



103 THEOPHRASTACEAE ¹

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Annual or perennial herbs or sub-shrubs or evergreen shrubs or small trees; sometimes rhizomatous (*Samolus*). Leaves alternate, often in a basal rosette (*Samolus*) or in pseudowhorls at branch tips, petiolate, exstipulate, simple, margins entire or sometimes glandular punctate. Inflorescences terminal or axillary, a raceme or corymb or a branched compound raceme, flowers ebracteate or subtended by a single bract. Flowers actinomorphic, (4)5-merous, bisexual or unisexual (not *Samolus*), hypogynous or perigynous (*Samolus*). Calyx persistent, lobes free or fused (*Samolus*). Corolla imbricate, fused. Stamens homomerous, antepetalous, fused with corolla tube; staminodes, often present, alternating with stamens, fused with corolla tube; anthers dithecal, opening introrsely (*Samolus*) or extrorsely by longitudinal slits. Ovary superior to semi-inferior, ovoid to globose; ovules few to numerous, inserted in several series or a spiral on free central placenta; style well developed; stigma capitate or truncate. Fruit or a dehiscent capsule (*Samolus*), or an indehiscent berry with a dry and sometimes woody pericarp. Seeds small, 1 to many; endosperm abundant, hard; embryo straight, cotyledons well or poorly differentiated.

Theophrastaceae are a family of 6–9 genera and about 105 species found mostly in tropical America with only *Samolus* extending to the Old World including Australasia. The family is placed in the Ericales and is closely related to Myrsinaceae (worldwide) and Primulaceae (mostly N Hemisphere, also s'rn S America & Melanesia, absent from Australia: Anderberg 2004) (Källersjö *et al.* 2000; Ståhl 2004a, 2004b; Brummitt 2007a, 2007b). Traditionally *Samolus* was placed in the Primulaceae but it has been shown that the traditional concept of Primulaceae was polyphyletic and thus all Australian representatives of the family have been transferred to either Theophrastaceae or Myrsinaceae (Källersjö *et al.* 2000). *Samolus* is sometimes placed in the monogeneric family Samolaceae (Ståhl 2004a; Brummitt 2007a) sister to a more narrowly circumscribed Theophrastaceae which is restricted to the Americas (Ståhl 2004b; Brummitt 2007b). APG II (2003), Haston *et al.* (2007) and Stevens (2007) combine the two families which is what is followed here.

Synonymy: Samolaceae.

Key References: Källersjö *et al.* (2000); Ståhl (2004a, 2004b); Brummitt (2007a, 2007b).

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

1 SAMOLUS

Samolus L., *Sp. Pl.* 1: 171 (1753).

Prostrate to erect perennials; sometimes rhizomatous, stems not angular. Leaves alternate, often a rosette at base. Inflorescence a raceme or corymb, or flowers solitary in axils of upper leaves or bracts. Calyx cupular, 5-lobed. Corolla fused to form a tube, 5-lobed; lobes spreading. Stamens 5, opposite petals; staminodes 5, alternating with stamens. Ovary semi-inferior. Fruit a capsule, splitting apically into 5 valves. Seeds numerous, minute.

1 This work can be cited as: Duretto MF (2009). Theophrastaceae, **version 2019:1**. In MF de Salas (Ed.) *Flora of Tasmania Online*. 3 pp. (Tasmanian Herbarium, Tasmanian Museum and Art Gallery: Hobart). <https://flora.tmag.tas.gov.au/treatments/theophrastaceae/>

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

A genus of about 15 species found mostly in tropical regions and the New World; 4 species native to Australia.

1 *Samolus repens* (J.R.Forst. & G.Forst.) Pers., *Syn. Pl. (Persoon)* 1: 171 (1805) var. **repens** *Creeping Brookweed*

Sheffieldia repens J.R.Forst. & G.Forst., *Char. Gen. Pl.* 18, t. 9 (1776). *Sheffieldia incana* Labill. *Nov. Holl. Pl.* 1: 40, t. 54 (1805); *Samolus littoralis* var. *incana* (Labill.) Duby, *Prodr. (DC.)* 8: 73 (1844); *S. repens* var. *incana* (Labill.) Pax & R.Knuth, *Pflanzenr. (Engler)* 22: 344 (1905). *Samolus littoralis* R.Br., *Prodr. Fl. Nov. Holland.* 428 (1810), *nom. illeg.* *Samolus repens* var. *procumbens* R.Knuth, *Pflanzenr. (Engler)* 22: 344, fig. 74 A (1905).

Illustrations (as *S. repens*): Morley & Toelken (Eds), *Flowering Plants in Australia* 119, fig. 73f-h (1983); Makinson, *Fl. New South Wales* 1: 505 (1990); Walsh, *Fl. Victoria* 3: 519, fig. 106q-s (1996); Corrick & Fuhrer, *Wildflowers of Victoria* 182, fig. 638 (2000); Harris et al., *One Hundred Islands: the Flora of the Outer Furneaux* 219 (2001); Woolmore et al., *King Island Flora* 66 (2002); Gilfedder et al., *The Nature of the Midlands* 124 (2003); Whiting et al., *Tasmania's Natural Flora* 260 (2004).

Creeping, procumbent or erect, herb, often forming mats; glabrous; often rhizomatous or stoloniferous, rooting at nodes; leafy stems to 40 cm tall, often warty. Leaves: basal rosette sometimes present, rosette leaves often spatulate; cauline leaves oblanceolate to obovate, ± sessile, 0.3–3.0 cm long, 1–8 mm wide, subfleshy, apex acute or obtuse. Flowers solitary in axils or in few-flowered corymbs; pedicels 0.5–2.5 cm long, each subtended by a leaf-like bract. Calyx 1.5–5(–7 in fruit) mm long; lobes acute, 1–4 mm long. Corolla white to pale pink, lobes obovate, spreading, exceeding calyx by 2–6 mm, united in lower third. Stamens and staminodes inserted at throat of corolla. Capsule somewhat woody, ovoid, 4–5 mm long. Flowering Dec.–Mar.; fruiting Dec.–May.

Tas. (all regions except MIS, TCH); also WA, SA, Qld, NSW, Vic.; also New Zealand, S Pacific, S America. Widespread in coastal and dryer inland situations and found in a variety of communities such as herb lawns and salt marsh on the foreshore in the spray zone, on estuarine river banks, and around saline lagoons. A number of other varieties are recognised for *S. repens* in Australia, New Zealand and New Caledonia and research is required to resolve their taxonomic limits (see Green 1994; APNI).

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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>

INDEX

C		<i>Samolus</i>	1
Creeping Brookweed.....	2	<i>Samolus littoralis</i>	2
E		<i>Samolus littoralis</i> var. <i>incana</i>	2
Ericales.....	1	<i>Samolus repens</i>	2
M		<i>Samolus repens</i> var. <i>incana</i>	2
Myrsinaceae.....	1	<i>Samolus repens</i> var. <i>procumbens</i>	2
P		<i>Samolus repens</i> var. <i>repens</i>	2
Primulaceae.....	1	<i>Sheffieldia incana</i>	2
S		<i>Sheffieldia repens</i>	2
Samolaceae.....	1	T	
		Theophrastaceae.....	1