
Subgenus Eucalyptus

Species name: *Eucalyptus racemosa*

Common name: Narrow-leaved Scribbly Gum or Snappy Gum

Occurrence: Ridgetops and upper slopes, dry sclerophyll woodland on shallow infertile sandy soil on sandy. Often found with *A. costata* and *C. gummifera*.

Special notes: Some references list *E. racemosa* as a distinct species from *E. signata* but others say they are the same species (known as *E. racemosa*). For the purposes of this guide, *E. signata* is not included separately.

Bark

- White or yellow, with grey patches and scribble marks, sheds in short ribbons



Fruit (shown actual size)

- Small rounded fruit 0.4–0.7cm x 0.4–0.7cm (smaller than *E. haemastoma*)
- Flat or slightly raised reddish rim
- Valves enclosed



Flowers / buds

- White flowers in September to December
- Small round or pointed buds 0.3-0.6cm x 0.2-0.4cm on long stalks
- Clusters of 7-15 buds



Leaves

- Narrow 1-1.5cm wide and 7-14cm long
Note: juvenile leaves are broader
- Glossy green on both sides



Form

- Small to medium tree, 15m



E. racemosa at Barnsley

Eucalyptus - Scribbly Gums
Subgenus Eucalyptus

Species name: *Eucalyptus saligna*

Common name: Sydney Blue Gum

Occurrence: Common across LGA in moist forests on soils of moderate fertility, often on slopes, ridgetops and valleys with deep clay soils. Often occurring with *Syncarpia glomulifera* and *Angophora floribunda*.

Bark

- Smooth upper trunk cream to blue-green-grey
- Rough collar on base of trunk
- Bark sheds in long strips, revealing pale gold bark beneath



Fruit (shown actual size)

- Bell-shaped fruit 0.5-0.8cm x 0.4-0.7cm
- Valves projecting above rim, straight or curving outwards
- Short stalks



Flowers / buds

- White flowers in January to April
- Buds 0.5-0.8cm x 0.3-0.4cm
- Clusters of 7-11



Leaves

- Green above and paler underneath
- 10-20cm long and 1.5-3cm wide
- Thin textured



Form

- Tall to 40m, with high branching



Eucalyptus - Blue Gum
Subgenus *Symphomyrtus*

E. saligna at Central Rankin Prk

Species name: *Eucalyptus propinqua*

Common name: Small-fruited Grey Gum

Occurrence: Found in moist coastal forest on soils of low to medium fertility.

Bark

- Smooth, shedding to ground level
- Irregular patches, with new bark orange, weathering to cream then light grey then dark grey



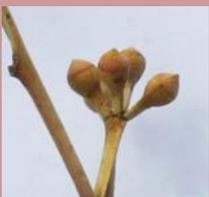
Fruit (shown actual size)

- Small 0.2-0.5cm x 0.3-0.6cm
- Valves projecting above rim



Flowers / buds

- White flowers in January to March
- Small buds 0.4-0.5cm long
- Clusters of 7-15



Leaves

- 8-14cm long x 1.5-2.5cm wide
- Discolorous -glossy green above, paler underneath



Form

- Medium to tall forest tree to 40m



Eucalyptus - Grey Gums
Subgenus *Symphomyrtus*

E. propinqua at Kenibea Bushland Reserve

Species name: *Eucalyptus punctata*

Common name: Grey Gum

Occurrence: Common across Lake Macquarie in dry sclerophyll forest or woodland on soils of low to medium fertility, such as hills and ridges with shale and sandy soils.

Bark

- Smooth but patchy
- Cream - orange, aging to grey
- Very orange when new or after rain



Fruit (shown actual size)

- Hemispherical
- 0.5-1cm x 0.5-1.2cm (larger than *E. propinqua*)
- 3 or 4 exerted valves (projecting above rim)



Flowers / buds

- White flowers in December to April
- Buds 0.4-0.6cm x 0.9-1.1cm
- Clusters of 7-9 (usually 7)
- Buds can be pointed or more rounded (often rounder in heath forms)



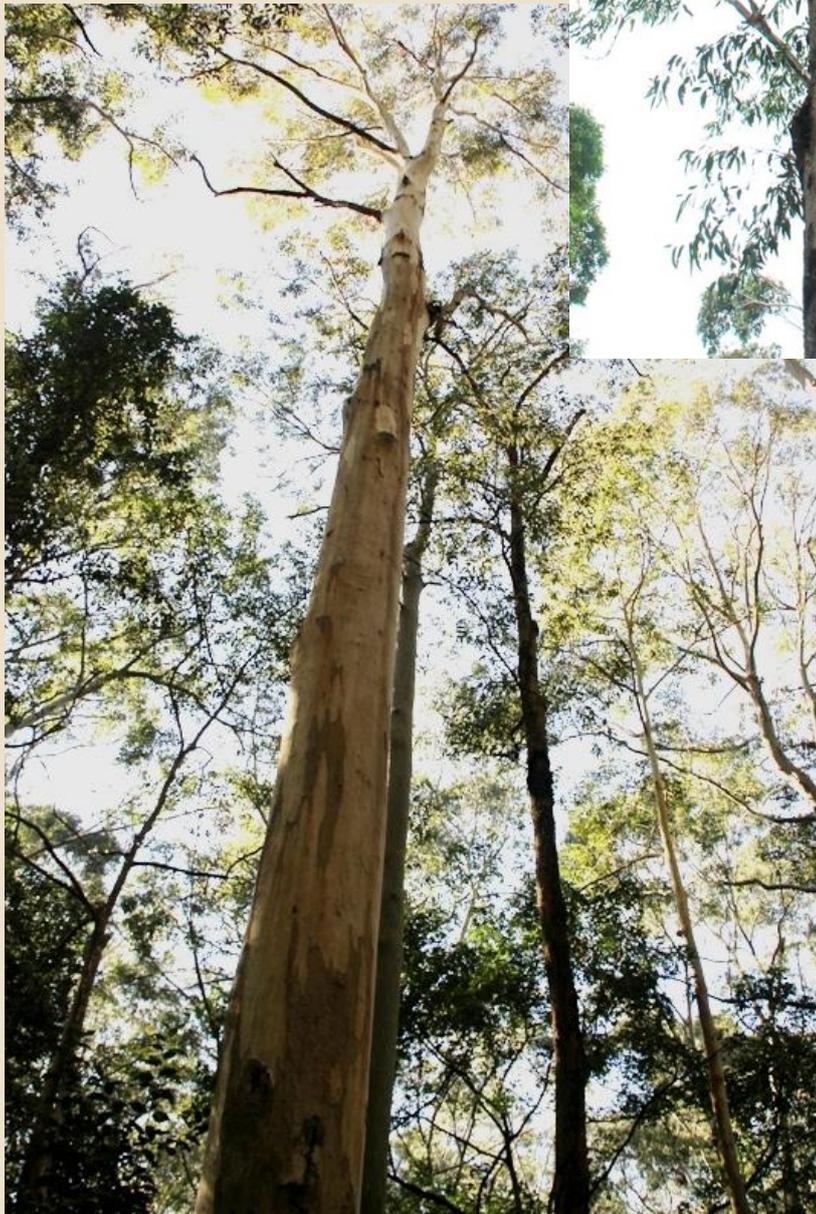
Leaves

- Dark green above, paler underneath
- Thick and leathery
- 6-14cm long by 2-3cm wide



Form

- Tall, to 35m



E. punctata Sunshine
Silverwater

Eucalyptus - Grey Gums Subgenus *Symphomyrtus*

Species name: *Eucalyptus robusta*

Common name: Swamp Mahogany

Occurrence: Common in Lake Macquarie on alluvial soils in swamp forests in association with Paperbarks. Mostly in coastal areas near salt water.

Special notes: Important winter flower source to feed Threatened pollinators such as the Regent Honeyeater, Little Lorikeet, Swift Parrot, Grey-headed Flying-fox, Yellow-bellied Glider and Squirrel Glider.

Bark

- Fully rough bark, spongy in texture
- Dark brown
- Thick and furrowed on all branches



Fruit (shown actual size)

- Long barrel-shaped, valves enclosed
- To 1.8 x 1.1cm
- Flattened stem to fruit



Flowers / buds

- Cream flowers in June to November (mostly in winter in our area)
- Large profuse clusters of 9-15 flowers
- Buds to 2.4 x 0.8cm
- Flattened stem to buds



Leaves

- Dark, thick and glossy, paler underneath
- Large 10-17cm long, 2-4.5cm wide



Form

- Medium tree to 25m



Eucalyptus - Swamp Mahogany
Subgenus *Symphomyrtus*

E. robusta at Belmont Wetlands, top, and Jewells, above.

Species name: *Eucalyptus botryoides*

Common name: Bangalay

Occurrence: Uncommon in Lake Macquarie and restricted to coastal areas. Found on alluvial flats in moist areas or in dry forests on sandy soils. Associated with littoral rainforest and *Banksia integrifolia*.

Bark

- Rough reddish grey bark on trunk and all but smallest branches which are smooth and pale grey



Fruit (shown actual size)

- Long cup to barrel shaped fruit without individual stalks (sessile)
- To 1.2 x 0.9cm
- 3-4 valves below rim



Flowers / buds

- White flowers in January to March
- Buds to 0.9 x 0.6cm, can be rounded or pointed at tops
- Clusters of 7 -11



Leaves

- Thick and quite broad
- To 16cm long and 4cm wide
- Distinctly paler underneath



Form

- Medium sized tree, 20-30m high



E. botryoides at Pelican

Eucalyptus - Bangalay
Subgenus *Symphymyrtus*

Species name: *Eucalyptus resinifera*

Common name: Red Mahogany

Occurrence: Found in moist or dry forest on deeper soils of medium to high fertility (often transition sand/clay soils).

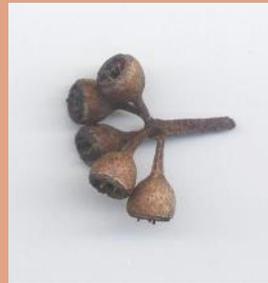
Bark

- Rough
- Grey-brown or red-brown



Fruit (shown actual size)

- Cup-shaped capsules with strongly exerted valves (projecting above rim)
- 0.5 -1.2cm in diameter



Flowers / buds

- White flowers in October to February
- Buds 1.2-1.5cm long, often with long slightly curved cap
- Clusters of 7-11



Leaves

- Tapering to a long fine point
- 10-16cm long, 2-3cm wide
- Dark green and glossy above, paler underneath



Form

- Tall, to 35m



Eucalyptus - Red Mahogany
Subgenus *Symphomyrtus*

E. resinifera at Edgeworth

Species name: *Eucalyptus amplifolia* subsp. *amplifolia*

Common name: Cabbage Gum

Occurrence: Found in grassy woodlands on deeper, loamy soils, usually on low sites or along watercourses. Restricted distribution in Lake Macquarie.

Bark

- Shedding over whole trunk, leaving streaky patterns of mottled white, grey, bluish-grey colours



Fruit (shown actual size)

- Round shaped 0.5-0.8cm x 0.4-0.6cm
- Fruit has short stalks
- Usually 4 valves that project above rim (exserted)



Flowers / buds

- White flowers in November to January
- Buds 0.9-2cm long, with long cap often slightly curved
- 7-20 buds per cluster (usually more than 11)



Leaves

- Adult leaves 9–20 cm long, 1.5–4.5 cm wide (often much broader than *E. tereticornis*), juvenile leaves are very rounded (left in picture)
- Dull green on both sides (concolorous)



Form

- Medium to tall (to 30m)



Eucalyptus - Red Gums

Subgenus *Symphomyrtus*

E. amplifolia subsp. *amplifolia* at Martinsville, juvenile tree shows very rounded leaves at left

Species name: *Eucalyptus tereticornis*

Common name: Forest Red Gum

Occurrence: Common across Lake Macquarie LGA and often found along Lake foreshore. Found in moist, swamp or dry forests on clay or more fertile soils. Often found with *A. floribunda*. Can hybridise with *E. robusta* when found together.

Special notes: Important winter flower source to feed Threatened pollinators such as the Grey-headed Flying-fox, Yellow-bellied Glider and Squirrel Glider.

Bark

- Shedding over whole trunk, leaving streaky patterns of mottled white, grey, cream, peach colours
- Sometimes rough bark accumulates at base



Fruit (shown actual size)

- Small round fruit 0.4-0.7cm x 0.4-0.8cm
- 4-5 valves project above a broad disc



Flowers / buds

- Flowers are white or occasionally pink, flowering in April to October
- Long buds, 1-2cm x 0.4-0.8cm
- Clusters of 7-11 buds



Leaves

- 10-22cm long x 1-3cm wide, same colour on both sides



Form

- Medium to tall tree to 40m



E. tereticornis at
Murrays Beach and
Sunshine
Silverwater

Eucalyptus - Red Gums Subgenus Symphyomyrtus

Species name: *Eucalyptus fibrosa*

Common name: Broad-leaved Ironbark

Occurrence: Found mostly in dry sclerophyll forest on shallower and less fertile soils. Found across Lake Macquarie LGA on coastal plains and hills. Associated with *C. maculata*, *A. costata* and *E. umbra*.

Special notes: Dominant in Lower Hunter Spotted Gum Ironbark EEC in north-west of LGA.

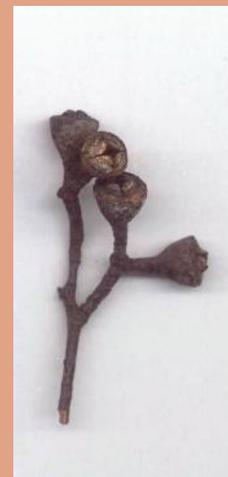
Bark

- Grey-black (sometimes over brown)
- Hard but somewhat flaky (not as hard as other ironbarks)



Fruit (shown actual size)

- Cone-shaped
- 0.5-1cm x 0.6-1.2cm
- Valves level or exserted (project above rim)



Flowers / buds

- White flowers in November to January but some references say March to August so times probably vary
- Long buds (to 2cm) with top 'cap' longer than base
- Clusters of 7-11



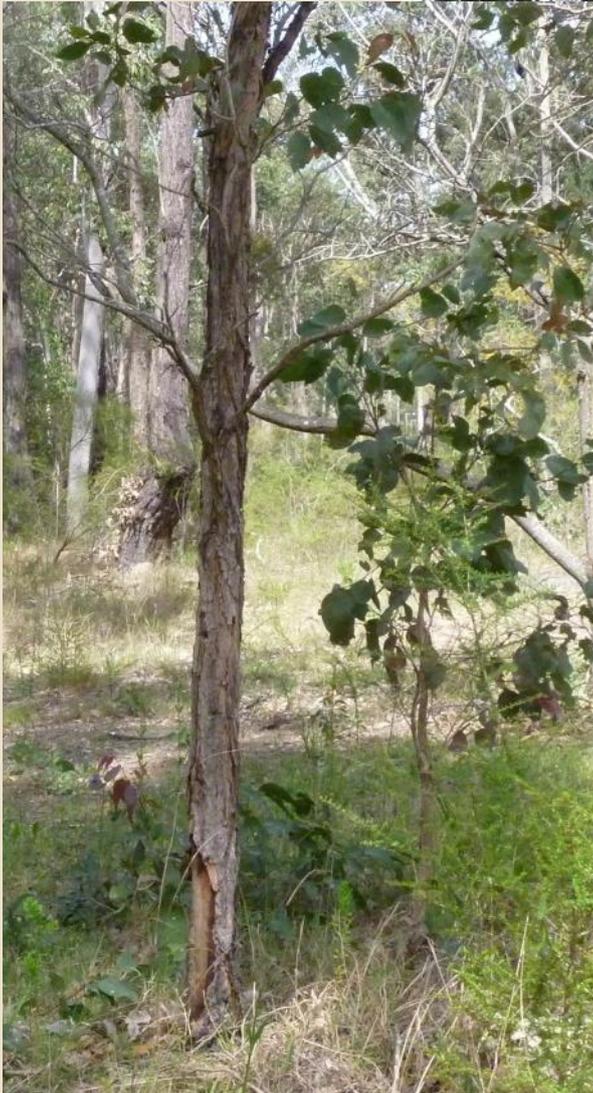
Leaves

- Large, broad leaves 2.5-5cm wide x 12-18 cm long (juvenile leaves rounded)
- Dull blue/grey to green on both sides (concolorous)



Form

- Medium to tall (15—35m)



Eucalyptus - Ironbarks
Subgenus *Symphomyrtus*

Above left—young tree and seedlings, showing rounded juvenile leaves

Species name: *Eucalyptus paniculata*

Common name: Grey Ironbark

Occurrence: Common across Lake Macquarie LGA, mostly in moist forests on deep loam and clay soils. Often found with *C. maculata* (Spotted Gum).

Special notes: Some references distinguish *E. fergusonii* as a separate, closely related species which has been listed as a Rare or Threatened Australian Plant (ROTAP) in 1996. It has been noted to have strong ridges on buds and fruit. However the Australian Plant Census 2006 lists it as a taxonomic synonym of *E. paniculata* so it has not been included separately in this guide.

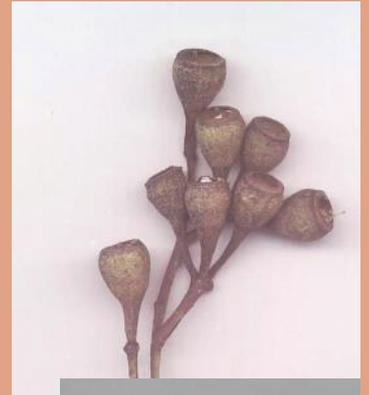
Bark

- Light grey to black
- Hard with deep furrows



Fruit (shown actual size)

- Small, cone or pear-shaped
- 0.6-0.9cm x 0.5-0.8cm
- Valves enclosed or at rim level
- 2-4 weak ridges sometimes present



Flowers / buds

- White flowers in May to January
- Buds 0.7-1.1cm x 0.3-0.5cm
- Clusters of 7
- Diamond shaped buds



Leaves

- Dark green and slightly glossy above, paler underneath
- 7-15cm long and 1.5-3cm wide



Form

- Medium to tall, 20-30m



Eucalyptus - Ironbarks
Subgenus *Symphomyrtus*

E. paniculata at Kenibea Landcare Site, Charlestown

Species name: *Eucalyptus siderophloia*

Common name: Grey-leaved Ironbark

Occurrence: Occurs across Lake Macquarie LGA in moist or dry forests on more fertile (less sandy) soils

Special notes: Important winter flower source to feed Threatened pollinators such as the Grey-headed Flying-fox and Squirrel Glider.

Bark

- Hard grey to grey-black bark with deep furrows



Fruit (shown actual size)

- Cone-shaped to cup shaped fruit
- 0.5-0.8cm x 0.5-0.7cm
- Usually 4 valves, to rim level or slightly exerted (projecting above rim)



Flowers / buds

- White flowers in June to September
- Angular to diamond shaped buds with slight scar, 0.5-0.8cm x 0.3-0.4cm
- Clusters of 7 buds



Leaves

- Dull green on both sides (concolorous)
- 8-15cm long x 1-2cm wide



Form

- Medium to tall tree, to 45m high



Eucalyptus - Ironbarks
Subgenus *Symphomyrtus*

Young *E. siderophloia* at Carey Bay

Species name: *Eucalyptus microcorys*

Common name: Tallowwood

Occurrence: Mostly found in moist forests or margins on moderately to highly fertile soils often on slopes. Also can occur in dry forests of coastal ranges. Naturally uncommon in LGA and found predominantly on western side of Lake (although a commonly planted species).

Bark

- Rough bark of long fibres with fissures, sometimes appear to twist around the tree as you look up it
- Slightly spongy



Fruit (shown actual size)

- Long cone shaped fruit on long stalks
- 0.5-0.9cm x 0.4-0.6cm
- Valves at more or less rim level



Flowers / buds

- Creamy white flowers in August to November
- Buds 0.4-0.6cm x 0.2-0.3cm
- Clusters of 7-9 buds
- Buds on long tapered pedicels, ending in rounded caps (sometimes caps can have very small points/ beaks at tip)



Leaves

- Dark glossy green above and paler underneath (discolorous)
- Quite thin
- 8-12cm long x 1.5-2.5cm wide



Form

- Tall forest tree to 50m



Eucalyptus - Tallowwood

Subgenus *Nothovalyptus* or *Alveolata*

E. microcorys at Martinsville

Species name: *Syncarpia glomulifera*

Common name: Turpentine

Occurrence: Found on well drained soils, transitional zones between shale and sandstone-derived soils. Can also be found on heavier soils, near the margins of rainforest. Common across Lake Macquarie LGA.

Special notes: Not really a Gum Tree but this species has been included as its form and bark mean it is sometimes confused with Gums Trees.

Bark

- Coarse, thick and stringy



Fruit (shown actual size)

- 'Spaceship' shaped fruit
- Fused woody cluster, 1-2cm diameter



Flowers / buds

- White flowers in October to December



Leaves

- Opposite, glossy green-grey above, grey underneath, curled edges
- 7-11cm long



Form

- Tall, over 25m



Turpentine

S. glomulifera at Kenibea Landcare site, Charlestown

Additional notes on species not included

The following species have been recorded in Lake Macquarie by various references but they have not been included in this guide as they are known only to occur in remote or restricted parts of the Local Government Area:

- *Angophora euryphylla* (uncommon or unknown in this area)
- *Eucalyptus agglomerata* (mostly in far west of LGA)
- *Eucalyptus camfieldii* (threatened species restricted to very few locations)
- *Eucalyptus crebra* (uncommon or unknown in this area)
- *Eucalyptus deanei* (mostly in far west of LGA)
- *Eucalyptus longifolia* (mostly in far south of LGA)
- *Eucalyptus parramattensis* (threatened species restricted to very few locations)
- *Eucalyptus sieberi* (mostly in far south or west of LGA)

Glossary and pictorial aides

Alluvial Soils Earth material from areas once exposed to floods or flowing water

Alternate Leaves Leaves that are positioned alternating on either site of the stem rather than being opposite to each other



Bud Cap Covering of bud top that falls off as flowering occurs

Concolourous Leaves Leaves with the same or very similar colour on top of the leaf to the underside of the leaf

Disc Ring of woody tissue on fruit edge

Discolorous Leaves Leaves with a different colour on top of the leaf to the underside of the leaf

Hemispherical Shaped like a globe cut in half

Hybridise When two different species breed and produce an offspring

Indigenous Native to the local area, not introduced

Littoral Growing near the seashore

Rim Top edge of fruit

Scar Crease in bud between base and cap

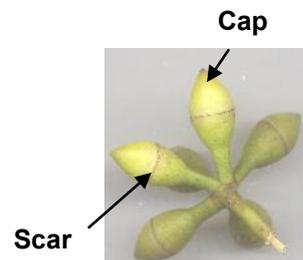
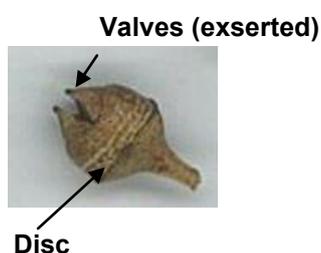
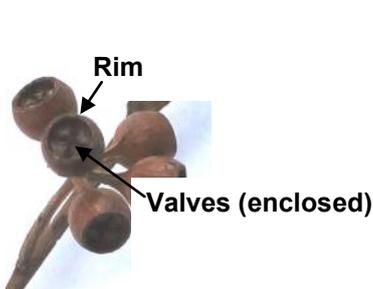
Sclerophyll Forest A forest dominated by trees with hard thick leaves like Gum Trees, Wattles etc.

Opposite Leaves Leaves that are positioned opposite each other on the stem as opposed to Alternate Leaves



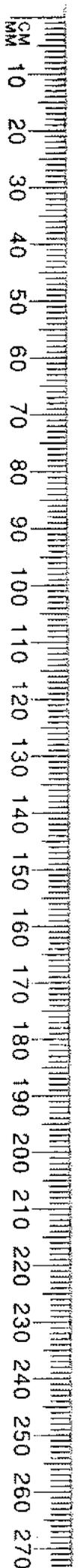
Threatened Species A species listed under the NSW Biodiversity Conservation Act 2016 as vulnerable, endangered, critically endangered, or presumed extinct. For details on Threatened Species in NSW see <http://www.environment.nsw.gov.au/topics/animals-and-plants/threatened-species/about-threatened-species>

Valves Fruit segments that open to release seeds. These can be enclosed (within and below the fruit rim) or exserted (projecting above fruit top/ rim)



Fruit parts

Bud parts



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