



## Callistemon, Melaleuca and Kunzea

### Family: MYRTACEAE

The Myrtaceae family takes its name from the West Asian Myrtle, *Myrtus communis*, long naturalised in Europe. It is a large family of approximately 155 genera and 3000 species, mostly from the southern hemisphere, but also present in the Mediterranean region. The Myrtaceae family has two sub-families: Psiloxylloideae and Myrtoideae. All Australian species belong to the sub-family Myrtoideae.

Leaves dotted with glands containing a variety of oils which release characteristic odours.  
Leaves entire and may be alternate, opposite or whorled.  
Flowers are usually regular and mostly have four or five sepals and petals  
Stamens are often numerous and conspicuous.

#### ***Did you know that,***

- Bottlebrush is a common name for Callistemons
- Paperbark is a common name for those Melaleucas with papery bark
- Common names highlight the more obvious features of plants
- Some botanists combine *Callistemon* and *Melaleuca* into the one genus: *Melaleuca* and they are both in Tribe: Melaleuceae

### ***Callistemon***

*Callistemon* means beautiful stamen. There are about 30 Australian species, all endemic. Leaves are alternate. The many crowded flowers are arranged in terminal spikes and the new stem grows from the end of the flower spike. The fruit is a woody capsule which remains on the plant in a cylindrical cluster. Many *Callistemons* grow in damp places but they are hardy and adaptable garden plants which can tolerate dry conditions and all except alkaline soils. They prefer full sun. They can be pruned back hard if necessary. They grow readily from cuttings or seed, but hybridise readily.

#### ***Callistemon citrinus***      Crimson bottlebrush

A stiff, erect shrub to 3m.

**Leaves:** Lemon scented, alternate, lanceolate, to 7cm long, 8mm wide. Venation obvious on both sides. New growth is soft pink.

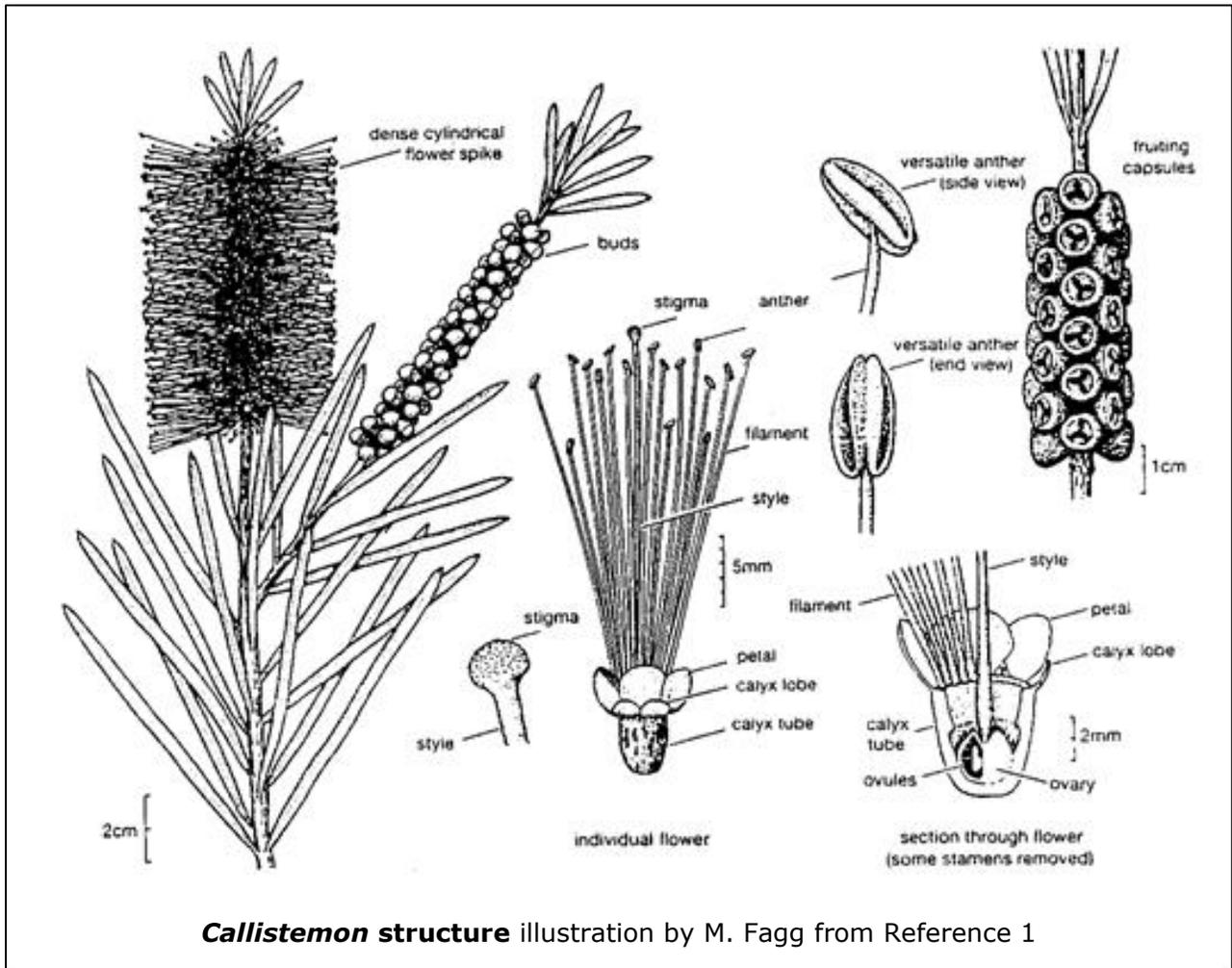
**Flowers:** Spikes are bright red, up to 10cm long, 7cm wide. Spring to summer.

**Fruit:** Capsules to 7mm diam.

**Habitat:** In wet sclerophyll forest, often beside streams or in damp places.  
Coast & ranges NSW, Vic.



***Callistemon linearis*, *Callistemon pinifolius* and *Callistemon rigidus*** have very similar characteristics but are treated as separate species in these notes.



***Callistemon linearis*** Narrow-leaved Bottlebrush

Stiff shrub to 3m.

**Leaves:** Thick, narrow, to 10cm long, 1-3mm wide.

**Flowers:** Spikes to 10cm long, Stamens pale red with darker anthers. Spring to summer.

**Fruit:** Capsules 7mm diam.

**Habitat:** Damp places in heath & woodland.

Coast, ranges and slopes NSW, Qld.



**Callistemon pinifolius** Pine-leaved Bottlebrush

Decumbent shrub to 1m or more.

**Leaves:** Terete to channelled, 4-8cm long, about 1mm diameter, dark green.

**Flowers:** Spikes to 7cm long. Stamens yellow-green with dark anthers. Spring to summer.

**Fruit:** Capsules 7 mm diam.

**Habitat:** Damp places in heath & woodland. Chiefly in the Sydney district.



**Callistemon rigidus** Stiff Bottlebrush

A stiff, erect shrub to 3m.

**Leaves:** Thick, narrow, to 7cm long, 3-4mm wide, side veins obscure.

**Flowers:** Spikes to 10cm long. Stamens red with dark anthers. Summer.

**Fruit:** Capsules 7 mm diam.

**Habitat:** Damp places in heath & woodland. Widespread NSW coast and ranges, chiefly in the Sydney district.



**Callistemon salignus** Willow Bottlebrush

Large shrub or small tree to 10m.

**Leaves:** Narrow-elliptic to 9cm long, 1cm wide. Veins distinct.

**Flowers:** Spikes to 5cm long, cream. Spring.

**Fruit:** Capsules 5mm diam.

**Habitat:** Low-lying river flats and damp creeks. NSW coast and ranges, Qld.



**Callistemon viminalis** Weeping Bottlebrush

Weeping shrub to 8m, dark, furrowed bark.

**Leaves:** Leaves linear to narrow-elliptic with one side straighter than the other, to 7cm long, 3-7 mm wide.

**Flowers:** Spikes to 10cm long, Stamens bright red and are fused into a ring at the base. Spring to summer and throughout the year.

**Fruit:** Capsules 6mm diam, wide apex.

**Habitat:** Beside streams on sandstone or granite. Northern NSW, Qld.



## **Melaleuca**

The name of the genus is said to refer to the black and white colouring of the bark, especially after fire. There are over 200 species, Australia-wide, with the greatest number in Western Australia. In the west most grow in well-drained sandy soils. In the east many are trees in damp situations. The genus consists of woody trees and shrubs, some with papery bark, some hard. Flowers occur in inflorescences which are heads, spikes or "claws". The numerous stamens are joined to varying degrees to form 5 "bundles". The fruit is a capsule, often woody. The number of Melaleucas which were grown in England after Banks' return from Botany Bay (*M. armillaris* in 1789, to be followed soon after by *M. ericifolia*, *M. nodosa*, *M. thymifolia* and *M. hypericifolia*) attests to the ease of growing the genus from seed. Capsules should be at least 12 months old to ensure mature seed.

### **Melaleuca armillaris** Bracelet Honey-myrtle

Shrub to 5m. Light coloured flaking bark.

**Leaves:** Alternate, linear, 2.5cm long by 1mm.

**Flowers:** Dense spikes to 7cm long. Stamens white. Spring.

**Fruit:** Capsules 5mm diam.

**Habitat:** Heath in coastal NSW, Vic, Tas, SA.



### **Melaleuca deanei** Deane's Melaleuca ROTAP: 3RC-

Shrub to 3m with fibrous-flaky bark. (not in key below)

**Leaves:** Alternate, 12-25mm by 3-6mm. Central vein obvious. Leaf stalk yellow. New growth pale orange-brown.

**Flowers:** Spikes bright white, up to 6cm long, Flowers form in spring but mainly after fire.

**Fruit:** Capsules to 7mm diam.

**Habitat:** In wet heath on sandstone in Sydney area. Berowra to Nowra NSW.



### **Melaleuca elliptica** Granite Honey Myrtle

Erect, open shrub to 4m. (not in key below)

**Leaves:** Alternate, elliptical. Grey-green.

**Flowers:** Spikes are deep red, up to 8cm long. Spring, summer and autumn.

**Fruit:** Capsules

**Habitat:** Full sun on granite. South-west WA.

**Melaleuca hypericifolia** Hillock Bush

Shrub to 6m with corky to papery bark.

**Leaves:** Opposite and decussate, lanceolate, to 4cm long, 10mm wide.

**Flowers:** Dense, orange-red spikes in leaf axils, up to 5cm long. Spring to summer.

**Fruit:** Capsules to 10mm diam.

**Habitat:** Wet sandy heath and sclerophyll woodland.

Coast and ranges, Sydney to southern NSW.



**Melaleuca linariifolia** Snow-in-summer or Flax-leaved Paperbark or Budjur

Shrub or small tree to 10 m with papery bark.

**Leaves:** Opposite, narrow, pointed, to 4.5mm long by 4mm wide.

**Flowers:** Spikes are white, up to 4cm long. Form a white canopy over the tree. Spring to summer flowering.

**Fruit:** Capsules 4mm diam.

**Habitat:** Heath and dry sclerophyll forest in moist or swampy ground.

Coast and adjacent ranges, north from Bawley Point NSW, Qld.



**Melaleuca nodosa** Prickly-leaved Paperbark

Shrub to 4m with a corky to papery bark.

**Leaves:** Alternate, narrow, to 4cm long, 1-3mm wide. Very sharp pointed.

**Flower:** Small head-like clusters of creamy flowers. Spring to summer.

**Fruit:** Capsules in dense globular cluster.

**Habitat:** Coastal heath and dry sclerophyll forest. North from Campbelltown NSW, Qld.



**Melaleuca quinquenervia** Broad-leaved paperbark

Tree to 15 m high. Bark papery and white when fresh.

**Leaves:** Alternate, lanceolate, to 7cm long, 8-24mm wide. Venation obvious on both sides.

**Flowers:** Spikes are cream, up to 5cm long.  
Autumn to winter

**Fruit:** Capsules 5mm diam.

**Habitat:** Coastal swamps and lake margins, north from Botany Bay NSW, Qld, Papua NG, N. Caledonia.



**Melaleuca styphelioides** Prickly-leaved Tea Tree

Tree to 20 m high with papery bark.

**Leaves:** Alternate, twisted, pointy, to 15mm long, 6mm wide.

**Flowers:** Dense spikes are white, to 2cm long.  
Summer.

**Fruit:** Capsules 3mm diam, with pointy sepals.

**Habitat:** Moist places along streams.  
Coast and ranges north from Nowra NSW, Qld.



**Melaleuca thymifolia** Thyme Honey-myrtle

Shrub to 1-2m. Stems with corky bark; often arising from a lignotuber.

**Leaves:** Opposite, small, to 15mm long, 1-3mm wide.

**Flowers:** Small clusters of pink to deep mauve flowers.

**Fruit:** Capsules 5mm diam, thick sepals.

**Habitat:** Heath and scrubland, damp places and margins of swamps.

Coast and ranges NSW, Qld.



## Acknowledgements

These notes contain hyperlinks to materials, including images, illustrations, plant descriptions and a glossary from PlantNET, with the courtesy of The Royal Botanic Gardens & Domain Trust, 2021. For general access to PlantNET see also <http://plantnet.rbgsyd.nsw.gov.au/>

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<https://austplants.com.au/North-Shore/> Updated WG 2015/2021.

| <b>Key to the genus <i>Callistemon</i> growing in KWG</b> |  |                               |
|---|--|-------------------------------|
| 1   | Leaves less than 3 mm wide   | 2                             |
| 1*  | Leaves more than 3 mm wide   | 3                             |
| 2   | Flowers yellow-green or rarely red; leaves terete or channelled, rough with oil glands                       | <i>Callistemon pinifolius</i> |
| 2*  | Flowers red; leaves flat or channelled, not or scarcely rough  | <i>Callistemon linearis</i>   |
| 3   | Flowers yellow or green  | <i>Callistemon salignus</i>   |
| 3*  | Flowers red, pink or lilac   | 4                             |
| 4   | Flowers red  | 5                             |
| 4*  | Flowers pink or lilac  | <i>Callistemon citrinus</i>   |
| 5   | Stamens fused into a ring at the base  | <i>Callistemon viminalis</i>  |
| 5*  | Stamens free   | 6                             |
| 6   | Leaves more or less linear, mostly 5--7 cm long, 3--4 mm wide  | <i>Callistemon rigidus</i>    |
| 6*  | Leaves oblanceolate to narrow elliptic, 3-7 cm long, 5-8 mm wide, short acuminate and pungent. Veins evident | <i>Callistemon citrinus</i>   |

| <b>Key to the genus <i>Melaleuca</i> growing in KWG</b> |  |                                |
|---|--|--------------------------------|
| 1   | Leaves opposite or more or less opposite   | 2                              |
| 1*  | Leaves scattered, alternate or irregularly arranged (including irregularly whorled)  | 4                              |
| 2   | Flowers red; staminal bundles more than 20 mm long   | <i>Melaleuca hypericifolia</i> |
| 2*  | Flowers mauve, pink, white or yellowish  | 3                              |
| 3   | Flowers pink to deep mauve, in short spikes; staminal bundles less than 20 mm long; Inflorescences lateral from older stems  | <i>Melaleuca thymifolia</i>    |
| 3*  | Flowers white or yellowish; staminal claws 8--15 mm long each bundle with more than 30 stamens; inflorescences terminal, sub-terminal or in the upper axils; fruit with included valves                      | <i>Melaleuca linariifolia</i>  |
| 4   | Fruit in tight globose or ellipsoidal clusters; flowers in globose heads or short spikes   | <i>Melaleuca nodosa</i>        |
| 4*  | Fruit scattered or in cylindrical groups; flowers in spikes or terminal clusters   | 5                              |
| 5   | Leaves flat, more than 3 cm long, petiolate, usually with 5 prominent longitudinal veins   | <i>Melaleuca quinquenervia</i> |
| 5*  | Leaves not as above  | 6                              |
| 6   | Leaves ovate to broad-ovate, 2--6 mm wide, with more than 11 longitudinal veins; bark papery   | <i>Melaleuca styphelioides</i> |
| 6*  | Leaves at least shortly petiolate, 1-veined; Leaves flat or lower surface concave, c. 1-2 mm wide; flowers white to pink or purple; Inflorescences axillary, borne low on the branchlets; bark corky or hard | <i>Melaleuca armillaris</i>    |

#### REFERENCES:

1. Wrigley, J & Fagg, M. *Bottlebrushes, Paperbarks & Tea trees*. Harper-Collins, 1993.
2. Robinson, Les. *A Field Guide to the Native Plants of Sydney*. Kangaroo Press, 1991.
3. Brophy, J, Craven, L, & Doran, J. *Melaleucas: their botany, essential oils and uses*. ACIAR Monograph MN156, 2013 (free download).

**Tribe: Leptospermeae, Genus: *Kunzea***

*Kunzea* was named as a tribute to Gustave Kunze, an early 19th century professor of medicine and botany in Leipzig, who worked on a collection of Australian plants. There are more than 40 species widespread over temperate and sub-tropical Australia. They are woody shrubs with small, entire, usually alternate leaves. Flowers are usually in fluffy pom-poms, often terminal, sometimes in upper leaf axils. Colours range from white through yellow, mauve and red. Stamens are usually longer than petals and are usually the conspicuous part of the flower, arranged in 2 or more rows. The capsule is non-woody and the calyx lobes persist. Eastern species grow readily in well-drained soils in sun. W.A. species, with the exception of *Kunzea baxteri*, do not thrive in our humid summers.

| Key to the genus <i>Kunzea</i> growing in KWG |  |                        |
|---|--|------------------------|
| 1   | Flowers pink to purple   | <i>Kunzea capitata</i> |
| 1*  | Flowers white  | 2                      |
| 2   | Flowers not in heads, crowded on leafy side branches or in axils of upper leaves | <i>Kunzea ambigua</i>  |
| 2*  | Flowers in head-like clusters at ends of branchlets                              | <i>Kunzea capitata</i> |

**[Kunzea ambigua](#)** Tick Bush

Bushy shrub to 3.5m.

**Leaves:** Small, narrow, to 12mm long, about 1mm wide, divergent, alternately arranged along branches.

**Flowers:** White, crowded in leaf axils, not in heads. Stamens longer than petals.

Spring to summer.

**Fruit:** Capsules 3.5mm long, 4mm wide. Dehiscent.

**Habitat:** Heath and dry sclerophyll forest. South from Sydney area in NSW, Vic, Tas.



**[Kunzea capitata](#)** No common name

Erect or ascending shrub to 2m.

**Leaves:** Alternate, with three main veins evident. Long spreading hairs on young leaves.

**Flowers:** Pink to purple, in clusters at ends of branches, Stamens much longer than petals. Late winter to spring.

**Fruit:** Capsules 4mm long, 2mm wide. Dehiscent

**Habitat:** Heath and dry sclerophyll forest. Coast and ranges NSW, Qld.



**Signs in KWG with '29' on a green disc indicate plants belonging in these three genera.**