

KOALA QUEST

KOALA TREE SPOTTING GUIDE



Eucalyptus trees – often called gum trees – are one of the most important plants in Australia. They are native to Australia and are a major part of our forests and wildlife habitats.

There are over 900 native species of eucalypts in Australia. Because there are so many species, identifying them can sometimes be tricky. Scientists study the leaves, bark, flowers, and gumnuts to tell different species apart.

Koalas depend on eucalyptus trees for both food and shelter, which is why learning to recognise them is an important skill for any Koala Guardian.

Below are some key features that can help you identify a eucalyptus tree.

LEAVES

Most eucalyptus trees have **long, narrow leaves** that hang downwards from the branches. These leaves often look slightly curved or shaped like a spear.

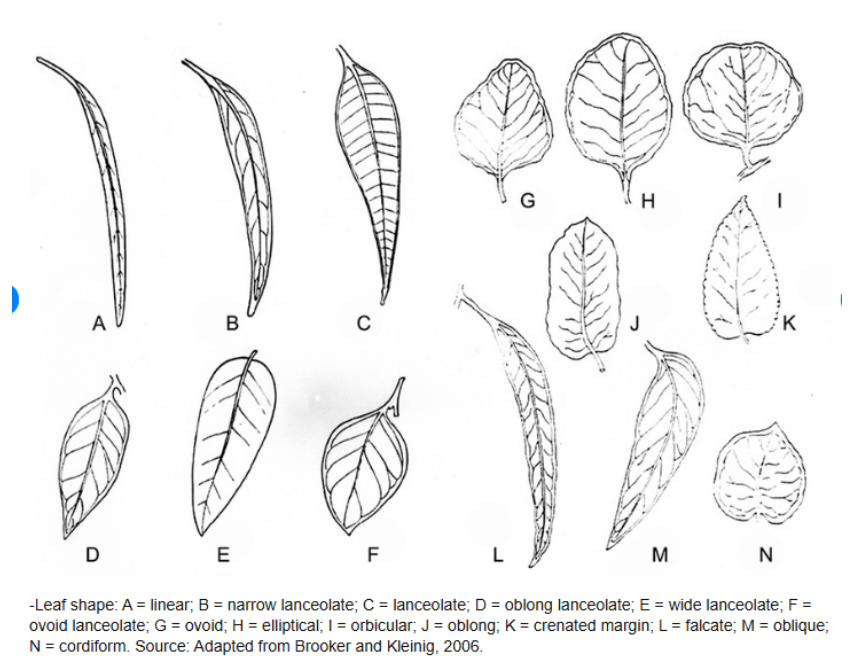
Leaf colours can vary from **light green to dark green, blue-green, or grey-green** depending on the species.

Some things to notice when looking at eucalyptus leaves:

- **Shape:** usually long and narrow
- **Position:** many hang down instead of sticking out sideways
- **Texture:** often smooth and slightly leathery
- **Smell:** crushed leaves often release a **strong eucalyptus scent** because they contain natural oils

These oils help protect the tree from insects and give eucalyptus leaves their distinctive smell.

Koalas have special digestive systems that allow them to **eat eucalyptus leaves that are toxic to most other animals**.



GUMNUTS (Seed capsules)

Eucalyptus trees produce **woody seed capsules** commonly known as **gumnuts**.

These grow after the tree flowers and contain the seeds that allow new trees to grow.

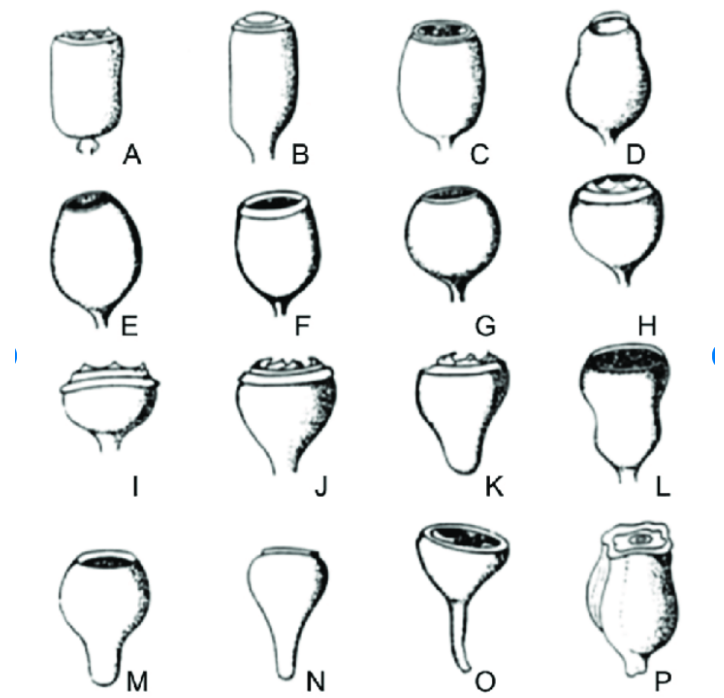
Gumnuts can vary a lot between species, which is why botanists often use them to identify eucalyptus trees.

They may be:

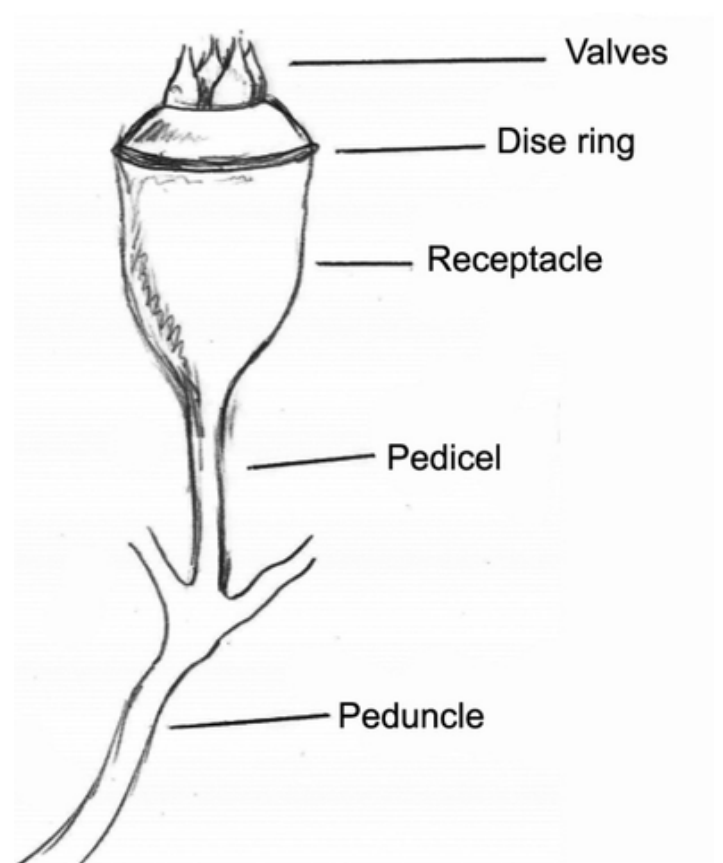
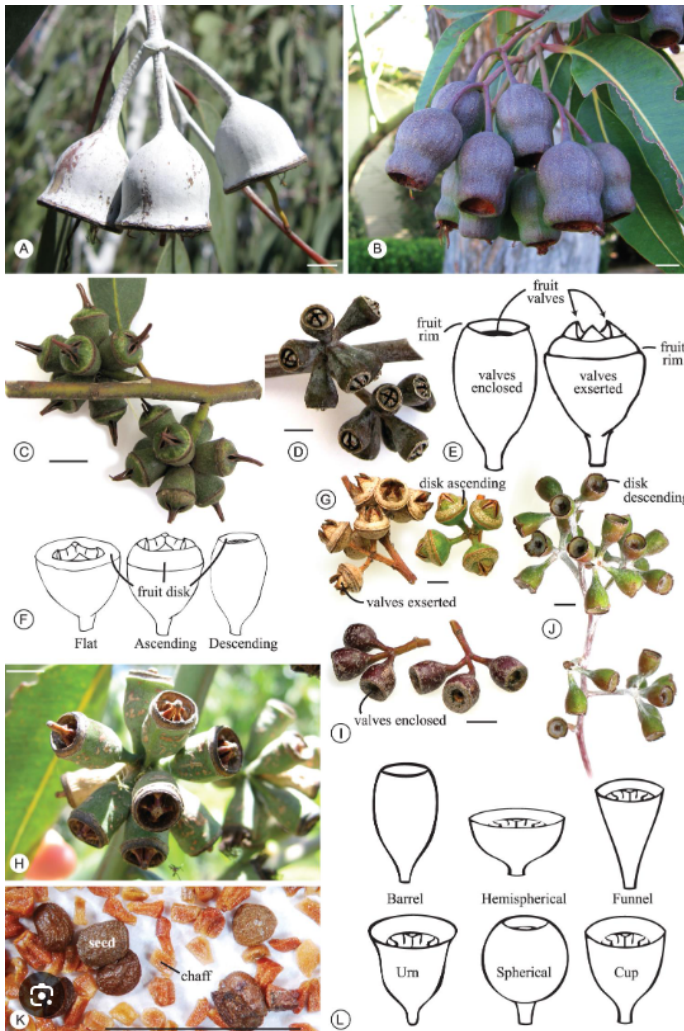
- **Round or cup-shaped**
- **Small and button-like**
- **Large and thick with wide openings**

Most gumnuts have a small opening at the top where the seeds are released.

You can often find fallen gumnuts **on the ground near the base of the tree.**



-Fruit shape: A = oblong; B = cylindrical; C = barrel; D = Urceolar; E = ovoid; F = truncated ovoid; G = globular; H = truncated globular; I = hemispheric; J, K = widely tapered; L = bellshaped; M = piriform; N, O = conical; P = quadrangular. Source: Adapted from Brooker and Kleinig, 2006.



BARK

The bark of eucalyptus trees is one of the **most useful clues for identifying species**.

Different species have different types of bark. Some of the common bark types include:

Smooth bark (9)

Some eucalyptus trees shed their bark in thin sheets or patches, leaving a **smooth trunk underneath**. These are sometimes called **gum trees**.

Stringybark (2)

Some species have **long fibrous bark that looks stringy or shaggy**.

Ironbark (3)

Ironbark trees have **very dark, rough, deeply furrowed bark** that feels thick and hard.

Peppermint bark (10)

Some species have **rough bark with a strong eucalyptus smell**.

The bark may cover the **entire trunk** or only the **lower part of the tree**, depending on the species.



FLOWERS

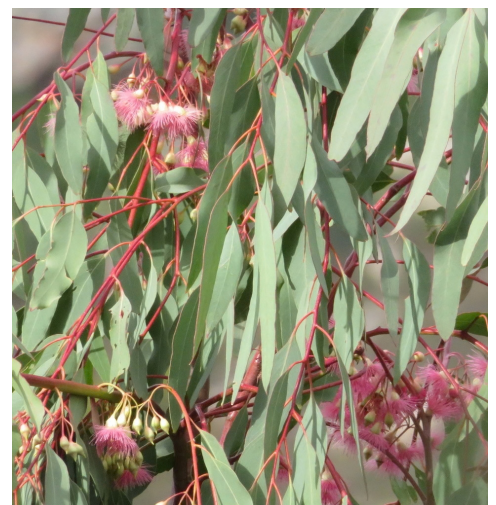
Eucalyptus flowers are unusual because they **do not have visible petals**.

Instead, they have a cluster of **soft stamens** that form fluffy flowers.

Flower colours can include:

- white
- cream
- yellow
- pink
- red

These flowers are very important for **pollinators such as bees, birds, and insects**.





WHY EUCALYPTUS TREES MATTER FOR KOALAS

Koalas rely on eucalyptus trees for:

- **Food** – they eat the leaves
- **Shelter** – they sleep and rest in the branches
- **Safety** – tall trees help protect them from predators

However, koalas only eat **certain species of eucalyptus**, which is why protecting these trees is essential for their survival.

In the South-East Queensland the following trees are recognised as important food trees.

PRIMARY FOOD TREES (main food source):

- **Forest red gum or Queensland blue gum (*Eucalyptus tereticornis*):**

This is one of the **most important food trees in Queensland**. Growing 20 to 40m tall, this species is found throughout the coastal area, mainly on alluvial flats, or other fertile soils on hill slopes and mountains. The smooth bark is shed in irregular plates with white, grey and bluish patches. Flowers are usually white but can be pink.

- **Tallowwood (*Eucalyptus microcorys*)**

This species occurs in moist eucalypt open forest on a range of soil types. Often **found on hilly areas** in fertile soils, tallowwood will grow on rather poor sand if subsoil moisture is adequate. Creamy white flowers in late winter-spring (sometimes summer) and grows up to 40m. The **rough red-brown bark** is soft and fibrous.

- **Small-fruited grey gum (*Eucalyptus propinqua*)**

Irregular and **mottled bark patches** characterise this medium to tall forest tree. It will grow 20 to 35m tall on a wide range of soil types but prefers moist, well-drained gravelly soils with some clay content. Flowering periods from January to March.

- **Red stringybark (*Eucalyptus resinifera*)**

This species **prefers sandy or well-drained soils** with adequate soil moisture. Grows 20 to 45m and flowers in spring and summer. The **red to grey bark** is rough and fibrous.

- **Narrow-leaf Ironbark (*Eucalyptus crebra*)**

This species prefers sandy soils in woodland and forest. Grows to a height of 35m and flowers in most months, and the **flowers are white**. It has persistent thick, rough, deeply furrowed, **greyish black “ironbark”** from the base of its trunk to the small branches.

SECONDARY FOOD TREES:

Koalas are also regularly seen in other tree species that are used either as a food source or provide important habitat. These tree species provide good shade and shelter or have other suitable characteristics that make them suitable for koalas.

- **Spotted gum (*Corymbia citriodora*) (previously known as *Eucalyptus maculata*)**

Medium to large tree (25 to 40m). Found on heavy-textured, well-drained soils on **slopes and ridges**. The bark has **distinctive dimples**. Flowers March to June.

- **Scribbly gum (*Eucalyptus racemosa*) (previously known as *E. signata*)**

Small to tall forest tree, grows up to 20m. Occurs in **coastal areas**. Distinct **smooth white bark** with **scribbly patterns** made by bark-boring insects. Prefers clay to sandy, poorly-drained soils. Small white flowers from July through to September.

- **Queensland white stringybark (*Eucalyptus tindaliae*)**

Canopy of this moderate sized tree has a **silvery appearance**. It has **rough fibrous bark** that persists to the top of the trunk and branches. Grows 20 to 30m. Flowers February to April.

- **Queensland grey ironbark (*Eucalyptus siderophloia*) (previously *Eucalyptus drepanophylla*)**

Grey ironbark usually occurs in **sheltered valleys** with alluvial soils on **edges of flood plains**. Also **grows on slopes** on a range of soil types. This species grows to 30m and flowers winter-early summer.

- **Broad-leaved ironbark (*Eucalyptus fibrosa* subsp. *fibrosa*)**

Moderate sized tree grows 20 to 30m. Found on **stony, well-drained soils on ridges and slopes**. **Black, deeply furrowed bark** (iron bark) and **dull green leaves**. Flowers April to July.

- **Five-veined paperbark (*Melaleuca quinquenervia*)**

Commonly grows from **8 to 12m** but can reach 25m. Found in **coastal areas**, along **streams, estuary banks, marshes and seasonal swamps**. Likes sandy, gravelly, swampy soils where ground water is close to the surface. **White to light-brown papery layers of cork bark**. The loose outer layers become torn and ragged, eventually peeling off. White to cream flowers mainly from spring to autumn.

Koala Tree Detective Checklist

Use this checklist when trying to identify a eucalyptus tree, look for **several clues together**, such as:

Checklist	
Long narrow leaves	☐
Distinctive bark	☐
Gumnuts on the ground and with leaves	☐
The smell of eucalyptus oil	☐

Using **multiple features** together helps scientists correctly identify different eucalyptus species.