



Topic 31: *Leptospermums* and *Baeckneas*

TEA-TREES, HEATH-MYRTLES and others

(Family – MYRTACEAE)

Did you know that,

- *Leptospermums*, *Agonis*, *Austromyrtus*, *Baeckneas*, *Calytrix* and *Darwinias* are all members of the Myrtaceae family.
- Five white or pink petals dominate the flowers of these plants in KWG.
- In *Darwinias*, it is the long style that is the outstanding feature of the flower.
- All of these plants are growing in KWG.

Tribe: **Myrteae**

Trees, sometimes shrubs with leaves opposite. Inflorescences axillary, sometimes paniculate. Stamens free, numerous and anthers versatile. Ovary inferior mostly 2 to 3 locular. Fruit indehiscent and fleshy. This tribe contains the European species *Myrtus*, from which the family name Myrtaceae is derived. Some common genera, *Austromyrtus*, *Myrtus*.

Austromyrtus

The genus *Austromyrtus* has 3 species all endemic to Australia (NSW, Qld). Trees or shrubs with opposite leaves. Flowers solitary in groups of 4-5. Stamens free and numerous. Fruit a globose or ovoid berry. The botanical name *Austromyrtus* means "southern myrtle".

Austromyrtus tenuifolia (*tenuifolia*= thin leaved)

A graceful shrub to 2 m high.

Leaves: Opposite, narrow, with recurved margins and fine stiff points, 1.5-4 cm long, 1-3 mm wide. Lower surface of young leaf is silky and above is rosy.

Flowers: White, 5-petalled with numerous stamens and grouped together on short stalks in leaf axils. Flowering in summer.

Fruit: An indigo berry or white with dark spots, 4-5 mm diameter.

Habitat: In wet sclerophyll forest, often beside streams or in damp places. NSW.



Tribe: **Leptospermeae**

Shrubs or trees with leaves mostly spiral. Inflorescences with solitary flowers or triads. Stamens usually free and anthers versatile. Ovary half inferior. Fruit a woody capsule sometimes with delayed dehiscence. Some common genera, *Agonis*, *Kunzea*, *Leptospermum*.

Leptospermum, Tea-trees

The genus *Leptospermum* has 79 species, 75 of which are endemic to Australia. It occurs in all the states and the Northern Territory and extends to South-East Asia, New Guinea and New Zealand. It is thought that the common name, Tea-tree, originated from early colonial days when *Leptospermum* was used as a substitute for tea. Captain Cook's crew drank tea made from leaves of the New Zealand plant Manuka (*L. scoparium*) as a tea substitute.

Tea-trees are tough shrubs or small trees with smooth, fibrous or papery bark and alternate, small aromatic leaves, in small clusters. They are well adapted to drying winds and poor sandstone soils. The flowers have five round or wedge-shaped petals spreading around a central cup with an erect style in the centre. Five sepals lie between the petals. Numerous stamens are in a single ring around the edge of the cup. Many species of insects including flies, beetles and bees are attracted to the rich honey nectar in the flowers. Fruit is a distinctive woody capsule with 3-12 chambers. The botanical name is a reference to the many small seeds produced by the genus – *lepto*, slender, *spermum*, seed.

Some representatives found in the Wildflower Garden are: *L. arachnoides*, *L. petersonii*, *L. polygalifolium*, *L. squarrosum*, *L. trinervium*. Also a species from a related genera, *Agonis flexuosa*.

Leptospermum arachnoides (arachnoides=spider-like), Spidery Tea-tree

A low stiff spreading shrub to 2 m with spiky leaves and rough bark, peeling in flaky layers.

Leaves: Narrow, needle-like and pungent, 10-20 mm long, 1-2 mm wide.

Flowers: Solitary, white, 8-12 mm diam. Flowering Nov.-Jan.

Fruit: Woody domed capsule 5-8 mm diam., with four to five valves, persistent.

Habitat: Heath and open sandstone in moist areas. NSW and Qld.



Leptospermum grandifolium (grandifolium=large leaves), Woolly Tea-tree. A tall shrub to 1.5 m or tree to 6 m with large leaves and smooth bark peeling off in strips.

Leaves: Large, oblong, recurved or flat, apex narrowing quickly to a pungent point, 10-30 mm long, 3-7 mm wide.

Flowers: Solitary, white, 15 mm diam. hypanthium hairy Flowering Oct.-Jan.

Fruit: Woody domed capsule 8-10 mm diam, with five valves, persistent.

Habitat: Sandy swamps, rocky streams mainly on ranges south from Hawkesbury R in NSW & in Vic.



[Leptospermum parvifolium](#) (parvifolium=small leaved,)

Erect shrub to 2m. Bark flaky and younger stems hairy.

Leaves: Small, thick, obovate, 3-8 mm long, 1-3 mm wide, with visible oil dots.

Flowers: Buds pink, hairy. Flowers solitary, white or pink, with green centres and mostly 10 mm diam. Hypanthium hairy. Flowering Sept-Nov.

Fruit: Capsules 4 mm diam, hairy, 5 valves well exerted.

Habitat: Found on poor sandy or gravelly soils and rocky ridges in dry forest. NSW, Qld.



[Leptospermum petersonii](#)

Shrub or small tree to 5 m high, bark flaky, persistent and fibrous, younger stems hirsute, soon glabrous.

Leaves: Often strongly lemon-scented, narrow-elliptic to lanceolate, usually 20-40 mm long, 2-5 mm wide, flat or recurved, mostly glabrous; apex usually retuse.

Flowers: Usually solitary, 10-15 mm diam., white, new growth tinged with red or purple. Hypanthium with obvious glands, 3-4 mm long, almost glabrous. Sepals 1.5-2.5 mm long mostly glabrous. Petals 5-6 mm long. Stamens 2.5-3.5 mm long. Ovary 5-locular. Flowering Dec- Jan.

Fruit: Capsule 6 mm diam., surface flaking, persistent.

Habitat: Often near wet sclerophyll forest or rainforest, on sandy soils or on rocky escarpments, north from Port Macquarie. NSW and Qld.



[Leptospermum polygalifolium](#) (polygalifolium=*Polygala*-leaved,) Lemon-scented Tea-tree. Graceful shrub to 3m. Bark hard, not papery or flaky.

Leaves: Soft and narrow 10-15mm long, with one rather obscure vein, visible oil dots and a strong lemon odour when crushed.

Flowers: Solitary and usually creamy white with green centres and mostly 10-15 mm diam. Some varieties have yellow buds and yellow flowers. Flowering Aug-Jan.

Fruit: Capsules 5-10 mm diam, hairless, 5 valves and with distinct stalk.

Habitat: Found in moist places in woodland. NSW, Qld.



[Leptospermum squarrosum](#) (squarrosum= at right angles), Pink Tea-tree

A tall spreading shrub 1-3m high with conspicuous attractive flowers, mostly borne along the older branches.

Leaves: Glossy, small, crowded and variable 5-15 mm long, 2-5 mm wide. Leaf margins incurved and point pungent.

Flowers: Buds are pink and petals can vary from almost white to rich pink 10-20 mm diam. Flowers are solitary. Flowering irregular often March).

Fruit: Capsules are about 12mm diam, and hairless, five valves, persistent.

Habitat: Heath, scrubland and woodland on sandy soils. NSW.



Leptospermum trinervium (trinervium=three veined) Flaky-barked Tea-tree

Shrub to small tree 3-4m, with stout trunk, and rough flaky bark.

Leaves: Flat, oblong, 10-20mm long 1-6 mm wide with three obscure veins (look at mature leaves). Margins incurved, point pungent and with a strong eucalyptus odour when crushed.

Flowers: Solitary or two together, white 7-15 mm diam. Floral tube and fruit covered with long weak grey hairs. Flowering spring and summer in mountains.

Fruit: Capsules fall soon after flowering. Four to five valves 3-6 mm diam.

Habitat: In dry sclerophyll forest, heath and scrub in deep or shallow sandy soil. NSW, Vic, Qld.



Agonis

Trees or shrubs with aromatic alternate clusters of leaves and clusters of white flowers: stamens 10-25, shorter than petals. This genus only occurs in WA. *Agonis flexuosa* is a very common coastal and street tree in the south west of the state.

Agonis flexuosa (flexuosa= full of turns, referring to the zigzag stems) Peppermint

Shrub or tree to 10 m high.

Leaves: Alternate, narrowly elliptical, 20-120 mm long, 3.5 to 12 mm wide.

Flowers: White axillary clusters, petals 3-6 mm long, stamens 15 to 25, with 3 to 5 opposite each sepal. Flowering in spring.

Fruit: Three celled woody capsule.

Habitat: Coastal heath. WA.



Tribe: **Chamelaucieae**

Shrubs, mostly glabrous. Leaves usually opposite, inflorescences mostly of solitary flowers. Stamens usually few, free, shorter than petals, anthers adnate. Ovary inferior 1 to 3 locular. Fruit a capsule or indehiscent. Common genera are, *Actinodium*, *Baeckea*, *Calytrix*, *Chamelaucium*, *Darwinia*, *Micromyrtus*, *Thyrptomene*, *Verticordia*.

Baeckea, Heath Myrtles

The genus *Baeckea* had about 75 species of which ~ 70 were endemic to Australia. It occurred in all states, and extends to Asia, New Caledonia and New Zealand. The flower resembles that of *Leptospermum* and has 5-15 stamens depending on the species, but the distinguishing features are the non-woody capsule and opposite leaves. The genus named after a friend of Linnaeus Dr Baeck a doctor in Stockholm. The group of plants originally assigned to this genus continue to be redistributed between new and existing genera. This redistribution is the subject of ongoing research. Recent names are given for the plants described below.

Baeckea linifolia (linear-leaved) Weeping Baeckea

A small shrub to 1.5m high. Characteristic drooping branches make it easy to identify.

Leaves: Spreading linear, occasionally terete 6-18 mm long, mostly 0.5-1 mm wide and arranged in alternate pairs close to stem or on short side branchlets.

Flowers: White and solitary in upper axils and have 8 stamens (sometimes 9-12). Flowering summer.

Fruits: Capsule 2mm diameter.

Habitat: Heath in damp places, sheltered places near waterfalls and along water courses. Coast and adjacent ranges. NSW, Vic and Qld.



Sannantha pluriflora

Shrub to 4 m high; branchlets 4-angled, slightly flanged.

Leaves: Lanceolate to elliptic, 10-30 mm long, 2.5-6 mm wide, apex obtuse to acute, margins entire, oil glands prominent, especially on lower surface; petiole 0.8-1.5 mm long.

Flowers: Inflorescences 3-7-, or rarely 9-13-flowered; peduncle 5-13 mm long; pedicels 3-7 mm long, bracteoles linear, to 1.2 mm long. Hypanthium ± smooth. Calyx lobes compound, inner lobes to c. 0.6 mm long, outer lobes about half as long. Corolla to 10 mm diam.; petals broad-ovate to circular, 2.5-3.7 mm long. Stamens 8-15. Flowers chiefly Oct-Jan.

Fruit: Capsule 2.5-3.5 mm diam.; seeds flattened D-shaped.

Habitat: Most commonly grows in eucalypt forest close to watercourses on deep sandy soils. NSW and Vic.



Calytrix

The genus *Calytrix* contains 72 species all endemic to Australia (in all states). Shrubs with alternate leaves or opposite or whorled. Flowers white, pink, yellow or purple, single and axillary. Stamens numerous in one or more series. Fruit dry and indehiscent. The genus name refers to the long awns on the calyx (calyx=cup, thrix, trichos=hairs).

Calytrix tetragona (four-sided, referring to leaves when dried) A bushy shrub to 2 m tall.

Leaves: Linear, variable – tiny, 1-12 mm long, 0.5-1 mm wide, crowded, covered in short erect hairs, blunt tipped.

Flowers: Abundant star-like flowers in terminal heads – 5 pink or white petals, numerous stamens. The petals are deciduous, leaving the red sepals which have 5 long calyx-awns. Flowering all year, but chiefly spring.

Fruit: Nut-like with persistent sepals.

Habitat: In heath, woodland and dry sclerophyll forest, widespread on poor and sandy soils. NSW, WA, SA, Tas, Vic and Qld.



Darwinia

The genus contains 42 species all endemic to Australia (WA, SA, Vic and NSW). Shrubs with opposite leaves, terete, linear or flattened. Flowers with protruding style, ten stamens alternating with ten staminodes. Fruit indehiscent. The genus named after the Erasmus Darwin, the grandfather of Charles Darwin.

Darwinia fascicularis subsp. fascicularis (arranged in bundles, referring to leaves) A much branched shrub.

Leaves: Minute, densely crowded in clusters, opposite or whorled, terete, 8- 16 mm long.

Flowers: The floral tube is 5-7mm long and the style protruding beyond the floral tube is 12-18 mm long. The flowers are variable clusters of 4-20 and are white but turn red with age. The bracteoles are deciduous. Flowering winter to spring.

Fruit: A nut.

Habitat: In dry sclerophyll forest or heath on shallow soils on sandstone. NSW.



Darwinia procera (procera=tall, long)

An erect shrub sometimes to 3m tall with limited distribution.

Leaves: Laterally compressed 10-25mm long in pairs at right angles along the stem. Old leaf bases form distinct ridges on stems.

Flowers: Creamy with dark red lobes on top, in groups of 4-8 with straight white or red styles and short flower stalks.

Bracteoles are red-brown persisting until flowering when they fall off. Flowering late winter to spring.

Fruit: A nut.

Habitat: Grows in dry sclerophyll forest and scrub at the head of sheltered gullies on sandstone. NSW



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Acknowledgements

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