



## 126 DONATIACEAE <sup>1</sup>

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Perennial evergreen plants; stems short, erect, much-branched, closely crowded forming compact and hard cushions. Leaves small, numerous, spirally arranged; stipules 0. Flowers mostly terminal, usually solitary, sessile, actinomorphic, hermaphrodite; receptacle epigynous. Calyx-tube turbinate, adnate to ovary; calyx lobes 3–7, free. Petals 5–10, imbricate, free. Stamens 2–3, inserted at the innermost margin of a fleshy, nectiferous, epigynous (covers top of ovary) disk, alternate to styles; filaments free; anthers extrorse, opening by longitudinal slits. Ovary inferior, 2–3-locular; ovules numerous in each loculus, pendulous on axile placentas; styles 2–3, short, subulate; stigmas capitate. Fruit dry, indehiscent. Seeds few; testa membranous; endosperm fleshy, oily; embryo minute.

A monogeneric family with two species of Tasmania, New Zealand and sub-Antarctic South America. The family is placed in the Asterales and is sister to the Stylidiaceae (mainly Australian, also SW Pacific, SE Asia, S South America). Some authors argue for the inclusion of Donatiaceae under Stylidiaceae, often as the subfamily Donatioideae (see Lundberg 2001; Lundberg & Bremer 2003; Carolin 2007). Reuniting Donatiaceae with Stylidiaceae would unnecessarily remove the defining synapomorphies of the latter (Wege 2007).

Key reference: Wege (2007).

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

### 1 DONATIA

*Donatia* J.R.Forst. & G.Forst., *Char. Gen. Pl.* 9, t. 5 (1775).

Characters as for the family.

A genus of 2 species: *D. novae-zelandiae* in Tasmania and New Zealand; and *D. fascicularis* J.R.Forst. & G.Forst. in sub-antarctic South America.

**1 *Donatia novae-zelandiae*** Hook.f., *Bot. Antarct. Voy. II. (Fl. Nov.-Zel.)* 1(2): 81, t. XVIII (1852) *Cushion Plant*

*Illustrations:* Wilson, *Stewart Island Plants* 121, fig. 146 (1982); Kirkpatrick, *Alpine Tasmania* 59, fig. 25f (1997); Cameron, *A Guide to Flowers and Plants of Tasmania*, 3rd edn, 29, pl. 28 (2000); Whiting *et al.*, *Tasmania's Natural Flora* 106 (2004); Simmons *et al.*, *A Guide to Flowers and Plants of Tasmania*, 4th edn, 25 (2008).

A perennial, densely tufted plant forming hard compact mounds to 1+ m diam.; stems erect, closely packed, much-branched, to 10 cm long; stout fleshy adventitious roots penetrating between them. Leaves sessile, erect and ± appressed, the upper ones bright green, the lower ones brown but long-persistent, 5–6 mm long, linear-subulate, apex pointed, base widened and having in the axil dense tufts of white hairs about half as long as the leaf. Flowers about as long as the leaves, 5–6 mm diam. Sepals 5, triangular, c. 2 mm long. Petals 5, oblong, bluntly pointed c. 5 mm long. Fruit turbinate. Flowering Jan.–Mar.; fruiting Feb.–Mar.

<sup>1</sup> This work can be cited as: Duretto MF (2009). Donatiaceae, **version 2019:1**. In MF de Salas (Ed.) *Flora of Tasmania Online*. 2 pp. (Tasmanian Herbarium, Tasmanian Museum and Art Gallery: Hobart). <https://flora.tmag.tas.gov.au/treatments/donatiaceae/>

<sup>2</sup> Tasmanian Herbarium, Tasmanian Museum & Art Gallery, PO Box 5058, UTAS LPO, Sandy Bay, TAS 7005, Australia.

Tas. (TCH, TSR, TWE); also New Zealand. Common in the western half of the Central Highlands as well as in the Southern Ranges and the Tasmanian West. Found on mountain summits on wet scree slopes and exposed places where snow lies for several months of the year. Often dominating bolster heath communities growing with and often coalescing with other species of cushion plants.

## REFERENCES

- ALA (Atlas of Living Australia) <http://www.ala.org.au/>
- APC (Australian Plant Census) <https://biodiversity.org.au/nsl/services/apc>
- APNI (Australian Plant Name Index) <https://biodiversity.org.au/nsl/services/apni>
- AVH (Australia's Virtual Herbarium) (Council of Heads of Australasian Herbaria) <http://avh.chah.org.au/>
- IPNI (International Plant Name Index) <http://www.ipni.org> or <http://www.us.ipni.org>
- Carolin RC (2007) Stylidiaceae. In K Kubitzki, JW Kadereit, C Jeffrey (Eds) *The Families and Genera of Vascular Plants: VIII Flowering Plants – Eudicots – Asterales*. pp. 614–619. (Springer-Verlag: Berlin)
- Lundberg J (2001) *Phylogenetic Studies in the Euasterids II with Particular Reference to Asterales and Escalloniaceae*. (Acta Universitatis Upsaliensis: Uppsala)
- Lundberg J, Bremer K (2003) A phylogenetic study of the order Asterales using one morphological and three molecular data sets. *International Journal of Plant Science* **164** 553–578.
- NVA (Natural Values Atlas) (Department of Primary Industries and Water: Hobart) <https://www.naturalvaluesatlas.tas.gov.au/>
- Wege JA (2007). Donatiaceae. In VH Heywood, RK Brummitt, A Culham, O Seberg (Eds), *Flowering Plant Families of the World*. p. 132. (Royal Botanic Gardens, Kew: London)
- NOTE:** Web addresses can and do change: a list of current web addresses is maintained in the web version of this treatment on the *Flora of Tasmania Online* website at <https://flora.tmag.tas.gov.au>

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