



## 86 SAPINDACEAE <sup>1</sup>

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Trees, shrubs or climbers (not in Tas.), rarely herbaceous (not in Tas.), evergreen or deciduous. Leaves alternate or opposite, usually exstipulate, sessile or petiolate; lamina simple, palmatifid, pinnate or digitate. Inflorescences axillary or terminal, racemose, cymose or flowers solitary. Flowers actinomorphic or zygomorphic, bisexual or unisexual, functionally male or functionally female. Sepals (3)4–5(–10), free or united. Petals (0)4–6, free. Stamens 4–10(–74), usually 8, usually free; anthers 2-locular, dehiscing longitudinally. Ovary superior, 1–3(–8)-locular; ovules 1–2 per locule; style usually 1; stigma entire or with 2–3(4) lobes. Fruit a drupe, capsule, berry or a winged schizocarp consisting of 2–3 samaras. Seeds often solitary by abortion, often arillate; endosperm scanty or absent.

A family of 135 genera and about 1580 species, widespread in tropical, subtropical, warm temperate and temperate regions but mostly pantropical. About 30 genera and 190 species in Australia; 2 genera and 3 species in Tasmania. The family is placed in the Sapindales and is related to the mainly tropical families Meliaceae and Simaroubaceae and the widespread Rutaceae family. The circumscription of Sapindaceae here follows the molecular analysis of Harrington *et al.* (2005) and includes Aceraceae (Maple family) and Hippocastanaceae (Horse Chestnut family).

Synonymy: Aceraceae, Dodonaeaceae, Hippocastanaceae.

Key references: Reynolds & West (1985); Heywood *et al.* (2007).

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

1. Deciduous trees; leaves opposite, palmately lobed

1 Acer

1: Evergreen shrubs to small trees; leaves alternate, not lobed

2 Dodonaea

### 1 \* Acer

*Acer* L., *Sp. Pl.* 1: 1054 (1753).

Trees or shrubs, usually deciduous. Leaves opposite, petiolate, usually palmately or pinnately divided, occasionally entire. Inflorescences a corymb, umbel, raceme or panicle. Flowers unisexual or functionally unisexual, actinomorphic. Sepals (4)5(6), usually free. Petals equal in number and resembling sepals. Stamens 4–12, usually 8. Carpels 2; ovules 2 per locule. Fruit a winged schizocarp, usually a double samara. Seeds 1 per samara, exarillate, endosperm absent.

A genus of about 120 species; native in temperate and tropical regions of northern Africa, Asia, Europe, Central and North America. The genus is particularly well represented in China which has approximately 99 species (Xu *et al.* 2008). Two species are naturalized in Australia; 1 species is naturalized in Tasmania. Several members of the genus are cultivated as ornamentals, including *A. negundo* L. (Box Elder), *A. pseudoplatanus* L. (Sycamore Maple) and numerous cultivars of *A. palmatum* Thunb. (Japanese Maple) (Spencer 2002). Maple syrup is made from the sap of the north American species, *A. saccharum* Marsh. (Sugar Maple).

Key references: Hewson (1985); Xu *et al.* (2008).

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

**1 \* *Acer pseudoplatanus* L., *Sp. Pl.* 1: 1054 (1753)**

Sycamore Maple

*Illustrations:* Walsh, *Fl. Victoria* 4: 151, fig. 27b (1999); Wilson, *Fl. New South Wales* 2, rev. edn: 361 (2002); Baker, *Pap. & Proc. Roy. Soc. Tasmania* 141: 189, pl. 2 (2007).

Trees up to 20 m or more tall, monoecious, deciduous; branches opposite, glabrous. Leaves opposite, glabrous, except for some hairs confined to the main veins on the abaxial surface; stipules usually absent; petiole 5–17(–22) cm long; lamina palmately (3–)5-lobed, 9–16(–20) cm long, 9–18(–27) cm wide, lobes ovate, adaxial surface green, abaxial surface glaucous, base usually cordate, margin irregularly and coarsely toothed, apex of lobes acute. Inflorescences pendulous, racemose panicles, to 22 cm long, c. 60–100-flowered; pedicels to 13 mm long. Flowers functionally male or functionally female. Sepals and petals similar, greenish-yellow, c. 3 mm long. Stamens usually 8. Ovary pubescent, not viscous. Fruit a schizocarp of two joined samaras, samara wings to 50 mm long, usually spreading at an obtuse angle, reticulate. Seeds spherical, 5–10 mm long. Flowering Oct.–Nov.; fruiting Nov.–Feb. (in sheltered situations, the fruits remain on trees throughout winter).

Tas. (TNM, TNS, TSE, TSR); also naturalized in SA, NSW, Vic.; native to central & S Europe; cultivated and naturalized throughout the world, particularly in cooler regions. Introduced to Tasmania as an ornamental plant and now naturalized throughout the State. Whilst its distribution is localized it is expected to be more widespread than records suggest. The species is associated with cool moist habitats such as riverbanks, wet to moist forests and occasionally in roadside drainage lines. In some situations it transforms vegetation almost to a monoculture and has been recorded colonizing large areas of native forest (Baker 2007). *Acer pseudoplatanus* was first recorded in Tasmania in 2002. However, earlier Tasmanian records exist in herbaria of other states and Raphael (1955) reported it to be an occasional garden escape in suburban habitats.

**2 *Dodonaea***

*Dodonaea* Mill., *Gard. Dict. Abr.*, ed. 4 (1754).

Evergreen trees or shrubs, often viscid. Leaves alternate, rarely opposite (not in Tas.), sessile or petiolate, simple or pinnate (not in Tas.), sessile to subsessile. Inflorescences cymose. Flowers unisexual or bisexual, actinomorphic. Sepals 3–7, free. Petals absent. Stamens 6–16. Carpels 2–6; ovules 2 per locule. Fruit a 2–6-angled or 2–6 winged capsule. Seeds 2 or 1 (by abortion) arillate or exarillate, endosperm absent.

A genus of about 65 species; native in the tropics, temperate Africa, the Pacific with the vast majority endemic to Australia. Several members of the genus are cultivated in Australia, these include *D. boroniifolia* G. Don (Hairy Hop-bush) and *D. viscosa* Jacq. (Hop-bush) (Spencer 2002). The cultivar *D. viscosa* 'Purpurea' is grown for its purplish red foliage (Spencer 2002).

Key references: West (1984); Reynolds & West (1985).

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|----|--|-------------------------------|
| 1. | Leaves linear, 4–20(–26) mm long, 0.5–1.4 mm wide                          | <b>1 <i>D. filiformis</i></b> |
| 1: | Leaves usually spatulate or oblanceolate, (15–)25–83 mm long, 3–20 mm wide | <b>2 <i>D. viscosa</i></b>    |

**1 *Dodonaea filiformis* Link, *Enum. Hort. Berol. Alt.* 1: 381 (1821)**

Fine-leaf Hop-bush

*Dodonaea ericifolia* G. Don, *Gen. Hist.* 1: 674 (1831) [as *D. ericaefolia*]. *Dodonaea salsolifolia* A. Cunn. ex Hook., *London J. Bot.* 1: 251 (1834).

*Illustrations:* Curtis & Stones, *The Endemic Flora of Tasmania* 2: t. 46, No. 77 (1969), as *D. ericifolia*; West, *Brunonia* 7(1): 171, fig. 62 (1984); Whiting *et al.*, *Tasmania's Natural Flora* 311 (2004); Simmons *et al.*, *A Guide to Flowers and Plants of Tasmania*, 4<sup>th</sup> edn, 113 (2008).

Dioecious shrubs to 2 m tall; stems, leaves and flowers with resin-secreting glands; stems pubescent. Leaves alternate, estipulate, sessile, glabrous, sometimes with occasional, minute hairs; lamina (4–)10–20(–26) mm

long, 0.5–1.4 mm wide, linear, adaxial surface flat to concave, abaxial surface convex or ridged, margin entire, apex sub-acute to rounded. Inflorescence a 3–4 flowered cyme or a solitary flower; pedicels 1–1.5(–3) mm long. Flowers unisexual. Sepals 5(6), 0.7–1.5 mm long. Stamens 5(6). Ovary glabrous, viscous. Fruit a rotund (in lateral view) capsule with 3(4) papery wings, 5–9(–11.5) mm long, 6–14.5(–17.8) mm wide, base cordate, apex obcordate, becoming purplish or with purplish extremities. Seeds lenticular 1.9–2.3 mm diam. Flowering & fruiting (Jul.–)Oct.–Jan.(–Mar.).

Tas. (BEL, FLI, TCH, TNM, TSE, TSR, TWE); endemic. Widespread and occasional in the north-east, midlands and eastern parts of the state. Associated with well drained inland riparian and floodplain vegetation, commonly growing with *Leptospermum*. *Dodonaea filiformis* has also been recorded in open forest and on lake shores. Collections recorded from the original Lake Pedder shoreline and from Lake Fenton are outlying records.

**2 *Dodonaea viscosa* Jacq., *Enum. Syst. Pl.* 19 (1760) subsp. *spatulata* (Sm.) J.G.West, *Brunonia* 7:43 (1984)**  
*Hop-bush, Native Hop, Soapwood*

*Dodonaea spatulata* Sm., *Cycl. (Rees)* 12 (1809); *D. viscosa* var. *spatulata* (Sm.) Benth., *Fl. Austral.* 1: 476–477 (1863) [as var. *spathulata*]; *D. viscosa* var. *arborescens* (Hook.f.) Sherff f. *spatulata* (Sm.) Sherff, *Amer. J. Bot.* 32: 214 (1945). *Dodonaea asplenifolia* Rudge, *Trans. Linn. Soc. Lond.* 11: 297, t. 20 (1815); *D. viscosa* var. *asplenifolia* (Rudge) Hook.f., *Bot. Antarct. Voy. Ill. (Fl. Tasman.)* 1: 55 (1856). *Dodonaea oblongifolia* Link, *Enum. Hort. Berol. Alt.* 1: 381 (1821). *Dodonaea conferta* G.Don, *Gen. Hist.* 1: 674 (1831). *Dodonaea asplenifolia* var. *arborescens* Hook.f., *J. Bot. (Hooker)* 2: 415 (1840); *D. viscosa* var. *arborescens* (Hook.f.) Sherff, *Amer. J. Bot.* 32: 214 (1945). *Dodonaea cuneata* Sm. var. *rigida* Benth., *Fl. Austral.* 1: 477 (1863).

*Illustrations:* Curtis & Morris, *The Student's Flora of Tasmania* 1, rev. edn: 122, fig. 35 (1975); West, *Brunonia* 7(1): 36, fig. 21; 147, fig. 22d (1984); West, *Fl. Australia* 25: 127, fig. 28d (1985); Cameron, *A Guide to Flowers and Plants of Tasmania*, rev. edn: 103, fig. 254 (1996); Duretto, *Fl. Victoria* 4: 147, fig. 26d (1999); Wilson & Scott, *Fl. New South Wales* 2, rev. edn: 356, fig. 1g (2002); Gilfedder *et al.*, *The Nature of the Midlands* 104 (2003); Whiting *et al.*, *Tasmania's Natural Flora* 312 (2004); Simmons *et al.*, *A Guide to Flowers and Plants of Tasmania*, 4<sup>th</sup> edn, 147 (2008).

Shrubs or small trees to 6 m tall, dioecious; stems, leaves and flowers with resin-secreting glands; stems pubescent. Leaves alternate, ex-stipulate, sessile to subsessile, glabrous; lamina variable, (15–)25–55(–83) mm long, (3–)5–15(–20) mm wide, spatulate, oblanceolate, obovate, narrow elliptic, flat, adaxial surface glossy, dark green, abaxial surface similar to adaxial although marginally lighter in colour, base attenuate, margin entire, slightly recurved, apex apiculate, truncate, rounded, acute, emarginate or obcordate. Inflorescence a several flowered panicle or a solitary flower; pedicels to 10 mm long. Flowers unisexual. Sepals 3–4, 1–2.5 mm long. Stamens 8. Ovary glabrous, viscous. Fruit an orbicular to rotund (in lateral view) capsule with 3(4) papery wings, 5–17(–20) mm long, 6.5–21.5(–28) mm wide, base cordate, apex obcordate, light brown to purplish or with purplish markings. Seeds lenticular 2.3–3 mm diam. Flowering mainly Dec.–Feb.; fruiting (Aug.–)Oct.–Jan.(–Feb.).

Tas. (BEL, FLI, KIN, TSE, TNM, TNS); also WA, SA, Qld, NSW, Vic.; widespread in the eastern parts of Tasmania with outlying populations occurring on King Island. Associated with moist to dry open forest, shrubland and grassland, from sea level to c. 680 m alt. Also recorded on stream banks and lake shores. The distribution of the species, which includes seven subspecies, is much broader and extends from Australia to the tropics and temperate South America and Africa (West 1984). *Dodonaea viscosa* subsp. *spatulata* is similar in appearance to *Beyeria viscosa* (Labill.) Miq. (Euphorbiaceae). *Dodonaea viscosa* subsp. *spatulata* can be distinguished from this species by having a glossy green abaxial leaf surface compared to the pale and somewhat glaucous abaxial leaf surface in *B. viscosa*.

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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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