



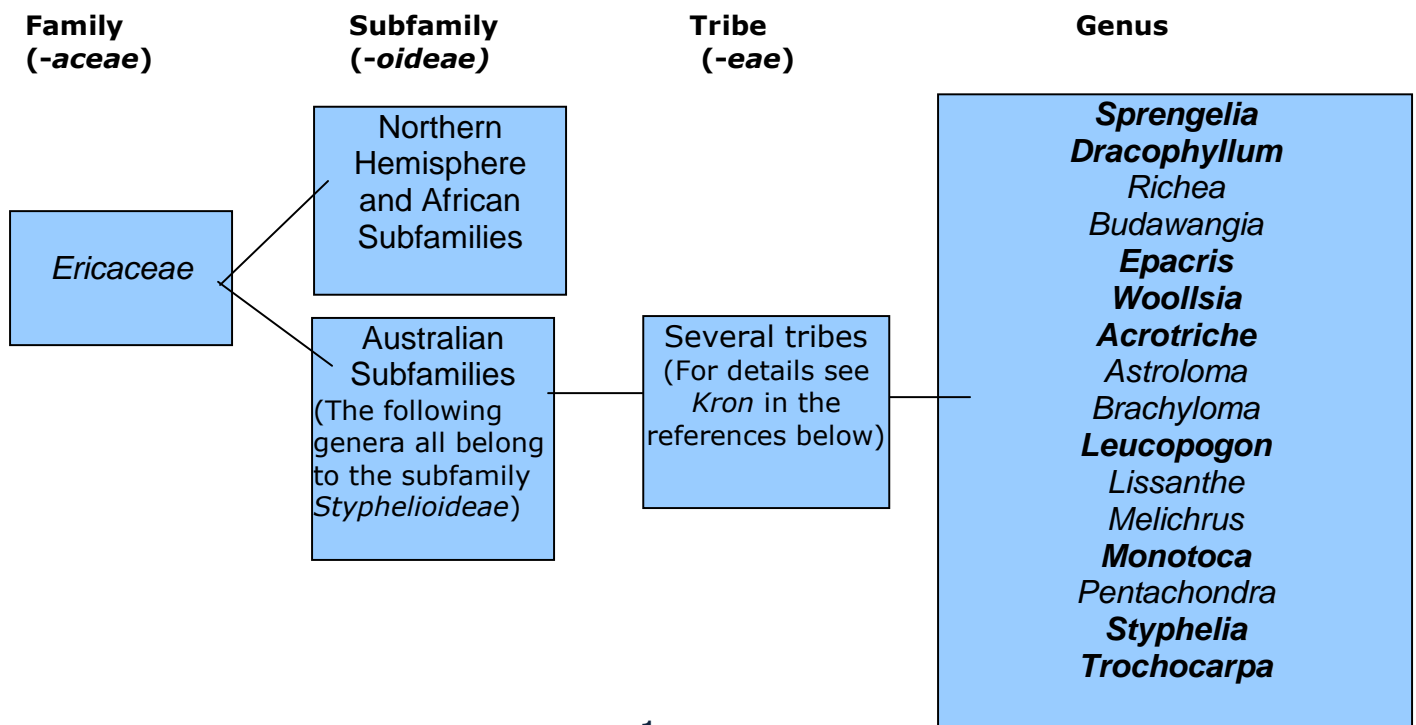
Topic 17: THE HEATH PLANTS (Ericaceae)



Did you know that:

- These rather straggly heath plants give rise to some of the most beautiful of our native plant flowers.
- *Epacris impressa*, Victoria's floral emblem, is a member of this family.
- Members of the *Ericaceae* family from the northern hemisphere include the commercially grown food crops, cranberries and blueberries and the popular ornamentals, *azaleas* and *rhododendrons*

When Australian heath plants were first studied by botanists they were noted as being reminiscent of the hardy plants such as heather (family: *Ericaceae*) that dominate the heathlands and moorlands of Europe. The Australian plants were collectively called the southern heaths and assigned to the new family *Epacridaceae*. On the basis of recent findings (in particular, from results of DNA analysis) the Australian heath plants are now included in the same family as the northern heaths, the *Ericaceae*. They are, however, placed in separate subfamilies to those of the northern heaths and the subfamilies are further sub-divided into various tribes as shown in the following diagram. Also shown in this diagram are those genera within the tribes that occur in NSW (Those found in Ku-ring-gai Wildflower Garden are indicated in bold letters.)



Members of the Australian *Ericaceae* occur in all states except the Northern Territory, and are mostly absent from the arid interior. They are particularly well represented in south west Western Australia and Tasmania, and are present along the southern and eastern coasts of the continent extending to northern Queensland at elevation. They can be found in a range of habitats from coastal sandplains to sandstone ridges and are a common component of low, exposed vegetation known as heathland, characterised by nutrient deficient soils, often acidic. They are well adapted to surviving in the prevailing harsh conditions of the high exposed sandstone ridges around the Sydney region. Some Australian members of the family produce succulent fruits which were eaten by Aborigines and the early settlers. The abundant nectar on the flowers was also valued by Aborigines.

General Features and Cultivation

The Australian heath plants are mostly low shrubs – just a few are small trees. Leaves are arranged alternately and the venation in the leaves is narrowly palmate. (The venation is sometimes described as “parallel” this being the appearance due to the thin leaves.) Flowers are usually tubular or cup-shaped and occur in spikes or racemes (occasionally solitary). For some species the fruits are drupes while for others the fruits are capsules that split open when ripe.

While these heath plants are amongst the most showy of Australian plants they are relatively difficult to propagate and not widely available as nursery plants. The most commonly cultivated genus is *Epacris*. They tend to have straggling growth and are best grown beside large rocks. They like moist, well-drained, acid soil and some shade.

Description of Species found in Ku-ring-gai Wildflower Garden

Sprengelia incarnata (NSW, Vic, Tas, SA)

Pink Swamp Heath

Erect shrub with stiff stems to 1m.

Leaves: Stiff with sharp points, concave above and sheathing the stem with overlapping bases, 6-20mm long.

Flowers: Terminal clusters, pink, star-like, 5 widely spreading lobes, stamens attached to base of corolla. Aug/Sept.

Fruit: A capsule.

Habitat: Heaths and heath understorey, on wet sandy soils and near swamps.



Dracophyllum secundum (NSW)

Small erect or procumbent shrub, 0.2-1m high.

Leaves: Linear to lanceolate, 50-100mm long sheathing at base, crowded at ends. Leaf scars on old wood.

Flowers: White to pink, terminal, one-sided racemes, corolla slender, cylindrical tube, 5 small recurved lobes. Winter/Spring.

Fruit: Small, globular capsule. Nov/Dec.

Habitat: Occurs on dripping sandstone ridges around Sydney and Blue Mountains.



Epacris longiflora (NSW)

Native Fuchsia

Erect to straggling shrub, 0.5-2m high.

Leaves: Ovate, 5-11mm long, crowded and sharply pointed.

Flowers: Long, tubular, 12-20mm long, red, the tips and sometimes part of the tube white. One sided inflorescence, 5 stamens to top of corolla, June/Oct.

Fruit: A small 5-celled capsule.

Habitat: Heath and open forest, coast and adjoining plateaux.



Epacris obtusifolia (NSW)

Large flowered Epacris

Stem erect, 0.5-1.5m high.

Leaves: Broad, linear, blunt, 5-12mm long.

Flowers: Axillary. Creamy white, June/Dec

Fruit: Capsule.

Habitat: Often in marshy ground.



Epacris microphylla (NSW, Qld)

Coral Heath, Small-leaved Epacris

Tall stemmed, to 1m high

Leaves: Numerous, 3-6mm, stem claspng bases

Flowers: Small white, in axils along branchlets. Winter/Spring.

Fruit: Capsule.

Habitat: Heath and woodland.



Epacris pulchella (NSW, Qld)

Stem erect, few branches, to 1.5m high.

Leaves: Ovate, stalkless, concave, pointed, 4-6mm.

Flowers: Axillary, longer than leaves, white or pink floral tubes broad, sepals finely pointed corolla lobes 2-3mm long. Late Summer/Autumn flowering.

Fruit: Capsule.

Habitat: Heath and woodland.



Woolisia pungens (NSW SE Qld coast)

Erect shrub 0.2--2m high.

Leaves: Ovate, acuminate, tapering to a rigid point, 6-12 mm long, crowded.

Flowers: Sessile, crowded in axils of upper leaves, bracts and sepals imbricate, corolla tube white or reddish, as long or longer than calyx, 5-lobed imbricate and twisted in bud. Flower lobes corrugated. June/Oct.

Fruit: A capsule, 5-celled.

Habitat: Heath and open forest on sandstone and dunes, prefers well-drained position.



Acrotriche divaricata (NSW, Vic)

Bushy shrub to 2m.

Leaves: Narrow to 15mm long, sharp pointed.

Flowers: Small and green 3mm, July/Sept.

Fruit A drupe

Habitat: Rainforest/open forest



Leucopogon amplexicaulis (NSW)

Small, weak shrub to 1m tall.

Leaves: Thin, flexible, heart-shaped, stem-clasping, with fringed margins. 12-25mm long.

Flowers: White in narrow spikes longer than the leaves.

Fruit: Drupe.

Habitat: Forests in sheltered sites.



Leucopogon ericoides (NSW, VIC, Tas)

Slender, erect, prickly shrub usually 0.5-1.5m high

Leaves: Small, stiff, pungent, pointed, 5-8mm long.

Flowers: White, perianth segments fully opening and recurving upon maturity. Corolla tube less than twice as long as the sepals.

Fruit: Brown drupe.

Habitat: Heath and woodland.



Leucopogon juniperinus (NSW, Vic, Qld)

Erect densely branched shrub.

Leaves: Obovate, recurved margins, sharp pointed tip.

Flowers: White, solitary

Fruit: Yellow drupe.

Habitat: Woodlands and forest.



Leucopogon microphyllus (NSW, Vic, Qld)

Slender, erect shrub to 1m high, but sometimes weak and straggling.

Leaves: Tiny, mostly about 3mm long, sometimes up to 6mm, scale-like.

Flowers White, in dense clusters. Sepals very acute.

Fruit: Drupe.

Habitat: Heath and woodland.



Leucopogon setiger (NSW)

Wiry spreading shrub to 1m high.

Leaves Short, slender, flat with recurved margins, pungent tipped, 8-12mm long, 2-4mm wide.

Flowers: White, in drooping racemes of 1 to 4 in the leaf axils, on 1-8mm stalks, the sepals are longer than the floral tube.

Fruit: Yellow/green drupe

Habitat: Woodlands.



Styphelia tubiflora (NSW)

Red Styphelia, Red Five Corners

Spreading shrub, 0.6m-0.8m

Leaves: Oblong-linear, recurved margins, mucronate apex dark green, 8-15mm long.

Flowers: Slender, tubular, axillary, red to pink, 20-25mm long, bracts enclose sepals, corolla lobes curled back, hairy inside, stamens extended. June/Sept.

Fruit A drupe, 5-angled, sepals persisting, edible.

Habitat: Heath and open forest sandstone, tolerant of moist conditions.



Trochocarpa laurina (NSW, Qld)

A large shrub or small tree 5-6 m tall found growing in poorer rainforest soils or in moist eucalypt forest.

Leaves: Broad elliptic to ovate, pointed 4-8 cm long, leathery, dark green and glossy above, paler beneath with 5-7 parallel veins. New foliage tan.

Flowers: Inconspicuous small white tubular borne in terminal spikes 2-3 cm, long. Jan/Feb.

Fruit: Tiny blue black berry with wheel like arrangement of 10 single seed stones.

Habitat: Rainforest



Monotoca scoparia (NSW)

A small shrub to 30 cm tall in dry, stony ground.

Leaves: Oblong with sharp, pointed tip.

Flowers: Tiny white flowers (1-3) in leaf axils. Jul/Sep.

Fruit: Single seed in each fruit (Hence name – *Monotoca*)

Habitat: Shrubland



Identification Key

A botanical key for the identification of plant genera in the *Ericaceae* family is available but for some genera this requires knowledge of the fruits formed – and unfortunately fruits are often unavailable when an identification is to be made! A modified key applicable to plants within the genera *Dracophyllum*, *Sprengelia*, *Styphelia*, *Leucopogon*, *Epacris* and *Woollsia* follows.

A Leaves sheathed at their base	B
B Leaves long (over 50 mm)	<i>Dracophyllum</i>
B* Leaves short (12-20 mm)	<i>Sprengelia</i>
A* Leaves not sheathed at their base	C
C Corolla hairy inside	D
D Anthers extend beyond floral tube	<i>Styphelia</i>
D* Anthers do not extend beyond floral tube	<i>Leucopogon</i>
C* Corolla not hairy inside	E
E Corolla lobes contorted and wrinkled	<i>Woollsia</i>
E* Corolla lobes not contorted and wrinkled	<i>Epacris</i>

Not included in this key:

Acrotriche divaricata – easily distinguished by its characteristic flat, lanceolate leaves,
Trochocarpa laurina – an introduced tree, planted in the fernhouse,
Monotoca scoparia – very small flowers, 2 mm or less and early flowering period.

References

Kron, K.A. et al. 2002. Phylogenetic Classification of Ericaceae: Molecular and Morphological Evidence. *The Botanical Review* 68(3): 335-432.
'A Field Guide to the Native Plants of Sydney', Les Robinson, Kangaroo Press
'Native Plants of the Sydney District', A. Fairley & P. Moore

Acknowledgements

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