

## Australian Plants Society NORTH SHORE GROUP



### Eucalyptus, Angophora, Corymbia

#### FAMILY MYRTACEAE



## GUM TREES OF THE KU-RING-GAI WILDFLOWER GARDEN

### Did you know that:

- The fossil evidence for the first known Gum Tree was from the Tertiary 35-40 million years ago.
- Myrtaceae is a very large family of over 140 genera and 3000 species of evergreen trees and shrubs.
- There are over 900 species of Gum Trees in the Family Myrtaceae in Australia.
- In the KWG, the Gum Trees are represented in the 3 genera: *Eucalyptus*, *Angophora* & *Corymbia*.
- The name *Eucalyptus* is derived from the Greek *eu* = well and *kalyptos* = covered.

### BRIEF HISTORY

The 18<sup>th</sup> & 19<sup>th</sup> centuries were periods of extensive land exploration in Australia. Enormous numbers of specimens of native flora were collected and ended up in England.

The first recorded scientific collection of Australian flora was made by Joseph Banks and Daniel Solander, during Sir James Cook's 1<sup>st</sup> voyage to Botany Bay in April 1770.

From 1800-1810, George Caley collected widely in N.S.W with exceptional skill and knowledge in his observations, superb preservation of plant specimens, extensive records and fluent expression in written records. It is a great pity that his findings were not published and he didn't receive the recognition he deserved.

The identification and classification of the Australian genus *Eucalyptus* began in 1788 when the French botanist Charles L'Heritier de Brutelle named a specimen in the British Museum London, *Eucalyptus obliqua*.

This specimen was collected by botanist David Nelson on Captain Cook's ill-fated third expedition in 1777 to Adventure Bay on Tasmania's Bruny Is. (*E.obliqua* proved to be a very satisfactory species to represent the genus as the "Type" specimen.)

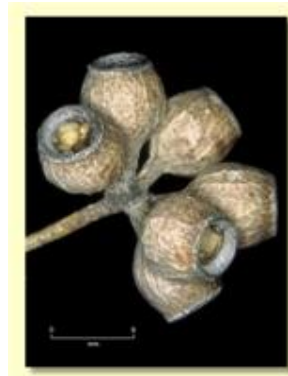
### TAXONOMY Classification of Gum Trees:

Some of the early great botanists were **George Bentham** (1800-84), **Ferdinand von Mueller** (1825-96), **Richard Thomas Baker** (1854-1941), **Joseph Maiden** (1859-1925) and **William Blakely** (1875-1941). Other major eucalypt botanists were **Lindsay D. Pryor** (1915-98) and **Dr Lawrie Johnson** (1925-1997) **Don Blaxell** (1934- ), **Ken D. Hill** (1948-2010), **Dr Ian Brooker** (1934- ) and **Dr Dean Nicolle** (1974- ).

In 1995 **Dr Lawrie Johnson** & **Kenneth D. Hill** (1948-2010) created a new milestone in taxonomy when they split the GENUS *Eucalyptus* into another GENUS *Corymbia* (bloodwoods, ghost gums) **Professor Pauline Ladiges** (1948- ) verified the latter in her extensive research on Eucalypts using molecular techniques involving DNA sequencing.

**Classification of the Gum Trees continues to be very difficult, perplexing and controversial.**

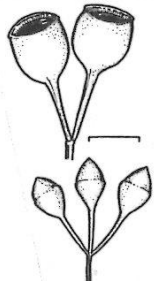
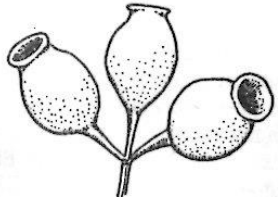
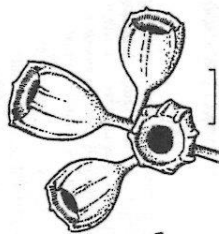
*E. obliqua*



## Gum Trees in the Ku-ring-gai Wildflower Garden

GENUS	<i>Eucalyptus</i>	<i>Corymbia</i>	<i>Angophora</i>
<b>GROW NATURALLY in KWG</b>	8	1	4
<b>PLANTED in KWG*</b>	6 ( +1 hybrid)	4	0
<b>TOTAL 23</b>	<b>14</b>	<b>5</b>	<b>4</b>

### Gum Trees: Comparison of 3 genera:



<i>Eucalyptus</i>	<i>Corymbia</i>	<i>Angophora</i>
Very diverse and widespread gum, peppermint, ironbark, stringybark, mahogany, ash, blackbutt, box, tallowwood	Diverse and widespread bloodwoods, spotted gums, lemon scented gums, ghost gums	Well defined group with a small number of species. Found mainly in NSW, QLD, VIC. Commonly called “apples”
<u>ADULT LEAVES</u> Usually alternate	<u>ADULT LEAVES</u> Usually alternate	<u>ADULT LEAVES</u> Always opposite
<b>BUD/FLOWER</b> Bud has a calyptra/operculum which falls off to expose the stamens. (no visible <u>petals</u> )  Most do not have separate <u>sepals</u> .	<b>BUD/FLOWER</b> Bud has a calyptra/operculum which falls off to expose the stamens. (no visible <u>petals</u> )  Do not have separate <u>sepals</u> .	<b>BUD/FLOWER</b> No operculum present but small <u>petals</u> with a green keel and white margin. Stamens become exposed. There is an outer whorl of hard woody green <u>sepals</u> .
<b>FRUIT</b> Woody capsule, size variable, not ribbed or toothed, variable shape  	<b>FRUIT</b> Many have typical “bloodwood” shape. No teeth, not ribbed.  	<b>FRUIT</b> A ribbed capsule of thin texture with 4-5 teeth on the rim.  

Gum Tree botanical signs in KWG have ‘24’ on a green disc attached to the sign.

## Gum Trees : *Eucalyptus*, *Corymbia*, *Angophora*

To aid in the identification of a particular tree, the following information and samples are useful:  
*type of bark.*, *juvenile & mature leaves* , *fruit/capsules and buds*.

### Gum Trees: Bark Categories

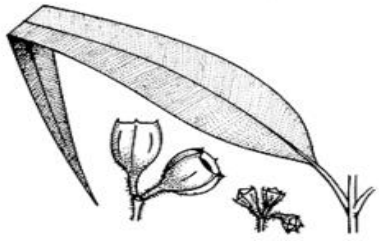

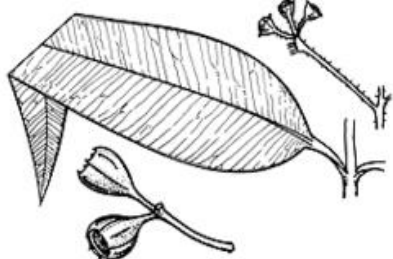

TYPE	NAME	COMMON NAME	DESCRIPTION of BARK
<b>SMOOTH</b>   (or with short stocking at base)	<i>Angophora costata</i>  <i>Corymbia maculata*</i> <i>Eucalyptus haemastoma</i> <i>Eucalyptus racemosa</i>  <i>Eucalyptus luehmanniana</i>	Smooth-barked Apple Spotted Gum Scribbly Gum Scribbly Gum  Yellow Top Mallee Ash	grey – orange, shed annually  white-grey, mottled/spotted white-grey, larvae scribbles white-grey, larvae scribbles  smooth, white-pale grey
	<i>Eucalyptus saligna*</i> <i>Eucalyptus grandis*</i> <i>Corymbia torelliana*</i>	Sydney Blue Gum Flooded Gum Cadaghi Gum	grey-pale blue, rough at base white-grey, rough at base green-grey, shiny trunk with rough base & part way up
<b>ROUGH (part bark)</b>	<i>Eucalyptus piperita</i>  <i>Eucalyptus elata*</i>  <i>Eucalyptus sieberi</i>	Sydney Peppermint  River Peppermint  Silvertop Ash	rough on trunk, smooth on small branches, in ribbons lower trunk hard, grey with upper bark shed in strips  hard, dark bark on trunk and larger branches, smooth upper
<b>ROUGH (to ends of branches)</b>  	<i>Angophora hispida</i> <i>Angophora floribunda</i> <i>Angophora crassifolia</i>  <i>Corymbia eximia*</i> <i>Corymbia gummifera</i>  <i>Corymbia ficifolia*</i>  <i>Eucalyptus robusta*</i> <i>Eucalyptus resinifera</i>  <i>Eucalyptus microcorys*</i>  <i>Eucalyptus capitellata</i> <i>Eucalyptus oblonga</i>  <i>Eucalyptus sideroxylon*</i>	Dwarf Apple Rough-barked Apple  Yellow Bloodwood Red Bloodwood  Red Flowering Gum  Swamp Mahogany Red Mahogany  Tallowwood  Brown Stringybark Narrow Leaf Stringy  Mugga Ironbark	grey and fibrous grey to brown and thick grey and fibrous  yellow and flaky brown-grey, red if peeled off tessellated, red kino oozes out  grey, rough and flaky  grey, thick, hard and corky brown – red, stringy-like  brown-orange, stringy-like  brown-grey, pulls off in strips grey, pulls off in long strips  hard, black/grey, furrowed

## GENUS *Angophora*

## GROWS NATURALLY in KWG

There are 4 different species of *Angophora* in the KWG. All are growing in the Ku-ring-gai plateau area.

**ANGOPHORA** (Greek *angos* = goblet & *pheros* = bearing)

NAME	BARK	FORM/ HEIGHT	LEAVES	FLOWER	CAPSULE/ BUDS LEAVES
<p><u><i>Angophora costata</i></u></p> <p>(Smooth-barked Apple)</p>	<p><b>SMOOTH</b></p> <p>Smooth on trunk &amp; branches, scales, dimples grey, orange pink</p>	<p>Medium - tall spreading contorted branches</p>	<p>Opposite, lanceolate, discolorous, lateral veins very close</p>	<p>In terminal panicles, cream flowers with 5 persistent sepals</p> <p><i>flowering</i> (Oct-Jan)</p>	<p>Fruit: length 13-15 mm</p>  <p>Royal Botanic Gardens Domain Trust</p>
<p><u><i>Angophora hispida</i></u></p> <p>(Dwarf Apple)</p>	<p><b>ROUGH</b></p> <p>Rough grey, fibrous, flaky</p>	<p>Mallee or tree often less than 3m in height</p>	<p>Opposite, thick, leathery, cordate, discolorous, red hairs on new leaves</p>	<p>Dense masses of cream flowers. Attracts lots of birds &amp; insects.</p> <p><i>flowering</i> (Nov-Jan)</p>	<p>Fruit length 16-19 mm,</p>  <p>Royal Botanic Gardens Domain Trust</p>
<p><u><i>Angophora floribunda</i></u></p> <p>(Rough bark apple)</p>	<p><b>ROUGH</b></p> <p>Rough, thick, fibrous, grey-light brown</p>	<p>Medium sized tree contorted branches</p>	<p>Opposite lanceolate 12 x 3 cm discolorous</p>	<p>Flowers terminal and cream</p> <p><i>flowering</i> (Oct- Dec)</p>	<p>Fruit: length 8-10 mm</p>  <p>Royal Botanic Gardens Domain Trust</p>
<p><u><i>Angophora crassifolia</i></u></p> <p>*****</p> <p>(Threatened Species ROTAP: 2Rca )</p>	<p><b>ROUGH</b></p> <p>Rough, grey, fibrous</p>	<p>Small tree</p>	<p>Opposite leathery lanceolate narrow 9 cm x 1 cm acute apex glabrous discolorous</p>	<p>Flowers terminal white-cream</p> <p><i>flowering</i> (Sept - Dec)</p>	<p>Fruit: length 10-14 mm</p>  <p>Royal Botanic Gardens Domain Trust</p>



**Photos : *Angophora*** Greek *angos* = goblet & *peros* = bearing

***Angophora costata*** ( Latin *costata* = ribbed)



***Angophora hispida*** (Latin *hispidus* = rough)



Location: Pacific Hwy Mt Ku-ring-gai

***Angophora floribunda*** (Latin *floribundus* = profuse flowering)



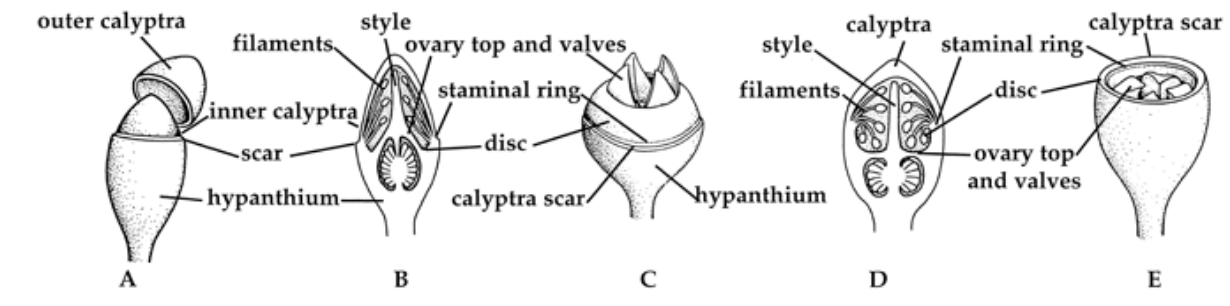
***Angophora crassifolia***  
( Latin *crass* = thick & *folia* = leaves)





## GENUS *Eucalyptus*

## Development of Bud & Fruit in GENUS *Eucalyptus*



A = bud with outer calyptra shed before inner calyptra B = longitudinal section after shedding  
C = fruit formed from bud "B" D = longitudinal section of bud with calyptra shed as a single unit  
E = fruit formed from bud D, calyptra and staminal ring scars, depressed disc, enclosed valves.  
PlantNET, The Royal Botanic Gardens & Domain Trust, 2015

## GENUS *Eucalyptus*

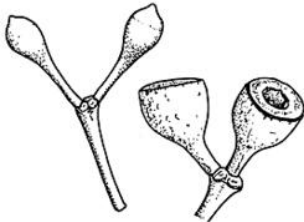
## GROWS NATURALLY in KWG

There are 8 different species of *Eucalyptus* in the KWG that grow naturally in the area.  
Greek *eu* = well and *calyptos* = covered refers to the operculum or cap of the flower bud.

### 1. *Eucalyptus haemastoma* (Scribbly Gum)

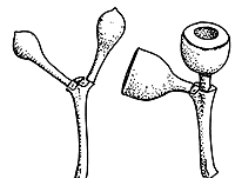
( **SMOOTH** bark with scribbles)

Greek *haema* = blood, *stoma* = mouth, referring to the red disc at mouth of the fruit.



Royal Botanic Gardens &  
Domain Trust 2015

- **HABIT/HABITAT:** Tree to 12 m high often multi-stemmed and disfigured by fire damage. It grows on sandstone ridges in harsh conditions.
- **BARK:** smooth throughout, white, silver/grey in colour often with scribbles/ tunnels caused by the larvae of the scribbly gum moth (*Ogmograptis scribula*)
- **LEAVES:** Adult leaves thick, lanceolate to broad-lanceolate, 12–15 cm long, 2–4 cm wide, green or grey-green, glossy, concolorous. **FLOWERS:** cream or pale yellow
- **FRUIT:** Fruit conical or pyriform, 6–9 mm long, 6–9 mm diameter, rim flat or slightly raised and often red in colour, usually 4 valves enclosed or rim-level.



### 2. *Eucalyptus racemosa* (Snappy or Narrow-leaved Scribbly Gum)

**NOTE** Similar to *E. haemastoma* but has narrower leaves, smaller fruit and the tree is often taller.

### 3. *Eucalyptus luehmanniana* (Yellow Top Mallee Ash)

(SMOOTH bark with ribbons)

Named after Johann Georg Luehmann botanical assistant to Ferdinand von Mueller



**Threatened species:** ROTAP: 2RCa

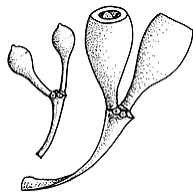
A “2” indicates a distribution of < 100km, R = rare and Ca = adequately conserved in a N.P.

- **HABIT/HABITAT:** A mallee up to 5-6 m high with narrow trunks. It prefers poorly drained sandstone tops. Locally abundant but restricted.
- **BARK:** Smooth white, shedding in long ribbons.
- **LEAVES:** Adult leaves lanceolate, drooping, rather large 14-18 cm long 2-4 cm wide.
- **FLOWERS:** cream or white
- **FRUIT:** Fruit ovoid or cylindrical 10-13 mm long, 7-10 mm diameter and ribbed.

### 4. *Eucalyptus sieberi* (Silvertop Ash or Black Ash)

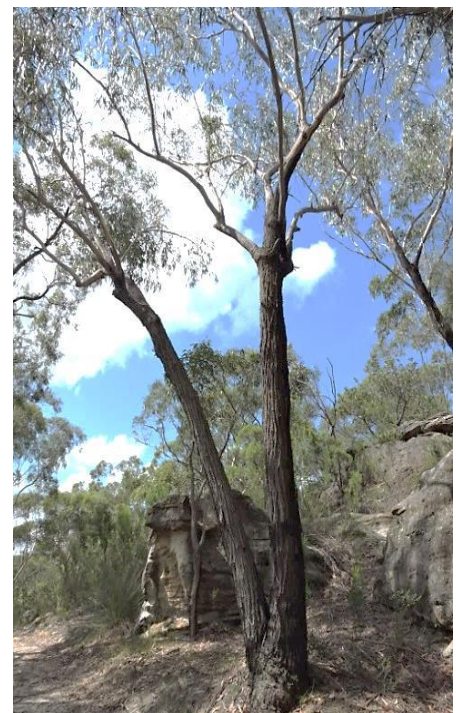
(PART ROUGH bark)

Named after Franz Wilhelm Sieber (1789-1844)



PlantNET Royal Botanical Gardens &  
Domain Trust 2015

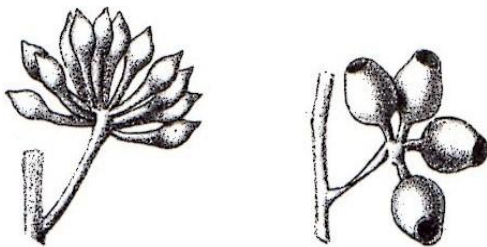
- **HABIT/HABITAT:** Often a tall tree up to 30-45 m. It prefers well drained areas with good rainfall.
- **BARK:** Dark black rough furrowed like ironbark but not as hard. Upper branches are smooth white, shedding in ribbons.
- **LEAVES:** Lanceolate, 9-15 cm x 1-2.8 cm wide, green glossy and concolorous. New growth conspicuously red.
- **BUDS** There is no scar, the operculum is half spherical or slightly conical.
- **FLOWERS:** white or cream flowers from Sept-Jan, 7-15 flowered, peduncle narrowly flattened.
- **FRUIT:** Fruit conical or pyriform, 9 x 8 mm, disc raised or flat, valves enclosed or rim level.





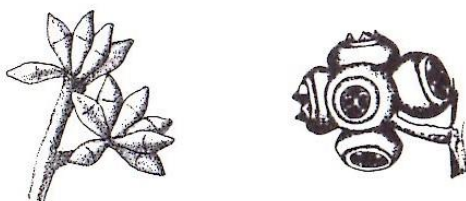
5. *Eucalyptus piperita* (PART ROUGH bark)  
(Sydney Peppermint)

Latin *piperitus* = pepper- like  
(peppermint aroma from leaves)



- **HABIT/HABITAT:** A medium- tall tree up to 30 m. In dry sclerophyll forest or woodland.
- **BARK:** Persistent bark, shortly fibrous grey -brown on trunk and large branches. Upper branches smooth white, shedding in long ribbons.
- **LEAVES:** Adult leaves falcate, lanceolate, dull green, concolorous with a strong peppermint aroma.
- **BUDS** Operculum of the bud is quite pointed **FLOWERS:** white or cream in dense clusters.
- **FRUIT:** Capsule globose, ovoid or urceolate with a small orifice. Capsule is 6-9 mm

6. *Eucalyptus oblonga* (FULL ROUGH bark)  
(Narrow-leaved Stringybark)



Drawing *Eucalyptus Buds and Fruit*  
G.M. Chippendale



- **HABIT/HABITAT:** A small-medium tree up to 15 m. Prefers ridges and upper slopes in sandy soil.
- **BARK:** Persistent bark, grey- red-brown on trunk and large branches and stringy.
- **LEAVES:** Adult leaves 6-9 cm x 1.4-2.8 cm wide, lanceolate, concolorous with acuminate apex.
- **BUDS** are cylindrical or fusiform (taper from centre to each end) with no scar and are sessile. Length is 6-7 mm x 2-3 mm across. Clusters of 11 or more and crowded are common.
- **FLOWERS:** white or cream
- **FRUIT:** capsule globose with a flat or slightly raised disc. Fruit 6-8 mm long x 6-9 mm diameter.



7. *Eucalyptus capitellata*

(Brown Stringybark)

Latin *capitellatus* = in heads



(FULL ROUGH bark)



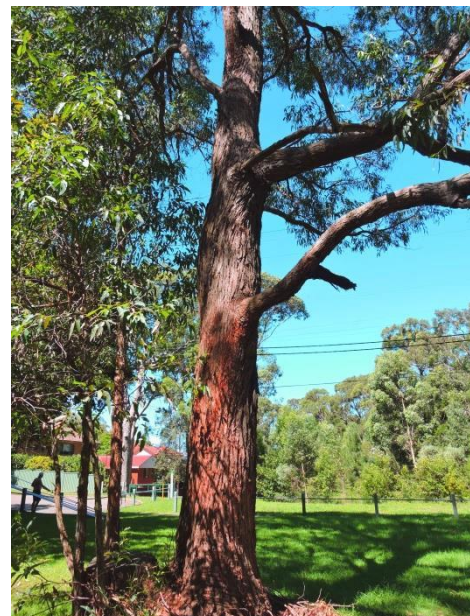
- **HABIT/HABITAT:** Small-medium tree 10-20 m. Clay soil with laterite on sandstone.
- **BARK:** Persistent, grey to red-brown and stringy
- **LEAVES:** Leaves are lanceolate, 8-18 cm long, 2-3.5 cm wide, concolorous, glossy
- **BUDS:** Sessile oblong or fusiform, sometimes angular 8-10 mm long, 4-5 mm diameter. Buds are in crowded clusters of 11 or more. **FLOWERS:** White or cream, 11 flowered
- **FRUIT:** Sessile and due to crowding may be compressed. Fruit hemispherical or flattened-globose 5-8 mm long, 7-12 mm diam.; disc flat or raised; valves rim-level or exerted.

8. *Eucalyptus resinifera* (Red Mahogany)

Latin: *resiniferus* = resin bearing bark



(FULL ROUGH bark)



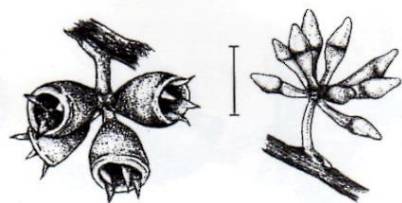
- **HABIT/HABITAT:** Can grow to a large tree to 40m. Prefers deeper soils shale-sandstone transition, shales. (gully, open forest)
- **BARK:** Persistent, (small branches sometimes smooth), red-brown and stringy.
- **LEAVES:** Adult lanceolate, 9-16 cm long, 2-4 cm wide, discolorous, dark green and glossy
- **BUDS:** The calyptra is very long and horn shaped. **FLOWERS:** White or cream, 7-11 flowered
- **FRUIT:** hemispherical-cup shaped 5-11 mm long x 8 mm diameter. Valves strongly exerted.

clays &



There are 6 different species of *Eucalyptus* in the KWG that are introduced.  
(also the hybrid *Eucalyptus robusta x tereticornis*)

9. ***Eucalyptus saligna***\* (Sydney Blue Gum)  
( **SMOOTH bark with stocking at base**)



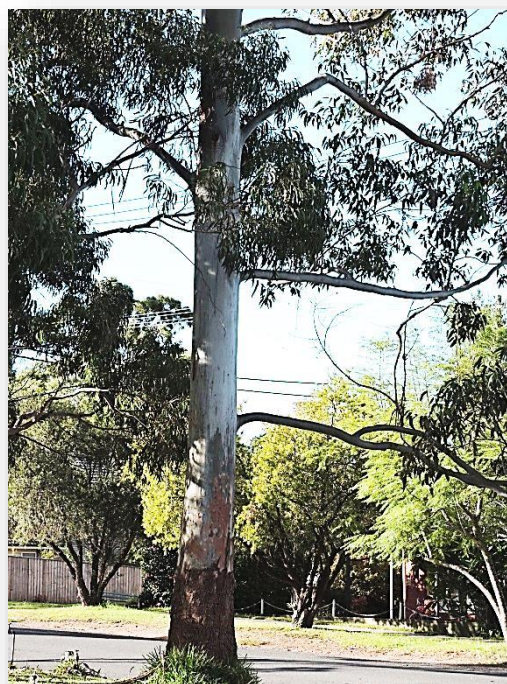
*Drawing Suzanne Fyfe*

Latin: *salignus* = willow - like

- **HABIT/HABITAT:** Can grow to a large tree up to 45 m. Prefers deeper rich shale-sandstone transition, clays & shales. Prefers to grow in an open forest or gully.
- **BARK:** Smooth white-silver-grey, stocking at base some ribbons hanging down.
- **LEAVES:** Adult lanceolate, 10-17 cm long, 2-3 cm wide, discolorous, dark green and glossy
- **BUDS:** Ovoid –cylindrical, fusiform, 5-8 mm long & 3-4 mm wide
- **FLOWERS:** White or cream, 7-11 flowered
- **FRUIT:** cylindrical, pyriform 5–8 mm x 4–7 mm disc depressed, valves exerted outwards.

10. ***Eucalyptus grandis***\* (Flooded Gum)  
Latin: *grandis* = great, large, referring to size

( **SMOOTH bark with stocking at base**)



- **HABIT/ HABITAT:** Can grow up to 60m. Prefers fertile soil in a deep gully environment. Often found growing in tall stands near rainforest.
- **BARK:** white smooth trunk, stocking at base
- **LEAVES:** Adult are lanceolate, discolorous.
- **BUDS:** Operculum is conical, slightly beaked.
- **FRUIT:** Conical-pyriform, 4-5 broad, blunt, exerted, incurved valves.

**The valves distinguish *E. grandis* (incurved) from *E. saligna* (curved out)**



## 11. *Eucalyptus elata* \* (River Peppermint)

Latin: *elatus* = tall referring to its habit

(PART ROUGH bark)



fissured

- **HABIT/HABITAT:** Tall well-formed tree with open bluish canopy and up to 30 m. Open forest to woodland.
- **BARK:** Lower trunk rough, grey to black, vertically and hard. Upper trunk & branches shed in long strips leaving smooth, white, grey surface.
- **LEAVES:** Bluish-green, concolorous, narrow tapering to a long point. Strong peppermint smell.
- **BUDS:** Clavate (club shaped) calyptra hemispherical and shorter than hypanthium.
- **FLOWERS:** Inflorescence 7-40 on long slender peduncle. White flowers in Spring.
- **FRUIT** Pear-shaped up to 6 mm, densely packed in a cluster, descending disc, 3-4 enclosed valves.

## 12. *Eucalyptus robusta* \* (Swamp Mahogany)

Latin: *robustus* = robust refers to the form of the tree

(FULL ROUGH bark)



- **HABIT/HABITAT:** Straight trunk, grows in a swampy area.
- **BARK:** Persistent throughout, rough, thick, spongy, furrowed, reddish-brown.
- **LEAVES:** Broad, lanceolate, large, thick, shiny, discolourous, glossy dark green above, 10-17 cm long and 3 cm wide. Leaves taper to a long point.
- **BUDS:** Large and pale yellow and fusiform in shape. (spindle shaped) The calyptra is beaked.
- **FRUIT** Cylindrical to urn-shaped, valves level with rim or tips slightly exerted.

13. *Eucalyptus microcorys* \*  
(Tallowwood )

(FULL ROUGH bark)

Greek: *micro* = small *korys* = helmet with small bud caps

**USES:** Timber hard, strong, durable & used in construction, flooring & decking  
Leaves are suitable food for koalas.

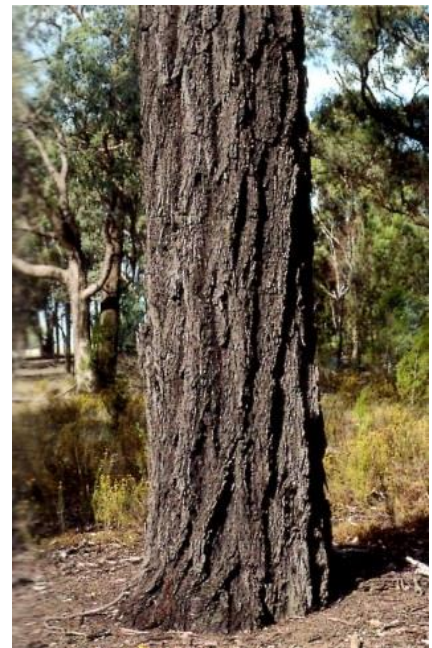
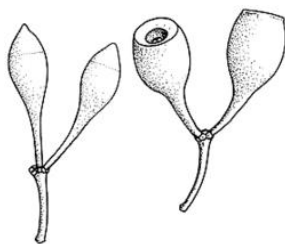


- **HABIT/HABITAT:** Straight trunk up to 40 m. Many side branches, often narrow, some almost at 90° to trunk. It prefers forest areas on fertile soils. This is a commonly planted tree in the Sydney area.
- **BARK:** Persistent throughout, stringy, orange/yellowish – red/brown
- **LEAVES:** Adult leaves are lanceolate/falcate, discolorous, darker green above, paler below. Up to 9-12 cm long and 2.5 cm wide, tapering to a sharp point. (acuminate)
- **BUDS:** Clavate (club-shaped) and in clusters of 7-11.
- **FRUIT:** Conical or pyriform, disc depressed, valves close to rim-level.

14. *Eucalyptus sideroxylon* \* (Mugga Ironbark)  
Greek: *sidero* = iron *xylon* = wood (hard wood)

(FULL ROUGH bark)

**USES:** A dense, hard, durable wood used in heavy duty construction, bridges, rail sleepers,  
Used as a fuel and is an excellent honey producer



- **HABIT/HABITAT:** Height varies from 10 m to 40 m with a spreading canopy. Found on plains, gradual slopes, western Sydney, Hunter valley and it is quite wide spread in NSW. It is also found growing in N Vic & S-E Qld.
- **BARK:** Persistent to main branches, very hard, furrowed black-dark grey in colour.
- **LEAVES:** Adult are lanceolate, up to 14 cm x 1.8 cm wide, green to grey-green and concolorous.
- **BUDS** Clusters of 7, long pedicels (glaucous) & flattened peduncle. **FLOWERS:** pink
- **FRUIT:** Ovoid, globose up to 9 mm diameter. Has a broad depressed disc and enclosed valves.



## GENUS *Corymbia*

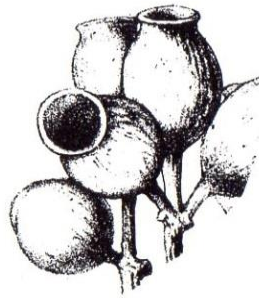
## GROWS NATURALLY in KWG

**K.D. Hill & L.A.S. Johnson described the genus *Corymbia* in 1995.**

### *Corymbia gummifera* (Red Bloodwood)

Latin: *gummi* = gum,  
*fera* refers to the red gum/kino oozing from the trunk.

There is only one species of *Corymbia* in the KWG that GROWS NATURALLY in the KWG.



- **HABIT/HABITAT:** Dry sandy ridge tops, open forest or woodland up to 35 m.
- **BARK:** Rough, persistent to small branches, grey- brown - red and tessellated.
- **LEAVES:** Adult lanceolate, up to 16 cm x 2 cm wide, dull-glossy green, discolourous.
- **BUDS:** Clavate to pyriform in shape, long pedicel.
- **FLOWERS:** flowers white-cream from Jan-April
- **FRUIT:** Large, 15 mm diameter, urn shaped with a distinct lip. Pedicel is long. Valves deeply enclosed.

**(FULL ROUGH bark)**



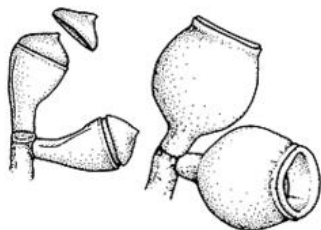
## GENUS *Corymbia*

## PLANTED in KWG\*

**K.D. Hill & L.A.S. Johnson described *Corymbia* in 1995**

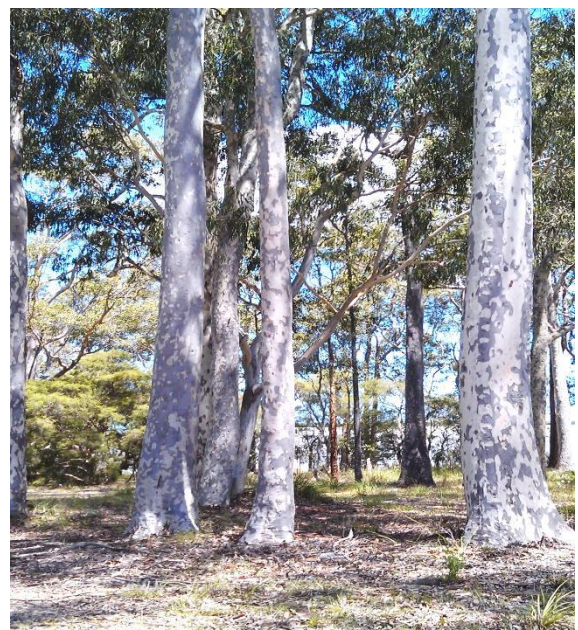
**( SMOOTH bark)**

### *Corymbia maculata*\* (Spotted Gum)



Latin :  
*maculus* = spotted

- **HABIT:** Attractive, ornamental tree, generally a single main trunk
- **BARK** is smooth throughout, white-grey or pink - cream shedding in small flakes.
- **LEAVES** adult leaves are narrow and long and leathery
- **FRUIT** ovoid to urceolate, valves enclosed. Pedicel very short, almost sessile.





## **Corymbia ficifolia\* (Red flowering Gum)**

**(FULL ROUGH bark)**

**Latin:** *fici* = of figs, *folium* = leaf, referring to the fig-like leaves

**NOTE:** At KWG, the “Red flowering gum” has been planted near Caley’s Pavilion and is actually a graft of *C. ficifolia* onto *C. ptychocarpa*.

- *C. ficifolia* is grafted mainly onto *C. maculata*, *C. ptychocarpa* or *C. calophylla* rootstocks. (compatibility can be an issue between the “scion” and the “rootstock.”)
- Grafting produces true to colour flowers. (flower colour is variable when grown from seed)
- Grafted *C. ficifolia* trees start flowering at a much earlier age than seedlings do.



Woody ovoid fruit 3 cm x 2.5 cm, disc depressed, valves enclosed



*C. ficifolia* flowers and buds are up to 14 mm long  
(Photo R.M. Berowra)

## **Corymbia torelliana\* (Cadaghi Gum) (SMOOTH bark with stocking at base)**



(NOTE Regarded as a weed in parts of Qld)

Photos: Cumberland State Forest R.M.

### **Distinguishing Features**

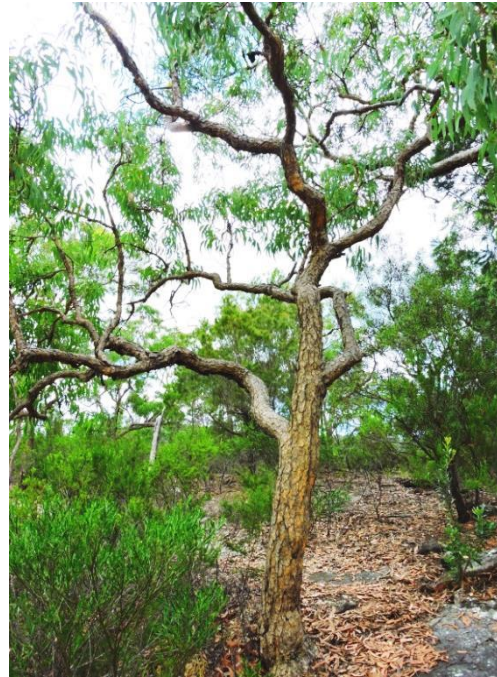
- Medium to tall tree up to 30m with rough bark at the base and smooth grey-green on upper.
- Leaves are large, broad (14 x 3.5 cm) and roughly hairy. Leaves are often affected by a sooty black mould.
- White flowers are borne in large clusters at the tips of the branches with numerous stamens.
- Woody capsules are (9-13 mm long by 12 mm wide) round, urn shaped with 3 compartments.



## *Corymbia eximia*\* (Yellow Bloodwood)

(FULL ROUGH bark)

Latin: *eximius* = extraordinary, in reference to the spectacular flower head.



### Distinguishing Features

- Bark is persistent throughout, rough and flaky, pale brown to yellow-brown in colour.
- Leaves are lanceolate, falcate 10-20 cm long x 1.3-3 cm wide, concolorous, pendulous in habit.
- Flowers are white and showy in winter/spring.
- Fruit are large, 13-20 mm long x 10-15 mm diameter, urn shaped and sessile with enclosed valves. The fruit is woodier and more rounded than the fruit of *C. gummifera*.

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## The Importance of Gum Trees: USES, ADVANTAGES, FACTS

*Gum trees were introduced from Australia to the rest of the world following Cook's expedition in 1770 eg. California, Brazil, Colombia, Ethiopia, Morocco, Portugal, S-Africa, Uganda, Israel, Chile, Spain. Some are used commercially overseas on a large scale but some have become evasive and are regarded as weeds.*

- Commercial Uses: construction/building industry, furniture, woodchips, paper, fuel, extraction of oils, used in medicines, insecticides, perfumes, bee keeping industry, manufacture of dyes, floristry industry,
- Aesthetic & functional: landscaping, windbreaks, shelter for farm animals, recreational uses
- Habitat for wildlife: shelter for wildlife, food for koalas, insects and birds are attracted by the plentiful nectar, assisting in pollination
- Evolution: important in our study of the evolution of flora and fauna
- Strategies for bushfire survival: Have special adaptations eg. lignotubers, extensive root system, epicormic buds, hard woody capsules protecting seeds,
- Important Facts: Gum trees can absorb huge quantities of water from the soil through transpiration. Plantings of Gum trees can thus lower the water table and reduce soil salination.
- Storage of carbon: All trees capture carbon dioxide from the atmosphere and store it in their wood, roots and leaves. In photosynthesis oxygen is released into the atmosphere.

*Gum trees are particularly effective at carbon capture and sequestration due to the fact that the wood is very dense, trees grow fast, they can grow large and live a long time 200-300 year. Very important in this time of climate change.*

## **ACKNOWLEDGEMENTS and REFERENCES**

A hyperlink to the **NSW Flora Online** can be used to access information, illustrations, plant descriptions and a glossary from [PlantNET](#). Simply hold down Ctrl and left click PlantNET while connected to your Service Provider

NOTE To go directly to information about a particular species you can click on the species name eg. *Eucalyptus saligna*, hold down Ctrl then Click to follow the link.

Provided with the courtesy of **PlantNET, The Royal Botanic Gardens & Domain Park Trust 2021.**

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