



## 76 ELATINACEAE <sup>1</sup>

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Herbs or rarely subshrubs growing in shallow water or on mud, often creeping and rooting at the nodes, resinous. Leaves opposite or whorled, stipulate, simple, usually glabrous. Inflorescence axillary, a few-flowered cyme, or flowers solitary. Flowers small, actinomorphic, bisexual. Sepals 2–6, free or fused in lower half. Petals as many as the sepals, free. Stamens as many as or twice as many as the petals; anthers opening by longitudinal slits. Ovary superior, 2–5-locular (locules incompletely divided in *Bergia* L.); styles free; stigmas capitate; ovules numerous. Fruit a septidial capsule or shizocarp. Seed lacking endosperm.

A family of 2 genera and about 30–45 species; widespread in tropical and temperate regions though more numerous in the tropics. 2 genera and 7 species in Australia. Elatinaceae are most closely related to Malpighiaceae (tropics & subtropics, especially the Americas) in the Malpighiales (Davis & Chase 2004).

Synonymy: Cryptaceae.

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

### 1 ELATINE

*Elatine* L., *Sp. Pl.* 1: 367 (1753).

Annual herbs, prostrate, glabrous. Leaves opposite; stipules scarious, erect, deciduous; petioles short; lamina entire, veins ending at the margins in a small dark gland or pore. Flowers solitary, axillary. 3–4-merous. Sepals free. Petals larger than sepals. Ovary 3–4-locular; styles as many as the loculi, free. Fruit a membranous capsule, depressed-globular, dehiscent (usually) radially. Seeds ± cylindrical, sometimes slightly curved, trabeculate.

A cosmopolitan genus of about 10–20 species: 2 species native to Australia. The other Australian species is *E. macrocalyx* Albr. (WA, NT).

**1 *Elatine gratioloides*** A.Cunn., *Ann. Nat. Hist.* 4: 26 (1839)

*Waterwort*

*Elatine americana sensu* J.D.Hooker, *Bot. Antarct. Voy. Ill. (Fl. Tasman.)* 1: 47 (1860); G.Bentham, *Fl. Austral.* 1: 178 (1863), *auct. non* (Pursh) Arn. (1830). *Elatine americana* var. *callitriche* Hook., *ibid.* *Elatine americana* var. *australiensis* Benth., *Fl. Austral.* 1: 178 (1863).

*Illustrations:* Walsh, *Fl. Victoria* 3: 315, fig. 62a-c (1996); Corrick & Fuhrer, *Wildflowers of Victoria* 70, fig. 252 (2000); Jacobs, *Fl. New South Wales* 1, rev. edn: 492 (2000).

Small, weak, glabrous herb, often forming mats to c. 50 cm across; on exposed mud stems have short internodes; submerged plants have ascending stems to 40 cm long, with longer internodes. Leaves ovate, obovate, oblong, elliptical or linear, depending on habitat, usually 2–5 mm long, 1–3 mm wide, but in deeper water up to 15 mm long and 6 mm wide; on exposed mud the leaves are crowded, almost coriaceous, purplish, veins obscure; on submerged plants the leaves are thin, pale green, veined ending at the margins in a small dark

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

gland or pore. Flowers subsessile in axil of one leaf of any leaf pair, 3-merous. Sepals green, elliptical, 0.5–1.25 mm long. Petals green or pinkish, orbicular, c. 1.5 mm long. Stamens opposite the sepals. Styles 0.1–0.5 mm long. Capsule membranous, 1–2.5 mm diam. Seeds numerous, 0.5–0.8 mm long, with longitudinal and cross-ridges. Flowering & fruiting Nov.-Mar.

Tas. (BEL, FLI, TCH, TNM. TNS, TSE, TSR, TWE); all Australian states; also New Zealand. Widespread and found growing on muddy shores or shallowly submerged in lakes and streams, in marshes or in deeper still or slow-flowing water, from near sea level to 1150 m alt. Dennis Morris (cited as a pers. comm. by Albrecht 2002) considered that the type of *E. gratioides*, from New Zealand, is quite different to the Australian material and that the Australian material may require a new name.

## REFERENCES

- Albrecht DE (2002) *Elatine macrocalyx* (Elatinaceae), a new species from central and western Australia. *Nuytsia* **14** 319–324.
- APC (Australian Plant Census) <http://www.chah.gov.au/apc/about-APC.html>
- APNI (Australian Plant Name Index) <http://www.anbg.gov.au/cgi-bin/apni>
- AVH (Australia's Virtual Herbarium) (Council of Heads of Australasian Herbaria) <http://www.anbg.gov.au/avh.html>
- Davis CC, Chase MW (2004) Elatinaceae are sister to Malpighiaceae; Peridiscaceae belong to Saxifragales. *American Journal of Botany* **91** 262–273.
- IPNI (International Plant Name Index) <http://www.ipni.org/index.html> or <http://www.us.ipni.org/index.html>
- NVA (Natural Values Atlas) (Department of Primary Industries and Water: Hobart) <http://www.dpiw.tas.gov.au/inter.nsf/WebPages/LJEM-6TV6TV?open>
- 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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