



131 ESCALLONIACEAE ¹

Marco F Duretto ²

Erect bushy, trees or shrubs, rarely annual herbs (not in Australia); glabrous. Leaves alternate or spiral, stipules absent, petiolate, usually simple, usually evergreen, margin entire or toothed, pinnately veined. Inflorescences terminal or axillary, bracteate, a raceme or cyme or rarely flowers solitary (not in Australia). Flowers 5–9-merous, actinomorphic, hermaphrodite. Sepals valvate, persistent, free or fused. Petals free, slightly imbricate. Stamens mostly 5; filaments free, filiform; anthers basifixed, introrse. Carpels 1–6, fusiform, prominently stipulate, erect, free for most of length, usually superior; style long; stigmas small, lobed; ovules 1-numerous, bitegmic. Fruit a berry or capsule, many-seeded. Embryo long.

A family of 6 genera and about 70 species in southern Australia, Central and South America, and the island of Réunion (Indian Ocean). 2 genera and 3 species are endemic to Australia. The family consists of a heterogeneous assemblage of unusual genera which have an intriguing distributional pattern: *Anopterus* (see below; Qld, NSW, Tas.), *Eremosyne* Endl. (SW WA), *Escallonia* Mutis (Americas), *Forgesia* Comm. ex Juss. (Réunion), *Tribeles* Philippi (temperate S America) and *Valdivia* C.Gay ex Remy (Chile) (Lundberg 2001; Culham 2007). The American taxa, with *Forgesia*, form a monophyletic group that is sister to *Eremosyne* and then to *Anopterus* (Lundberg 2001); support for the positions of the Australian genera is not strong though (Lundberg 2001).

Escalloniaceae are taxonomically isolated and is one of several 'unplaced' families that group with Apiales, Asterales and Dipsacales (see APG II 2003; Stevens 2007; Culham 2007; and references cited therein). The other 'unplaced' families in this large clade are Paracryphiaceae (New Caledonia), Polyosmaceae (E Australia & New Caledonia to S China & E Himalayas), Quintiniaceae (E Australia, New Zealand, New Guinea, New Caledonia, Philippines) and Sphenostemonaceae (NE Qld, New Guinea, New Caledonia) (see APG II 2003; Stevens 2007). The family most closely related to Escalloniaceae is possibly Polyosmaceae (Lundberg 2001) that contains a single genus, *Polyosma* Blume, which is placed in Escalloniaceae by Lundberg (2001) and Culham (2007). Otherwise, the relationships of Escalloniaceae are unclear and require further research.

Escalloniaceae have a complex taxonomic history with many of its component genera having been included in other families (eg. Grossulariaceae, Saxifraginaceae) or in their own families (eg. Anopteraceae, Eremosynaceae, Tribelaceae) (see Soltis & Soltis 1997; Lunberg 2001; Stevens 2007). A large number of genera that were once placed in Escalloniaceae have since been transferred to other families (see review by Lundberg 2001). Australian genera that recently had been placed in the Escalloniaceae (see Curtis & Morris 1975; Stanley 1981; Harden 1992) and since moved to other families are: *Abrophyllum* Hook.f. ex Benth. and *Cuttsia* F.Muell. (Rousseaceae), *Argophyllum* J.R.Forst. & G.Forst. (Argophyllaceae), *Polyosma* (Polyosmaceae), *Quintinia* A.DC. (Quintiniaceae) and *Tetracarpaea* Hook. (Tetracarpaeaceae).

Synonymy: Anopteraceae, Eremosynaceae, Tribelaceae.

Key references: Lundberg (2001); Culham (2007); Stevens (2007).

External resources: accepted names with synonymy & distribution in Australia (APC); author & publication abbreviations (IPNI); mapping (AVH, NVA); nomenclature (APNI, IPNI).

- 1: Leaves mostly > 8 cm long, margin coarsely toothed, apex acuminate
- 1: Leaves < 8 cm long, margin finely toothed, apex ± obtuse

1 Anopterus
Escallonia +

¹ This work can be cited as: Duretto MF (2009) 131 Escalloniaceae, version 2009:1. In MF Duretto (Ed.) *Flora of Tasmania Online*. 3 pp. (Tasmanian Herbarium, Tasmanian Museum & Art Gallery: Hobart). ISBN 978-1-921599-43-9 (PDF). www.tmag.tas.gov.au/floratasmania

² Tasmanian Herbarium, Tasmanian Museum & Art Gallery, Private Bag 4, Hobart, Tasmania 7001, Australia.

* *Escallonia* (S America) is widely grown in gardens and some taxa, eg. *E. macrantha* Hook. & Arn. (Chile; sometimes called *E. rubra* (Ruiz. & Pav.) Pav. var. *macrantha* (Hook. & Arn.) Reiche) and *E. x rockii* Eastw., occasionally grow and persist in the remains of older gardens and from garden refuse. The genus is not considered to be naturalized in Tasmania though *E. bifida* Link & Otto (Featherwood) is sparingly naturalized in New South Wales (Harden 1992).

1 ANOPTERUS

Anopterus Labill., *Nov. Holl. Pl.* 1(11): 85 (1805).

Shrubs or small trees. Leaves alternate, usually clustered at end of shoots, simple, mostly toothed. Inflorescence a terminal raceme. Calyx tube short, 6–9-toothed. Petals as many as calyx teeth. Stamens as many as calyx teeth. Ovary superior, 1-locular; style 2-lobed. Fruit a leathery capsule, opening in 2 recurved valves. Seeds numerous, flattened, winged.

An Australian genus of 2 species: *A. macleayanus* F.Muell. (Qld, NSW) and *A. glandulosus* (Tas.). *Anopterus* is taxonomically isolated and may be sister to the remainder of the family (Lundberg 2001).

1 *Anopterus glandulosus* Labill., *Nov. Holl. Pl.* 1(11): 86 t.112 (1805) [as *A. glandulosa*]

Native Laurel, Tasmanian Laurel

Illustrations: Stones & Curtis, *The Endemic Flora of Tasmania 2:* t. 27, No. 44 (1969); Curtis & Morris, *The Student's Flora of Tasmania 1:* 181, fig. 43a (1975); Morley & Toelken, *Flowering Plants in Australia* 143, fig. 89c-d (1983); Cameron, *A Guide to Flowers and Plants of Tasmania*, 3rd edn, 41, pl. 68 (2000); Whiting *et al.*, *Tasmania's Natural Flora* 155 (2004); Simmons *et al.*, *A Guide to Flowers and Plants of Tasmania*, 4th edn, 51 (2008).

Erect shrub or small tree to 5(–10) m high. Leaves spreading, (4–)7–24 cm long, 1–5.5 cm wide, glabrous; lamina lanceolate-elliptical or oblanceolate, thick and shining, apex acute, base narrowing into a short petiole, veins pinnate; margin with distant gland tipped teeth. Inflorescence a terminal raceme, sometimes paniculate at base, 7–15 cm long; pedicels slender, recurved, 6–22 mm long. Sepals usually 6, shortly joined at base, lobes spreading. Petals usually 6, white, ovate, 10–12 mm long. Stamens opposite sepals; filaments subulate, shorter than petals. Carpels 2, joined; ovary conical, tapering into a short style; stigma bifid. Capsules 12–18 mm long. Flowering (Aug.) Oct.–Apr. (Jun.); fruiting Dec.–Aug.

Tas. (KIN, TCH, TNS, TSE, TSR, TWE); endemic. Found mainly in the wetter western and southern areas of the island of Tasmania and some offshore islands including Bruny and Maatsuyker. Occurs in rainforest and wet sclerophyll forest as an understorey plant from near sea level to nearly 1000 m alt.

REFERENCES

APC (Australian Plant Census) <http://www.chah.gov.au/apc/about-APC.html>

APG II (2003) An update of the Angiosperm Phylogeny Group classification for the orders and families of flowering plants: APG II. *Botanical Journal of the Linnean Society* **141** 399–436.

APNI (Australian Plant Name Index) <http://www.anbg.gov.au/cgi-bin/apni>

AVH (Australia's Virtual Herbarium) (Council of Heads of Australasian Herbaria) <http://www.anbg.gov.au/avh.html>

Curtis WM, Morris DI (1975) Escalloniaceae. *The Student's Flora of Tasmania* **1**, 2nd edn, 180–182.

Culham A (2007) Escalloniaceae. In VH Heywood, RK Brummitt, A Culham, O Seberg (Eds), *Flowering Plant Families of the World*. pp. 143–144. (Royal Botanic Gardens, Kew: London)

Harden GJ (1992) Escalloniaceae. *Flora of New South Wales* **3** 438–441.

IPNI (International Plant Name Index) <http://www.ipni.org/index.html> or <http://www.us.ipni.org/index.html>

Lundberg J (2001) *Phylogenetic Studies in the Euasterids II with Particular Reference to Asterales and Escalloniaceae*.

(Acta Universitatis Upsaliensis: Uppsala)

NVA (Natural Values Atlas) (Department of Primary Industries and Water: Hobart) <http://www.dpiw.tas.gov.au/inter.nsf/WebPages/LJEM-6TV6TV?open>

Soltis DE, Soltis PS (1997) Phylogenetic relationships in Saxifragaceae *sensu lato*: a comparison of topologies based on 18S rDNA and rbcL sequences. *American Journal of Botany* **84** 504–522.

Stanley TD (1981) Escalloniaceae. *Flora of South-eastern Queensland* **1** 220–224.

Stevens PF (2007) Angiosperm Phylogeny Website. Version 7, May 2006. <http://www.mobot.org/MOBOT/research/APweb>

NOTE: Web addresses can and do change: a list of current web addresses will be maintained on the *Flora of Tasmania Online* website [www.tmag.tas.gov.au/floratasmania].

INDEX

A

<i>Abrophyllum</i>	1
Anopteraceae	1
<i>Anopterus</i>	1, 2
<i>Anopterus glandulosa</i>	2
<i>Anopterus glandulosus</i>	2
<i>Anopterus macleayanus</i>	2
Apiales	1
Argophyllaceae	1
<i>Argophyllum</i>	1
Asterales	1

C

<i>Cuttsia</i>	1
----------------------	---

D

Dipsacales	1
------------------	---

E

Eremosynaceae	1
<i>Eremosyne</i>	1
<i>Escallonia</i>	1, 2
<i>Escallonia bifida</i>	2
<i>Escallonia macrantha</i>	2
<i>Escallonia rubra</i> var. <i>macrantha</i>	2
<i>Escallonia</i> x <i>rockii</i>	2
Escalloniaceae	1

F

Featherwood	2
<i>Forgesia</i>	1

G

Grossulariaceae	1
-----------------------	---

L

Laurel	2
--------------	---

N

Native Laurel	2
---------------------	---

P

Paracryphiaceae	1
<i>Polyosma</i>	1
Polyosmaceae	1

Q

<i>Quintinia</i>	1
Quintiniaceae	1

R

Rousseaceae	1
-------------------	---

S

Saxifraginaceae	1
Sphenostemonaceae	1

T

Tasmanian Laurel	2
<i>Tetracarpaea</i>	1
Tetracarpaeaceae	1
Tribelaceae	1
<i>Tribeles</i>	1

V

<i>Valdivia</i>	1
-----------------------	---