Flora of Tasmania



96 DROSERACEAE 1

Dennis I Morris²

Small annual or perennial, insectivorous herbs; roots fibrous, the primary root often reduced; tubers or small rhizomes produced in some species. Leaves spiral, sometimes whorled, often in a basal rosette; stipules present or absent; lamina either modified as active traps (not in Tas.) or with mucilage-tipped often irritable insect trapping hairs. Inflorescence terminal or axillary. Flowers bisexual, actinomorphic, hypogynous. Sepals (4)5(–8), shortly connate at the base. Petals as many as the sepals, free or basally connate. Stamens (4)5(10–20), free or basally connate, alternating with petals, anthers bilocular. Carpels 3–5; ovary superior, unilocular, placentation parietal; ovules many; styles as many as the carpels, free or united at the base, often deeply divided. Fruit a loculicidal capsule enclosed in the persistent calyx. Seeds many, small, endospermic.

A family of 3 genera with about 160 species in temperate and tropical regions of both hemispheres with Australia being a major centre of diversity. 2 genera are represented by single species: *Aldrovanda vesiculosa* L. (NE Australia, Eurasia) and *Dionaea muscipula* Ellis (Venus' Fly-trap; SE USA). Droseraceae are placed in the Caryophyllales near the other carnivorous plant families Nepenthaceae (NE Australia, New Caledonia to S Asia, Madagascar) and Drosophyllaceae (Portugal, Spain, Morocco).

Synonymy: Aldrovandaceae, Dionaeaceae.

Key reference: Marchant et al. (1982).

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

1 DROSERA

Drosera L., Sp. Pl. 1: 218 (1753).

Synonymy: Dismophyla Raf., Fl. Tellur. 3: 36 (1837). Sondera Lehm., Flora 27: 82 (1844).

Insectivorous terrestrial herbs, mostly perennial; stems often reduced. Leaves spiral, often in a basal rosette, bearing glandular hairs that are sometimes irritable; stipules often lobed or absent. Inflorescence a terminal raceme or cyme, flowers sometimes solitary. Flowers 4–5-merous. Calyx and corolla often forming a persistent hood over the mature ovary and capsule. Styles free. Seeds minute, black, elliptical, fusiform or cylindrical.

A genus of about 160 species with a discontinuous distribution in both hemispheres. Australia, with about 120 species, is a major centre of diversity.

Leaves in a basal rosette only; tubers absent

Leaves cauline, basal rosette present or absent at flowering time; plant with a vertical
rhizome arising from a globose tuber

2. Leaf lamina deeply divided into two or occasionally more linear lobes 1 D. binata

2: Leaf lamina entire

^{2 (}deceased) formerly Tasmanian Herbarium, Tasmanian Museum & Art Gallery, Private Bag 4, Hobart, Tasmania 7001, Australia.





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4	Stipules present, conspicuous, scarious	3.
5	Stipules absent or small and fused to the petiole	3:
2 D. pygmaea	Flowers solitary, minute, on slender scapes; leaf lamina orbicular	4.
3 D. spatulata	Flowers few to many on a narrow secund raceme; leaf lamina spathulate	4:
4 D. arcturi	Leaves linear-oblong, 3–20 cm long; flowers 1(-4)	5.
5 D. glanduligera	Leaves orbicular, < 2 cm long; flowers 2-20	5:
6 D. macrantha	Stem leaves orbicular, peltate, lacking angular lobes; stems trailing, scrambling or climbing	6.
7	Stem leaves lunar-crescentic, the margins extended as 2 angular lobes; stems erect	6:
7 D. auriculata	Sepals glabrous	7.
8	Sepals hairy	7:
8 D. gracilis	Stems very slender, unbranched, frequently leafless in the upper half; seeds narrow-turbinate, slightly arcuate	8.
9	Stems branched or unbranched, leafy to the inflorescences; seeds cylindrical	8:
9 D. foliosa	Plant up to 9 cm high; tubers white; stems often several or if solitary branched from the base; flowers produced from lower and upper nodes; petals white, 4–4.5 mm long	9.
a D. Ioliosa	Plant (5–)8–22 cm high; tubers red; stems usually solitary, branched in the upper half or	9:
10 D. peltata	occasionally with a single branch from the upper nodes; petals white or pink 5–7 mm long	٥.

1 Drosera binata Labill. *Nov. Holl. Pl.* 1: 78, t.105 (1805)

Forked Sundew

Dismophyla binata (Labill.) Raf., Fl. Tellur. 3: 36 (1837).

Illustrations: Harden, Fl. New South Wales 1: 495 (1990); Conn, Fl. Victoria 3: 360, fig. 73g (1996); Cameron, A Guide to Flowers and Plants of Tasmania, 3rd edn, 75, pls 170 & 171 (2000); Corrick & Fuhrer, Wildflowers of Victoria 69, fig. 246 (2000); Woolmore et al., King Island Flora 42 (2002); Whiting et al., Tasmania's Natural Flora 107 (2004); Simmons et al., A Guide to Flowers and Plants of Tasmania, 4th edn, 99 (2008).

Perennial herb with long spreading fibrous roots; tuber absent; stems reduced. Leaves in a basal rosette, erect; stipules 3–5 mm long, fimbriate, ferrugineous; petioles slender, 2–20 cm long, glabrous; lamina usually once but occasionally up to 3 times divided; lobes linear, usually 4–10 cm long but in depauperate specimens less than 1 cm long. Inflorescences 1–3-branched; branches 10–40 cm long, glabrous; each branch a 15–30-flowered raceme to 50 cm long; bracts linear 1–1.5 cm long; pedicels 5–15 mm long. Sepals 5, blackish, 4–7.5 mm long, obovate to elliptic, apex acute or laciniate. Petals 5, white, obovate, (1.5–)9–11 mm long. Styles 3, the branches dichotomously divided. Flowering & fruiting Dec.-Mar.

Tas. (all regions except MIS); also WA?, SA, Qld, NSW, Vic., New Zealand. Widespread and found in boggy situations, heath and scrubland, herbfields, from near sea level to over 1000 m alt.

2 Drosera pygmaea DC., *Prodr. (DC.)* 1: 317 (1824)

Tiny Sundew, Dwarf Sundew

Illustrations: Harden, Fl. New South Wales 1: 495 (1990); Conn, Fl. Victoria 3: 360, fig. 73e (1996); Kirkpatrick, Alpine Tasmania 82, fig. 36e (1997); Woolmore et al., King Island Flora 43 (2002); Gilfedder et al., The Nature of the Midlands 109 (2003); Whiting et al., Tasmania's Natural Flora 109 (2004).

Herb with fibrous roots; tubers absent; stems absent. Leaves many, in a soil-appressed rosette; stipules 2-3(-5)





mm long, scarious, trifid, apices laciniate; petiole flattened, 2.5–6 mm long, glabrous; lamina entire, peltate, suborbicular, 1–2.5 mm in diameter. Flowers solitary, axillary; bracts absent; peduncles 1–4, 1–2 cm long. Sepals 4, 1–3 mm long, oblong to elliptic, glabrous, margins entire, apex obtuse. Petals 4, white, 1.5–2.5 mm long, obovate-spathulate, faintly nerved. styles 4, filiform. Seeds black, oblong, c. 0.4 mm long, shining. Flowering & fruiting Sep.-Apr.

Tas. (all regions except MIS); also WA, SA, Qld, NSW, Vic., New Zealand. Widespread and found in sedge and grassland, heathy herbfield, shrubby heath from near sea level to c. 1200 m alt.

3 Drosera spatulata Labill., *Nov. Holl. Pl.* 1: 79, t.106 (1805)

Rosy Sundew

Drosera spathulata Labill. sensu G.Bentham, Fl Austral. 2: 459 (1864), orth. var.

Illustrations: Harden, Fl. New South Wales 1: 495 (1990); Conn, Fl. Victoria 3: 360, fig. 73d; 628, pl. 9a (1996).

Perennial herb with fibrous roots, a short rootstock; tubers absent; stem reduced. Leaves in a soil-appressed, basal rosette, red, 8–20 mm long; stipules 5–7 mm long, deeply laciniate; lamina ovate-spathulate, narrowing to a broad flat petiole. Inflorescence 1–2(–5?)-branched; branches to 20 cm long; each branch a secund raceme, 5–12-flowered, glandular; bracts short, linear; pedicels 0.3–5 mm long. Sepals 5, red, 2–4 mm long, narrow-ovate, minutely glandular. Petals 5, white, c. 1 mm longer than the sepals, obovate to spathulate. Styles 3, each divided to the base into 2 linear lobes, stigmatic at the tip. Capsule c. 1.5 mm long, enveloped in an operculum formed by the withered remains of the corolla. Seeds black, elliptical, c. 0.3 mm long, minutely rugose. Flowering & fruiting mainly Dec.-Mar.

Tas. (BEL, FLI, KIN, TCH, TNS, TSE, TSR, TWE); also Qld, NSW, Vic., Papua New Guinea, New Zealand. Widespread though occasional in boggy peaty soils, wet heath and sedgelands, margins of streams from near sea level to c. 250 m alt.

4 Drosera arcturi Hook., J. Bot. (Hooker) 1: 247 (1834)

Alpine Sundew

Illustrations: Harden, Fl. New South Wales 1: 495 (1990); Conn, Fl. Victoria 3: 360, fig. 73b (1996); Kirkpatrick, Alpine Tasmania 82, fig. 36d (1997); Cameron, A Guide to Flowers and Plants of Tasmania, 3rd edn, 29, pl. 26 (2000); Whiting et al., Tasmania's Natural Flora 107 (2004); Simmons et al., A Guide to Flowers and Plants of Tasmania, 4th edn, 35 (2008).

Perennial herb with an extensive fibrous root system; tuber absent; stems usually short and mostly underground, shortly clothed in the persistent bases of old leaves. Leaves in a basal open irregular rosette; stipules absent; lamina 6–8(–20) cm long linear to narrow-spathulate, narrowing to a sheathing base; lower leaves usually smaller than the upper leaves; sometimes all leaves glabrous. Inflorescence 1–2, 2–12 cm long, usually longer than the leaves, 1(–4) flowered; bracts small, linear bract. Sepals black, 3.5–9 mm long, elliptic, entire, apex obtuse, shortly connate at the base. Petals 5, white, 6–12 mm long, obovate. Styles 3–4, stout, stigmas reniform. Capsule 10–15 mm long, black. Seeds black, lachrimiform, 1–2 mm long. Flowering & fruiting Dec.– Mar.

Tas. (BEL, TCH, TSR, TWE); also NSW, Vic., New Zealand. Found mainly at higher elevations in wet heaths and sedgelands, streambanks, in cushion plants, soaks and wet places from near sea level to c. 1200 m alt. The species can thrive when all leaves are glabrous and there is no possibility of insect trapping.

5 Drosera glanduligera Lehm., *Nov. Stirp. Pug.* 8: 37 (1844)

Scarlet Sundew, Pimpernel Sundew

Illustrations: Harden, *Fl. New South Wales* 1: 495 (1990); Conn, *Fl. Victoria* 3: 360, fig. 73f; 628, pl. 9f (1996); Corrick & Fuhrer, *Wildflowers of Victoria* 69, fig. 247 (2000).

Annual or short-lived perennial; tubers absent; stems reduced. Leaves in a ± dense ground-appressed rosette, 8–20 mm long; stipules fused to and scarcely wider than the petiole, laciniate, merging with the red multicellular





hairs on the petiole; petiole flattened, 5–12 mm long; lamina yellow-green, orbicular, 2.5–7 mm in diameter, the clasping hairs with long red tips. Inflorescence 1-several; branches reddish, glandular-hairy, up to 5(–10?) cm high, each a 2–20 flowered raceme; pedicels 4–8 mm long, deflexed after flowering. Sepals 5, light brown or reddish, 3–4.5 mm long, ovate-lanceolate, pilose, the hairs red, septate, gland-tipped, margins fimbriate. Petals 5, bright red, equalling or slightly longer than the sepals, obovate. Capsule finely reticulate. Seeds black, sperical, c. 0.4 mm in diameter, reticulate. Flowering & fruiting Sep.-Nov.

Tas. (FLI); also WA, SA, Qld, NSW, Vic. A poorly collected species found in the north-east and on Flinders Island in heath and sedgelands, open forest and shrubberies, up to 160 m alt.

6 Drosera macrantha Endl. Enum. Pl. 6 (1837)

Climbing Sundew

Drosera planchonii Hook.f. ex Planch., Ann. Sci. Nat. (Paris) ser. 3, 9: 248 (1848); D. menziesii R.Br. var. albiflora Benth., Fl. Austral. 2: 468 (1864); D. macrantha Endl. subsp. planchonii (Hook.f. ex Planch.) N.G.Marchant, Fl. Australia 8: 383 (1982).

Illustrations: Marchant et al., Fl. Australia 8: 37, fig. 9 (1982); Conn, Fl. Victoria 3: 360, fig. 73a; 628, pl. 9b (1996); Cameron, A Guide to Flowers and Plants of Tasmania, 3rd edn, 63, pl. 142 (2000); Corrick & Fuhrer, Wildflowers of Victoria 69, fig. 248 (2000); Whiting et al., Tasmania's Natural Flora 108 (2004); Simmons et al., A Guide to Flowers and Plants of Tasmania, 4th edn, 81 (2008).

Perennial herb with an erect rhizome arising from a globular tuber; tuber ± globose; stems 30–60 cm long, simple, slender, leafy, trailing, scrambling or climbing. Leaves: stipules absent; lower leaves few, reduced and scale-like, alternate; upper leaves paired or in false whorls of 3 or 4; petioles (5–)10–50 mm long; lamina orbicular-peltate, 3–7 mm in diameter, deeply concave, inverted. Inflorescence a terminal raceme or panicle 2-several-flowered; pedicels 3–15 mm long. Sepals 5, blackish, 3–8 mm long, broad-elliptical or ovate, pilose, the hairs appressed, septate, glandular, margins ciliate below, laciniate at the apex. Petals 5, white or pale pink, 6–10 mm long, obovate. Styles 3, divided from the base into numerous filiform dichotomous segments. Flowering & fruiting Aug.-Dec.

Tas. (FLI, KIN, TNM, TSE); also WA, SA, Vic. Widespread, though occasional, and found in coastal and estuarine situations, up to 90 m alt., in open heathy woodland and sedgelands. For discussion on the variation found in the species see Conn (1984) and Marchant and Lowrie (1992).

7 Drosera auriculata Backh. ex Planch., Ann. Sci. Nat. (Paris) ser. 3, 9: 295 (1848)

Tall Sundew

Drosera peltata subsp. auriculata (Backh. ex Planch.) B.J.Conn, J. Adelaide Bot. Gard. 3: 98 (1981).

Illustration (often as *D. peltata* subsp. *auriculata*): Curtis & Morris, *The Student's Flora of Tasmania* 1, rev. edn: 188, fig. 46 (1975); Harden, *Fl. New South Wales* 1: 494 (1990); Conn, *Fl. Victoria* 3: 628, pl. 9a (1996); Cameron, *A Guide to Flowers and Plants of Tasmania*, 3rd edn, 61, pls 135 & 136 (2000); Corrick & Fuhrer, *Wildflowers of Victoria* 69, fig. 249 (2000); Harris et al., *One Hundred Islands: the Flora of the Outer Furneaux* 118 (2001); Woolmore et al., *King Island Flora* 43 (2002); Gilfedder et al., *The Nature of the Midlands* 109 (2003); Simmons et al., *A Guide to Flowers and Plants of Tasmania*, 4th edn, 81 (2008).

Perennial herb with an erect rhizome arising from a globose tuber, roots produced in the axils of scales on the rhizome. Rosette leaves (often absent by flowering time) appressed to the soil, petiole 3–15 mm long, lamina flattened semi-orbicular, lunate, not peltate, 2–6 mm in diameter; lower stem leaves solitary, often reduced to a petiole with a minute unexpanded lamina; upper stem leaves solitary or in groups of 2–6, lamina crescentic, auriculate, peltate, 2–4 mm in diameter. Inflorescence erect, solitary, branching above, or rarely with a single branch from the base, 6–65 cm high, each branch a terminal raceme, 2–8-flowered; bracts narrow-lanceolate to narrow-ovate, c. 1 mm long; pedicels 4–14 mm long. Sepals blackish, 3–5 mm long, broad-lanceolate to ovate, glabrous, apex laciniate. Petals usually pink, 5–8 mm long, obovate. Styles 3, digitately divided above. Seeds



black, 0.5–0.6 mm long, narrowly cylindric to oblong-cylindric, with a persistent funicle and the testa prolonged into a flat apical extension, reticulate. Flowering & fruiting Aug.-Mar.

Tas. (all regions except MIS); also SA, Qld, NSW, Vic., New Zealand. Widespread in a variety of habitats from near sea level to 850 m alt. Found in light forest, coastal shrubberies, heath and sedgelands, coastal dunes, margins of streams in rain forest.

8 Drosera gracilis Planch., Ann. Sci. Nat. (Paris) ser. 3, 9: 297 (1848)

Sundew

Drosera peltata var. gracilis (Planch.) Benth., Fl. Austral. 2: 465 (1864).

Erect perennial herb, rhizome erect, arising from a globose tuber. Leaves, stems and tubers red. Rosette leaves soil-appressed, petiole 4.5–8 mm long, flattened, lamina 3–5 mm in diameter, semi-orbicular-lunate, not peltate; cauline leaves solitary or in groups of 3 or 4, crescentic, auriculate, peltate, petiole 7–8 mm long, lamina 3–6 mm in diameter. Inflorescence slender, solitary, unbranched, frequently leafless in the upper half, scape ending in a terminal raceme, 2–5-flowered; bracts c. 1.5 mm long, fimbriate. Sepals black, 2.5–3.5 mm long, narrow elliptical, hairy. Petals pink or white, 3.5–4.5 mm long, obovate. Seeds 0.4–0.5 mm long, narrow-turbinate, slightly arcuate, apex with a short flattened extension. Flowering & fruiting Nov.-Feb.

Tas. (BEL, FLI, KIN?, TCH, TSE, TSR, TWE), endemic ?; maybe also NSW. Found in marshes, peaty heath, margins of rivers and streams from near sea level to 1050 m altitude. Most Australian authors have included this species and *D. foliosa* as synonyms of *D. peltata* but in Tasmania these taxa exhibit sufficient differences to warrant taxonomic recognition.

9 Drosera foliosa Planch., Ann. Sci. Nat. (Paris) ser. 3, 9: 297 (1848)

Sundew

Drosera peltata var. foliosa (Planch.) Benth., Fl. Austral. 2: 465 (1864).

Yellowish green leafy perennial often forming ± dense swards; rhizome erect, arising from a white globose tuber. Basal leaves soil-appressed, petiole flattened, 5–14 mm long, lamina 7–11 mm wide, semi-orbicular, lunate, not peltate; cauline leaves with petiole 5–11 mm long, lamina 3–6 mm in diameter, crescentic, auriculate or occasionally the auriculate lobes absent. Inflorescence 1–several branched, 1–9 cm high, branched from the base and appearing multi-stemmed, each branch terminating in racemes from lower and upper nodes; bracts linear-lanceolate, fimbriate, c. 2.5 mm long, pedicels 5–8 mm long. Sepals green or blackish, 2.5–3 mm long, hairy, margins fimbriate. Petals white, 4–4.5 mm long, obovate. Seeds black, cylindrical 0.3–0.4 mm long, reticulate. Flowering & fruiting Sep.-Jan.

Tas. (FLI, TNM, TSE); also Vic. Found in the north-east of the island of Tasmania in grasslands, herbfields with a grassy understorey, oped woodland and pasture, from sea level to 300 m altitude. Most Australian authors have included this species and *D. gracilis* as synonyms of *D. peltata* but in Tasmania these taxa exhibit sufficient differences to warrant taxonomic recognition.

10 Drosera peltata Thunb., *Dissertatio Botanica de Drosera* 7 (1797)

Sundew

Drosera peltata var. genuina Planch., Ann. Sci. Nat. (Paris) ser. 3, 9: 297 (1848).

Illustrations: Marchant et al., Fl. Australia 8: 23, fig. 6 (1982); Harden, Fl. New South Wales 1: 494 (1990); Conn, Fl. Victoria 3: 360, fig. 73c; 628, pl. 9d (1996), as D. peltata var. peltata.

Erect perennial herb with an erect rhizome arising from a red globose tuber. Rosette leaves soil-appressed, usually present at flowering time, petiole flattened 3–14 mm long, lamina 5–10 mm in diameter, semi-orbicular-lunate, not peltate; lower cauline leaves often reduced to a petiole with a minute unexpanded lamina; upper leaves yellow-green or reddish, solitary or in groups of 2–4, petiole 7–10 mm long, lamina crescentic, auriculate, peltate, 5–6 mm in diameter. Inflorescence unbranched, (5–)8–22 mm high, yellow-green or reddish, branching above or rarely with a single branch from the base, flowers in axillary and terminal racemes; bracts lanceolate, fimbriate,





hairy, margins fimbriate. Sepals green or blackish, 3–5 mm long, hairy, margins fimbriate. Petals pink or white, 5–7 mm long, obovate. Seeds black, cylindrical, reticulate, 0.3–0.4 mm long. Flowering & fruiting Oct.–Dec.

Tas. (FLI, TCH, TNM, TSE, TSR); also WA, SA, Qld, NSW, Vic.; also Papua New Guinea, SE Asia. Found in heath and sedgeland, open forest, margins of sand dunes, among mosses in skeletal soils, from near sea level to 250 m alt. Most Australian authors have included *D. gracilis* and *D. foliosa* as synonyms of *D. peltata* but in Tasmania these taxa exhibit sufficient differences to warrant return to specific status.

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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

Α

Aldrovandaceae1
Aldrovandra vesiculosa1
Alpine Sundew3
C
Caryophyllales1
Climbing Sundew4
D
Dionaea muscipula1
Dionaeaceae1
Dismophyla1
Dismophyla binata
Drosera
Drosera arcturi
Drosera auriculata4
Drosera binata
Drosera foliosa
Drosera glanduligera
Drosera gracilis
Drosera macrantha4
Drosera macrantha subsp. planchonii4
Drosera menziesii var. albiflora
Drosera peltata
Drosera peltata subsp. auriculata4
Drosera peltata var. foliosa5
Drosera peltata var. genuina5
Drosera peltata var. gracilis5

Drosera peltata var. peltata	. 5
Drosera planchonii	. 4
Drosera pygmaea	2
Drosera spathulata	. 3
Drosera spatulata	3
Droseraceae	1
Drosophyllaceae	. 1
Dwarf Sundew	. 2
F	
Fly-trap	. 1
Forked Sundew	. 2
N	
Nepenthaceae	. 1
P	
Pimpernel Sundew	. 3
R	
Rosy Sundew	. 3
S	
Scarlet Sundew	. 3
Sondera	. 1
Sundew2, 3, 4,	5
Т	
Tall Sundew	4
Tiny Sundew	. 2
V	
Venus' Fly-trap	. 1



