



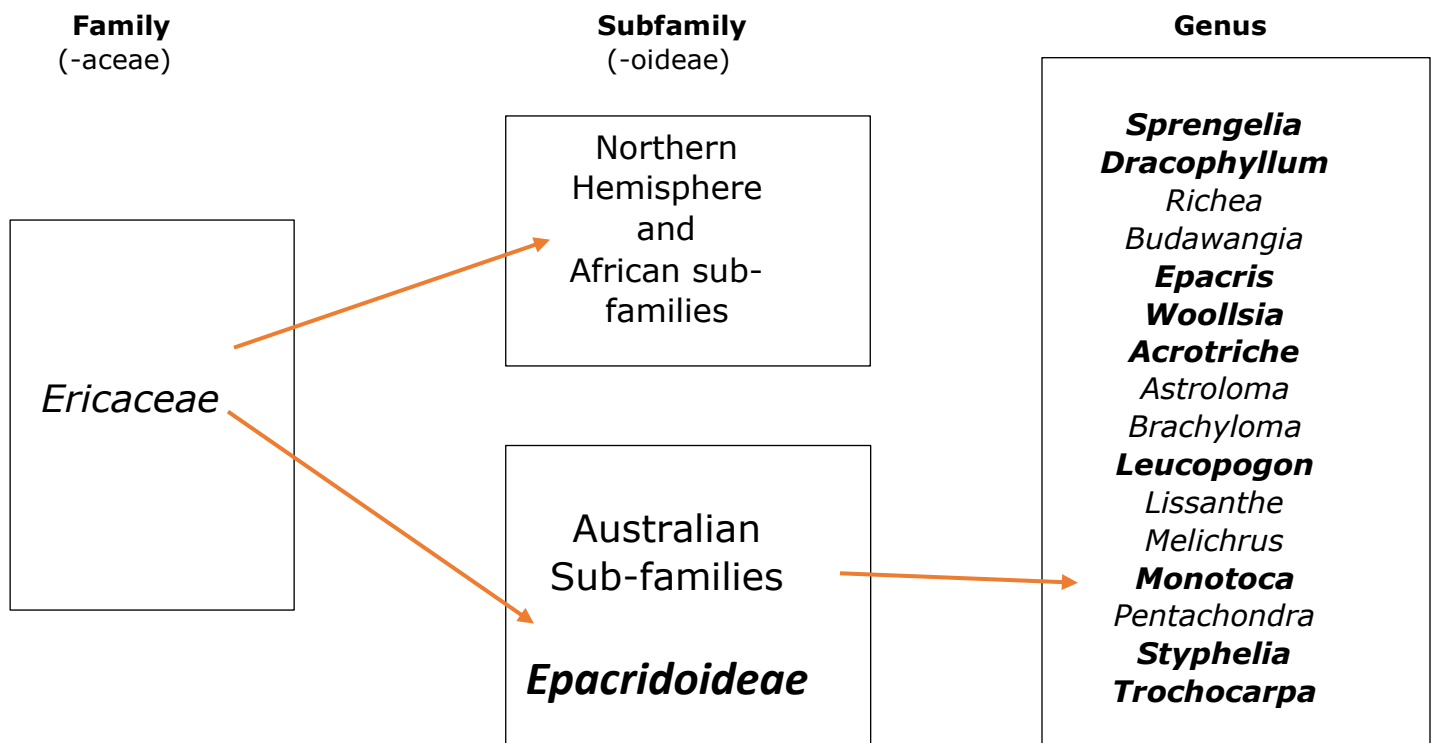
Topic 17: **THE HEATH PLANTS** (*Ericaceae*)

Did you know that:

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

The Southern heaths are a Gondwana group distributed in Australia, South Asia and Argentina. The early botanists noted that this Gondwana group was similar to 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 findings in 2002 (in particular, from results of DNA analysis) the Australian heath plants were included in the same family as the northern heaths, the *Ericaceae*, but placed in a separate subfamily *Styphelioideae* this subfamily is further sub-divided into various tribes not shown in the diagram. In 2012 a change in the botanical rules of nomenclature made this classification invalid and the subfamily name was changed to *Epacridoideae*. For more details see ref at end. [*Typification of some names in Epacridoideae (Ericaceae)* by Darren M. Crayn, Kathleen A. Kron and Benjamin C. M. Potter (Telopea, Volume 17: 319-321, November 2014).]

Shown in this diagram are those genera that occur in NSW (Those found in Ku-ring-gai Wildflower Garden are indicated in **bold letters**.)



Distribution

Members of the Australian *Ericaceae* occur:-

- All states except the Northern Territory,
- Mostly absent from the arid interior.
- Well represented in south west Western Australia
- Well represented in Tasmania,
- Present along the southern and eastern coasts of the continent extending to northern Queensland at elevation.

Habitat

They can be found in a range of habitats

- Coastal sandplains
- Sandstone ridges
- Common component of low, exposed vegetation known as heathland
- 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.

General Features

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).

The fruits are either drupes or capsules that split open when ripe.

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 and birds

Cultivation

Heath plants are some of the showiest of Australian plants but 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

Shrub: Erect with stiff stems to 2 m.

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

Shrub: Small erect or procumbent 0.2-1 m high.

Leaves: Linear to lanceolate, 50-100 mm 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

Shrub: Erect to straggling 0.5-2 m high.

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

Flowers: Long, red, tubular, 12-20 mm long, 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 plateau.



Epacris microphylla (NSW, Qld)

Coral Heath, Small-leaved Epacris

Shrub: Erect stem to 1 m high

Leaves: Numerous, ovate 3-6 mm, stem clasping bases, sharp point.

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

Fruit: Capsule.

Habitat: Heath and woodland.



Epacris obtusifolia (NSW)

Large flowered Epacris

Shrub: Stem erect, 0.5-1.5 m high.

Leaves: Broad, linear, blunt, 5-12 mm long. Pressed against the stem

Flowers: Axillary. Bell-shaped Creamy white, reaching to one side. June/Dec

Fruit: Capsule.

Habitat: Often in marshy ground.



Epacris pulchella (NSW, Qld)

Shrub: Stem erect, wiry branches, to 1.5 m high.

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

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

Late Summer/Autumn flowering.

Fruit: Capsule.

Habitat: Heath and woodland.



Woolisia pungens (NSW SE Qld coast)

Shrub: 0.2–2 m 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: Dry heath, open forest on sandstone and dunes,



Acrotriche divaricata (NSW, Vic)

Bushy shrub: to 2 m.

Leaves: Dark green, 15 mm long, sharp pointed.
new growth red

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

Fruit: A red drupe 3 mm

Habitat: Rainforest margins, sheltered forest



Leucopogon appressus (NSW coastal Sydney to Blue Mountains)

Shrub: > 1 m

Leaves: appressed to stem, pungent, margin smooth.

Flowers: blunt sepals, solitary, partly hidden by leaves.
Summer- autumn

Fruit: Drupe

Habitat: sandstone heath and woodland



Leucopogon amplexicaulis (NSW)

Shrub: Small, weak to 1 m tall, hairy stems.

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

Flowers: White in narrow spikes, longer than the leaves.

Fruit: Drupe.

Habitat: Forests in sheltered sites.



Leucopogon ericoides (NSW, VIC, Tas)

Shrub: Slender, wiry, prickly 0.5-1.5 m high

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

Flowers: White to pink 2-4 mm in short axillary spikes. perianth segments fully opening and recurving upon maturity. Late Autumn early Spring

Fruit: Brown drupe.

Habitat: Heath and woodland.



Leucopogon juniperinus (NSW, Vic, Qld)

Shrub: Erect, densely branched 1 m.

Leaves: Crowded, obovate, recurved margins, sharp pointed tip.

Flowers: Small, white narrow 7 mm tubes, solitary Spring.

Fruit: Yellow drupe.

Habitat: Woodlands and forest, especially on clay



Leucopogon microphyllus (NSW, Qld, Vic)

Shrub: 1 m tall, often weak and straggling.

Leaves: Tiny, mostly 3 mm long.

Flowers: Hairy, white in dense clusters at branch ends, sepals acute, flowers most of the year.

Fruit: Drupe

Habitat: Heath and woodland.



Leucopogon setiger (NSW)

Shrub: Wiry spreading to 1 m high.

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

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

Fruit: Yellow/green drupe

Habitat: Woodlands.



Styphelia tubiflora (NSW)

Red Styphelia, Red Five Corners

Shrub: Spreading 0.6-0.8 m

Leaves: Dark green, oblong-linear, recurved margins, mucronate apex, 8-15 mm long.

Flowers: Slender, tubular, axillary, red to pink, 20-25 mm. bracts enclose sepals, corolla lobes curled back, hairy inside, stamens extended, 5-angled, sepals persisting, June/Sept.

Fruit: A drupe, edible.

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



Trochocarpa laurina (NSW, Qld)

Shrub or small Tree 5-6 m tall.

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: Found growing in poorer rainforest soils or in moist eucalypt forest



Monotoca scoparia (NSW)

Shrub: to 30 cm tall.

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 in dry, stony ground.



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.

Darren M. Crayn, Kathleen A. Kron and Benjamin C. M. Potter Typification of some names in *Epacridoideae* (*Ericaceae*) (**Telopea**, Volume 17: 319-321, November 2014.).

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'Sydney Sandstone Flora' by Tony Edmonds and Joan Webb

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These notes may contain hyperlinks to materials, including images, illustrations, plant descriptions and a glossary from PlantNET, with the courtesy of The Royal Botanic Gardens & Domain Trust, 2017.

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Glossary for *Ericaceae*

Acuminate	sharp stiff point.
Anther	part of the stamen producing pollen.
Appressed	pressed closely against (the stem)
Berry	a succulent indehiscent fruit with an outer skin and an inner pulp containing many seeds e.g. Tomato
Bract	small modified leaf associated with a flower.
Capsule	a dried fruit derived from two or more carpels that break open at maturity.
Carpel	the female structure in a flower, consisting of stigma style and ovary.
Corolla	collective term for petals of a flower.
Dehiscent	splits open.
Drupe	a succulent fruit surrounding a stone e.g. plum
Imbricate	with edges over lapping.
Indehiscent	a fruit that doesn't split open.
Mucronate	sharp stiff point.
Obovate	ovate but broadest above the middle.
Perianth	a petal or sepal, used when these structures can't be distinguished from one another.
Pungent	needle sharp.
Raceme	an unbranched inflorescence bearing stalked flowers.
Sepal	one of the outer segments surrounding the flower.
Sessile	without a stalk.
Spike	an inflorescence in which the flowers don't have stalks.