



## 91 SANTALACEAE <sup>1</sup>

Brendan J Lepschi <sup>2</sup>

Perennial herbs, shrubs, vines or small trees; hemiparasitic on roots or aerially on stems or branches. Leaves alternate or opposite, sometimes decussate, simple, entire, sometimes scale-like, caducous or persistent; stipules absent. Inflorescence axillary or terminal, a sessile or pedunculate raceme, spike, panicle or corymb, sometimes condensed or flowers solitary, usually bracteate, bracts sometimes united to form a bracteal cup. Flowers bisexual (Tas.) or unisexual (and plants monoecious or dioecious), actinomorphic, perianth 1-whorled. Tepals (3)4–5(–8), free or forming a valvately-lobed tube or cup. Floral disc usually lobed, rarely absent. Stamens as many as tepals and inserted opposite them; anthers sessile or borne on short filaments. Carpels (2)3(–5); ovary inferior or superior; ovules 1–5 or lacking and embryo sac embedded in mamelon (not in Tas.); style usually very short, rarely absent; stigma capitate or lobed. Fruit a nut, drupe or berry, receptacle sometimes enlarged and fleshy. Seed 1(2), without testa, endosperm copious.

A family of 44 genera and about 875 species; almost cosmopolitan, well developed in tropical regions. 13 genera (5 endemic) and 67 species (55 endemic) in Australia and island territories; 3 genera and 8 species (2 endemic) in Tasmania.

Santalaceae are placed in the Santalales. As currently circumscribed, the family is polyphyletic with respect to Viscaceae (Old World) and Opiliaceae (pantropical) (Der & Nickrent 2008) and should probably be divided. Some recent classifications (e.g. APG 2003; Mabberley 2008) include the Viscaceae within the Santalaceae, and this treatment is adopted here.

Synonymy: Exocarpaceae, Viscaceae.

Key reference: Barlow (1984); Hewson & George (1984).

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

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|----|---|---------------------|
| 1. | Leaves well-developed, not scale-like; peduncle of flower united with subtending leaf; perennial herb or subshrub         | <b>1 Thesium</b>    |
| 1: | Leaves scale like; peduncle, where present, free from subtending leaf; subshrub, shrub (sometimes prostrate) or tree      | 2                   |
| 2. | Ovary superior; receptacle often enlarged and fleshy below fruit; tepals yellowish or greenish (sometimes tinged reddish) | <b>2 Exocarpos</b>  |
| 2: | Ovary inferior; receptacle not enlarged and fleshy below fruit; tepals white (sometimes tinged reddish-pink)              | <b>3 Leptomeria</b> |

### 1 † THESIUM

*Thesium* L., *Sp. Pl.* 1: 207 (1753).

Annual or perennial herbs or subshrubs; branches angular-terete, longitudinally ridged. Leaves alternate, well-developed or scale-like (not in Tas.), simple, persistent. Inflorescence axillary, a raceme, panicle or cyme or

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flowers solitary in leaf axils; peduncle united with leaf base. Flowers bisexual, (4)5-merous, subtended by (0)1–4 bracts. Tepals white with green band, thin or fleshy, adaxial surface usually with tuft of minute hairs at base. Stamens inserted at the base of the tepals. Ovary inferior; ovules 2–3; style short to long; stigma capitate or weakly 3-lobed. Fruit a nut, with persistent perianth at apex, exocarp dry or rarely fleshy; endocarp large.

A genus of about 245 species in Europe, Africa, Asia and the Americas, one of these extending to Australia.

**1 † *Thesium australe*** R.Br., *Prodr. Fl. Nov. Holland.* 353 (1810)

*Toadflax, Austral Toadflax*

*Linosyris australis* (R.Br.) Kuntze, *Revis. Gen. Pl.* 2: 588 (1891).

*Illustrations:* George (Ed.), *Fl. Australia* 22: 67, fig. 19f-h (1984); Harden, *Fl. New South Wales* 3: 59 (1992); Jeanes, *Fl. Victoria* 4: 37, fig. 4g (1996).

Perennial herb to 0.4 m, glabrous. Branchlets flexible, angular-terete, longitudinally ridged; ridges smooth. Leaves sessile, linear, 10–40 mm long, 0.5–1.5 mm wide, apex acute, minutely papillate (especially visible on young leaves), margin entire. Inflorescence a solitary axillary flower; peduncle 1–3 mm long; bracts 2, persistent, leaf-like, narrowly ovate to subulate, 1–5 mm long, 0.3–0.5 mm wide, apex acute, margin erose to papillate. Tepals whitish, with a broad, green longitudinal band on the abaxial surface, 1.3–1.5 mm long, apex incurved, with a small tuft of minute hairs on the adaxial surface above the point of filament insertion. Nut greenish, ellipsoid to broadly ellipsoid, 2–2.5 mm long, reticulate-striate. Flowering Sep.–Jan. (in Vic.); fruiting Nov.–Mar. (in Vic.)

Tas. (TSE †); also Qld, NSW, Vic.; also Indonesia. Presumed extinct in Tasmania where known from a single collection from the Derwent River valley made in 1804 (see Buchanan 1994). The description above is based on Victorian material. In other states the species occurs primarily in grassland and grassy woodland communities on fertile soils, frequently in association with *Themeda triandra*. Appears to have declined throughout much of its range within Australia as a result of habitat modification. Bentham (1873) and Nianhe and Gilbert (2003) suggest *Thesium chinense* Turcz. (China, Japan, Korea, Mongolia) may be conspecific with *T. australe*, but this has not been confirmed.

## 2 EXOCARPOS

*Exocarpos* Labill., *Voy. Rech. Pérouse* 1: 155 (1800).

Synonymy: *Exocarpus* C.H.Persoon, *Syn. Pl. (Persoon)* 2: 561 (1806), orth. var. *Xylophyllus* section *Exocarpos* (Labill.) Kuntze, in T.Post & Kuntze, *Lex. Gen. Phan.* 598 (1903) [as *Exocarpus*].

Subshrubs, shrubs or trees, some appearing leafless; branchlets terete to angular or flattened, usually with longitudinal ridges. Leaves alternate or sometimes opposite, scale-like or well developed (not in Tas.), simple, caducous or persistent. Inflorescence axillary, a simple or compound spike, sometimes condensed, usually only one fruit developing per inflorescence; peduncle, when present, free from subtending leaf. Flowers bisexual, 4–5-merous, bracteate. Tepals yellowish-green (sometimes tinged reddish), thin or fleshy, adaxial surface glabrous. Stamens inserted at the base of the tepals. Ovary superior; style very short; stigma lobed. Fruit a drupe, exocarp dry or rarely somewhat fleshy, fruiting receptacle enlarged and fleshy; endocarp large.

A genus of 26 species in Malesia, Australia (including Lord Howe & Norfolk Islands), New Caledonia, New Zealand and the Hawaiian Islands. 11 species (9 endemic) in Australia. Information on the colour of the fruiting receptacle and drupe, which may prove diagnostic for some taxa, is poorly documented and requires detailed observation.

Key reference: Stauffer (1959).

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|----|--|----------------------------|
| 1. | Inflorescence a spike of 4–24 flowers; rhachis (excluding peduncle) 3–7 mm long, clearly visible between individual flowers; erect shrub or small tree with a rounded or often pyramidal crown                             | <b>1 E. cupressiformis</b> |
| 1: | Inflorescence a condensed spike (sometimes resembling a cluster) of 2–8 flowers; rhachis (excluding peduncle) 0.4–2 mm long, often obscured by the closely packed bracts and flowers; prostrate to erect subshrub or shrub | <b>2</b>                   |
| 2. | Leaves opposite or subopposite   | <b>2 E. nanus</b>          |
| 2: | Leaves alternate   | <b>3</b>                   |
| 3. | Furrows between longitudinal ridges on fertile branchlets 0.05–0.3 mm wide; basal portion of leaves persistent, distal portion soon weathering away (rarely entire leaf persistent)  | <b>3 E. strictus</b>       |
| 3: | Furrows between longitudinal ridges on fertile branchlets <0.05–0.1 mm wide; entire leaf usually persistent (distal portion sometimes weathering away)   | <b>4</b>                   |
| 4. | Erect shrub, > 0.5 m tall, widespread at low and medium altitudes (< 500 m)  | <b>4 E. syrticola</b>      |
| 4: | Prostrate or ascending shrub < 0.5 m tall, occurring at higher altitudes (usually > 800 m, though found much lower in west)  | <b>5 E. humifusus</b>      |

**1 Exocarpos cupressiformis** Labill., *Voy. Rech. Pérouse* 1: 156, t. 14 (1800) [as *Exocarpus cupressiformis*]

Cherry Ballart

*Xylophyllos cupressiformis* (Labill.) Kuntze, *Revis. Gen. Pl.* 2: 589 (1891). *Exocarpos communis* Miq., *nom. inval., pro syn.*, *Ned. Kruidk. Arch.* 44: 103 (1844) [as *Exocarpus communis*]. *Exocarpos dasystachys* Schltld., *Linnaea* 20: 580 (1847) [as *Exocarpus dasystachys*].

*Illustrations:* Curtis, *The Student's Flora of Tasmania* 3: 628, fig. 134 (1967); Burbidge & Gray, *Flora of the Australian Capital Territory* 151, fig. 129 (1970); Costermans, *Native Trees & Shrubs of South Eastern Australia*, 168, 169 (1981); George, *Fl. Australia* 22: 38, fig. 13d (1984); Jessop, *Fl. South Austral.* 1: 159, fig. 83a (1986); Wiecek, *Fl. New South Wales* 3: 57 (1992); Jeanes, *Fl. Victoria* 4: 30, fig. 3b (1996); Harris *et al.*, *One Hundred Islands: the Flora of the Outer Furneaux* 155 (2001); Gilfedder *et al.*, *The Nature of the Midlands* 103 (2003); Whiting *et al.*, *Tasmania's Natural Flora* 308 (2004); Simmons *et al.*, *A Guide to Flowers and Plants of Tasmania*, 4<sup>th</sup> edn, 111 (2008).

Erect shrub or small tree to 8 m; branchlets flexible, often pendulous distally, fertile branchlets angular to terete, 0.6–1.3 mm diam., longitudinally ridged, the ridges smooth, furrows between the ridges usually < 0.05 mm wide, young growth densely to sparsely puberulous, becoming glabrous with age, but hairs persisting in furrows. Leaves alternate, entire leaf usually persistent, scale like, triangular to ovate-triangular, often broadly so, 0.7–1.6 mm long, 0.4–0.9 mm wide, apex acute, young leaves densely to sparsely puberulous, especially on margins, becoming glabrous with age, margin entire. Inflorescence a spike of 4–24 flowers; rhachis 3–7 mm long, densely puberulous; bracts persistent, scale-like, continuous with rhachis at base, cupped, broadly ovate to depressed ovate, 0.1–1.0 mm long, 0.2–0.3 mm wide, apex obtuse to rounded, sparsely to densely puberulous, hairs mostly confined to the margins, margin entire. Tepals yellowish-green, c. 0.5 mm long, apex incurved, minutely papillate. Fruiting receptacle orange-red to red, obovoid to ellipsoid, 4–6 mm long; densely puberulous when young, becoming glabrous with age, edible. Drupe green to brown, ellipsoid to broad ellipsoid, 3.5–4 mm long, glabrous or rarely with scattered minute hairs, especially when young. Flowering & fruiting Oct.–Feb. (May).

Tas. (BEL, FLI, TNM, TNS, TSE, TSR); also SA, Qld, NSW, Vic. Occurs mostly in the eastern and northern parts of the state, usually in dry Eucalypt woodland in rocky situations, though also found in wetter forests and heathland.

**2 *Exocarpos nanus*** Hook.f., *London J. Bot.* 6: 281 (1847) [as *Exocarpus nanus*]

Alpine Ballart

*Xylophyllos nanus* (Hook.f.) Kuntze, *Revis. Gen. Pl.* 2: 589 (1891). *Exocarpus nana* Benth., *Fl. Austral.* 6: 231 (1873); Rodway, *Tasman. Fl.* 184 (1903), orth. var.

*Illustrations:* Stauffer, *Mitt. Bot. Mus. Univ. Zürich* 213: t. 13 (1959); George, *Fl. Australia* 22: 38, fig. 13f (1984); Harden, *Fl. New South Wales* 3: 56 (1992); Jeanes, *Fl. Victoria* 4: 30, fig. 3a (1996); Kirkpatrick, *Alpine Tasmania* 57, fig. 24h (1997); Whiting *et al.*, *Tasmania's Natural Flora* 309 (2004).

Prostrate to ascending subshrub; branchlets more or less rigid, prominently angular, longitudinally ridged, the ridges smooth, apparently glabrous. Leaves opposite to sub-opposite, entire leaf usually persistent, scale like, triangular to ovate-triangular, often broadly so, 0.3–1 mm long, 0.4–0.8 mm wide, apex acute, minutely ciliate on youngest leaves, margin entire. Inflorescence a condensed spike of 1–4 flowers, rhachis to 0.5 mm long, glabrous; bracts persistent, scale-like, continuous with rhachis at base, cupped, broadly ovate, 0.3–0.5 mm long and wide, apex rounded, minutely ciliate, margin entire. Tepals yellowish-green[?], 0.5–0.6 mm long, apex incurved, minutely papillate or glabrous. Fruiting receptacle dark red, obovoid to obconical, 3–4 mm long, glabrous, edible. Drupe green to red-brown, ellipsoid to broadly ellipsoid, 3 mm long, glabrous. Flowering Dec.; fruiting Dec.-Mar. (Jun.).

Tas. (BEL, TCH, TWE); also NSW, Vic. Occurs in shrublands at elevations above 850 m alt. Floral morphology and flowering times are poorly documented for this species, as very few flowering specimens have been collected, most collections representing fruiting material.

**3 *Exocarpos strictus*** R.Br., *Prodr. Fl. Nov. Holland.* 356 (1810) [as *Exocarpus stricta*]

Pale Ballart

*Xylophyllos strictus* (Labill.) Kuntze, *Revis. Gen. Pl.* 2: 589 (1891). *Omphacomeria psilotoides* A.DC., *Prodr.* 14: 681 (1857); *Omphacomeria acerba* (R.Br.) A.DC. var. *psilotoides* (A.DC.) C.Moore & Betche, *Handb. Fl. New S. Wales.* 224 (1893).

*Illustrations:* Stauffer, *Mitt. Bot. Mus. Univ. Zürich* 213: t. 10 (1959); Jessop, *Fl. South Austral.* 1: 159, fig. 83c (1986); Wiecek, *Fl. New South Wales* 3: 57 (1992); Jeanes, *Fl. Victoria* 4: 30, fig. 3d (1996); Harris *et al.*, *One Hundred Islands: the Flora of the Outer Furneaux* 155 (2001); Whiting *et al.*, *Tasmania's Natural Flora* 309 (2004).

Erect shrub or small tree, to 3 m; branchlets flexible, sometimes pendulous distally, fertile branchlets angular to prominently angular, 0.4–1.4 mm diam., longitudinally ridged, the ridges smooth to minutely tuberculate, 0.1 mm wide, furrows between the ridges 0.05–0.3 mm wide, usually densely puberulous or minutely papillate in branchlet furrows (indumentum sometimes absent or poorly developed) and adjacent leaf axils, indumentum persisting or weathering away. Leaves alternate, basal portion persistent, distal portion soon weathering away (rarely entire leaf persistent), scale like, very narrowly triangular to subulate, 0.6–3.2 mm long, 0.2–0.3 mm wide, apex acute to narrowly acute; young leaves ciliate, at least distally, becoming glabrous with age, margin entire. Inflorescence a condensed spike of 2–8 flowers; rhachis 0.4–1.1 mm long, densely puberulous; bracts persistent, scale-like, continuous with rhachis at base, cupped, broadly ovate to depressed ovate, 0.3–0.4 mm long, 0.5–0.6 mm wide, apex obtuse to rounded or sometimes broadly acuminate, ciliate, margin entire. Tepals yellowish-green, sometimes tinged reddish, c. 0.5 mm long, apex incurved. Fruiting receptacle white to red, obovoid to broadly obovoid, 3–4 mm long, glabrous, edible. Drupe green to blackish-green, ellipsoid to broadly ellipsoid, 3–4 mm long, glabrous. Flowering Jul.-Nov.; fruiting Nov.-Mar. (May)

Tas. (BEL, FLI, TNM, TNS, TSE, TSR); also SA, Qld, NSW, Vic. Occurs mainly in the eastern parts of the state at low altitudes. Found in dry eucalypt woodland and coastal shrubberies on sand, granite or dolerite.

*Exocarpos strictus*, *E. humifusus* and *E. syrticola* are all closely related, and further research, both in Tasmania and elsewhere in southern Australia, is needed to determine whether these taxa should be maintained at specific rank. As noted by Curtis (1967), *E. humifusus* and *E. syrticola* are morphologically very similar, but differ significantly in habit and habitat. *Exocarpos humifusus* is a prostrate or ascending subshrub or shrub usually at high

altitudes (though in the west of the state it is found at lower altitudes but then in rocky, exposed heath), while *E. syrticola* is an erect shrub at low altitudes, frequently in coastal sites. *Exocarpos strictus* is again similar to both these species, and may be most reliably differentiated by the broader furrows on the branchlets (longitudinal ridges narrow and well separated) and the usually non-persistent leaves. In *E. humifusus* and *E. syrticola* the furrows on the branchlets are much narrower (longitudinal ridges broader and touching or nearly so), and the leaves are usually persistent. The common branchlet morphology in *E. humifusus* and *E. syrticola* may possibly be as a result of exposure to strong winds in their respective habitats. Specimens with branchlet morphology somewhat intermediate between *E. strictus* and *E. syrticola* have been seen, particularly from the Furneaux Island Group, but such specimens can usually be assigned (somewhat unsatisfactorily) to either taxon on the basis of leaf persistence and 'best fit'. Detailed observations on fruiting receptacle and drupe colour in *E. strictus*, *E. humifusus* and *E. syrticola* may also prove informative.

#### 4 *Exocarpos syrticola* (F.Muell. ex Miq.) Stauffer, *Mitt. Bot. Mus. Univ. Zürich* 213: 173, t. 9, 23B (1959)

*Coast Ballart*

*Exocarpos strictus* var. *syrticola* F.Muell. ex Miq., *Ned. Kruidk. Arch.* 4: 104 (1856).

*Illustrations:* Stauffer, *Mitt. Bot. Mus. Univ. Zürich* 213: t. 9 (1959); Cochrane *et al.*, *Flowers & Plants of Victoria*, fig. 293 (1967); Jessop, *Fl. South Austral.* 1: 159, fig. 83e (1986); Jeanes, *Fl. Victoria* 4: 30, fig. 3e (1996); Harris *et al.*, *One Hundred Islands: the Flora of the Outer Furneaux* 157 (2001); Whiting *et al.*, *Tasmania's Natural Flora* 310 (2004).

Erect shrub to 3.5 m, branchlets flexible, fertile branchlets angular-terete, 0.8–1.7 mm diam., longitudinally ridged, the ridges smooth to minutely tuberculate, 0.15–0.2 mm wide, furrows between the ridges <0.05–0.1 mm wide, usually densely puberulous or minutely papillate in branchlet furrows (indumentum sometimes absent or poorly developed) and adjacent leaf axils, indumentum persisting or weathering away. Leaves alternate, entire leaf usually persistent (distal portion sometimes weathering away), scale like, very narrowly triangular to subulate, 0.9–2.5 mm long, 0.2–0.3 mm wide, apex acute to narrowly acute; young leaves ciliate, at least distally, becoming glabrous with age, margin entire. Inflorescence a condensed spike of 2–8 flowers; rhachis 0.6–2.0 mm long, densely puberulous; bracts persistent, scale-like, continuous with rhachis at base, cupped, broadly ovate to depressed ovate, 0.3–0.4 mm long, 0.5–0.6 mm wide, apex obtuse to rounded or sometimes broadly acuminate, ciliate, margin entire. Tepals yellowish-green, sometimes tinged reddish, 0.5 mm long, apex incurved. Fruiting receptacle whitish to pinkish, obovoid to broadly obovoid, 3–5 mm long, glabrous, edible. Drupe green to purplish-green, ellipsoid to broadly ellipsoid, 3–4 mm long, glabrous. Flowering Jun.-Jan.; fruiting Dec.-Mar.

Tas. (FLI, TSE, TSR, TWE); also SA, Vic. Occurs in near coastal areas in the west, south and patchily in the east including the Tasman Peninsula and the Furneaux Group. Usually found growing in coastal shrubberies on sand, dolerite, siltstone and limestone. See discussion under *E. strictus*.

#### 5 *Exocarpos humifusus* R.Br., *Prodr. Fl. Nov. Holland.* 356 (1810) [as *Exocarpos humifusa*]

*Xylophyllos humifusus* (Labill.) Kuntze, *Revis. Gen. Pl.* 2: 589 (1891).

*Illustrations:* Stauffer, *Mitt. Bot. Mus. Univ. Zürich* 213: t. 12 (1959); Stones & Curtis, *The Endemic Flora of Tasmania* 5: 336, t. 177 (1975); Kirkpatrick, *Alpine Tasmania* 57, fig. 24g (1997); Whiting *et al.*, *Tasmania's Natural Flora* 308 (2004).

Prostrate to ascending subshrub; branchlets more or less rigid, fertile branchlets angular-terete to terete, 0.8–1.5 mm diam., longitudinally ridged, the ridges smooth, 0.2–0.4 mm wide, furrows between the ridges usually < 0.05 mm wide, densely puberulous or minutely papillate in branchlet furrows and adjacent leaf axils. Leaves alternate, entire leaf usually persistent (distal portion sometimes weathering away), scale like, triangular to subulate, 0.6–1.8 mm long, 0.4–0.8 mm wide, apex acute to narrowly acute; young leaves ciliate, becoming glabrous with age, margin entire. Inflorescence a condensed spike of 2–6 flowers; rhachis 0.5–1 mm long, puberulous; bracts persistent, scale-like, continuous with rhachis at base, cupped, broadly ovate to depressed ovate, 0.3–0.4 mm

long, 0.5–0.7 mm wide, apex obtuse to rounded or sometimes broadly acuminate, puberulous, margin ciliate, entire. Tepals yellowish-green, sometimes tinged reddish, 0.5–0.7 mm long, apex incurved, minutely papillate on margins. Fruiting receptacle red, obovoid, 3–5 mm long, glabrous, edible. Drupe dark red to blackish-green, ellipsoid to broadly ellipsoid, 3–4 mm long, glabrous. Flowering Nov.-Apr.; fruiting Dec.-Apr. (Jul.).

Tas. (BEL, TCH, TNM, TNS, TSE, TSR, TWE), endemic. Occurs at altitudes above 800 m in most regions though in the west of the state it does occur to almost sea level. Found in open eucalypt woodland or forest and shrubland or heath communities, frequently in rocky sites. See discussion under *E. strictus*.

### 3 LEPTOMERIA

*Leptomeria* R.Br., *Prodr. Fl. Nov. Holland.* 353 (1810).

Subshrubs or shrubs, some appearing leafless; branchlets terete to angular, usually with longitudinal ridges. Leaves alternate, scale-like and caducous or well-developed and persistent, simple. Inflorescence axillary or less often terminal, a simple or rarely compound raceme, spike-like raceme or corymb; peduncle free from subtending leaves. Flowers bisexual, (4)5(6)-merous, subtended by a single caducous or persistent bract. Tepals white (sometimes tinged reddish), thin or fleshy, the apex sometimes thickened and hooded, adaxial surface glabrous(?) or variously hairy. Stamens inserted at the base of the tepals. Ovary inferior; ovules (4)5; style very short; stigma lobed. Fruit a drupe, with persistent perianth at apex, exocarp fleshy or dry; endocarp large.

A genus of 17 species endemic to Australia.

Key reference: Lepschi (1999).

- |    |   |                       |
|----|---|-----------------------|
| 1. | Shrub (0.3–)1–2.5 m tall; adaxial surface of tepals with small tuft of minute hairs in the proximal portion; floral disc deeply lobed | <b>1 L. drupacea</b>  |
| 1: | Subshrub of shrub 0.04–0.1(–0.3) m tall; adaxial surface of tepals apparently glabrous; floral disc shallowly lobed                   | <b>2 L. glomerata</b> |

**1 *Leptomeria drupacea*** (Labill.) Druce, *Bot. Exch. Club Brit. Isles Rep.* 1916, *Suppl.* 2: 632 (1917)

*Thesium drupaceum* Labill., *Nov. Holl. Plant.* 1: 68, t. 93 (1805); *Leptomeria billardieri* R.Br., *Prodr. Fl. Nov. Holland.* 354 (1810), *nom. illeg.* *Leptomeria billardieri* var. *humilis* Hook.f., *Bot. Antarct. Voy. III. (Fl. Tasman.)* 1: 337 (1855).

*Illustrations:* Curtis, *The Student's Flora of Tasmania* 3: 627, fig. 133a-b (1967); Costermans, *Native Trees & Shrubs of South Eastern Australia* 170 (1981) (as *L. acida*); George (Ed.), *Fl. Australia* 22: 50, fig. 16e (1984); Harden, *Fl. New South Wales* 3: 60 (1992); Harris *et al.*, *One Hundred Islands: the Flora of the Outer Furneaux* 177 (2001); Gilfedder *et al.*, *The Nature of the Midlands* 118 (2003); Whiting *et al.*, *Tasmania's Natural Flora* 310 (2004); Simmons *et al.*, *A Guide to Flowers and Plants of Tasmania*, 4<sup>th</sup> edn, 114 (2008).

Erect, sometimes broom-like or occasionally more or less spreading subshrub or shrub (0.3–)1–2.5 m; branchlets flexible to more or less rigid, more or less terete to prominently angular, longitudinally ridged. Leaves scale-like, caducous, sessile, narrowly ovate to subulate, 0.7–1.5 mm long, 0.3–0.5 mm wide, base truncate, apex narrowly acute to acuminate, margin entire or suberose distally. Inflorescence a raceme of 6–15(–25)-flowered; rachis 4–15(–47) mm long; bracts scale-like, caducous, sessile, cupped, ovate to broadly ovate or almost suborbicular, 0.7–1.2 mm long, 0.3–0.5 mm wide, base truncate, apex narrowly acute, margin entire or distal portion rarely suberose. Tepals white to cream (frequently flushed reddish-pink upon ageing), 0.6–1.3 mm long, apex incurved, prominently hooded and thickened adaxially, with a small tuft of minute hairs on the adaxial surface above the point of filament insertion. Floral disc deeply lobed, 0.6–0.8 mm diam. Drupe green becoming reddish, subglobose to ellipsoid, c. 6 mm long, glabrous, edible. Flowering Jun.-Dec.(–Feb.); fruiting Aug.-Feb.

Tas. (all regions); also Qld (far SE), NSW, Vic (far SE). Widespread in open eucalypt forest or woodland, often

with a dense understorey, heath or (uncommonly) heath-sedgeland communities, sometimes on rocky sites.

Low (<50 cm tall) plants of *L. drupacea* (such as the type material of *L. billardieri* var. *humilis*) may appear superficially similar to *L. glomerata*, but the two taxa can be distinguished by the characters outlined in the key. These plants are probably an environmentally induced form of *L. drupacea*, and no evidence of intergradation with *L. glomerata* has been observed on herbarium material. Inflorescences in Tasmanian plants are frequently more floriferous (i.e. >15-flowered, occasionally also with longer rhachises) than those from other states.

## 2 *Leptomeria glomerata* F.Muell. ex Hook.f., *Bot. Antarct. Voy. III. (Fl. Tasman.)* 2: 370 (1859)

*Illustrations*: Stones & Curtis, *The Endemic Flora of Tasmania* 5: 336 (1975); George, *Fl. Australia* 22: 50, fig. 16b (1984); Whiting *et al.*, *Tasmania's Natural Flora* 311 (2004).

Prostrate to erect, often compact subshrub or shrub 0.04–0.1(–0.3) m; branchlets rigid, prominently angular, longitudinally ridged. Leaves scale-like, caducous, sessile, ovate to broadly ovate or ovate-triangular, 0.7–1.4 mm long, 0.4–0.5 mm wide, base truncate, apex narrowly acute to acuminate, margin occasionally more or less suberose distally. Inflorescence a short, spike-like raceme or corymb of 2–5(–13) flowers, rhachis (<0.5–)1–4(–11) mm long; bracts scale-like, caducous, sessile, cupped, ovate-elliptic to broadly ovate-elliptic, 0.7–1.2 mm long, 0.4–0.5 mm wide, base truncate, apex narrowly acute to acuminate, margin entire. Tepals white (often ageing reddish), 0.5–0.6 mm long, apex incurved, prominently hooded and thickened adaxially, glabrous. Floral disc shallowly lobed, 0.6–0.7 mm diam. Drupe reported green and becoming reddish or purplish-red when ripe, poorly known, ellipsoid to more or less globular, c. 4 mm long. Flowering & fruiting Dec.–Apr.

Tas. (TCH, TSE, TSR, TWE), endemic. Restricted to western and southern Tasmania, growing in heath, heath-sedgeland and tussock-sedgeland (button-grass) communities, often in damp seepage areas or sometimes in rocky sites, and fjaeldmark/cushion plant communities at higher altitudes.

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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](http://www.tmag.tas.gov.au/floratasmania)].

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