Flora of South Australia

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Photograph: Helen Owens
HYDATELLACEAE

J.G. Conran

Subaquatic caespitose annual or perennial herbs; rootstock minute, not forming a rhizome; leaves linear, sessile, alternate, sheathing, eligulate. Reproductive units capitulum-like, scapose, heterogamous, unisexual or co-sexual with male florets scattered among female florets; involucral bracts 2–21, lanceolate, spreading or erect, forming an apparent whorl below the florets; perianth absent; male flower a single anther; female flower a superior, ± trigonous, 1-ovulate ovary, styles free. Fruit a shortly pedicellate, achene or follicle-like, sometimes dehiscent, often with 3 prominent longitudinal ribs; seed perispermous, starchy, more or less lacking endosperm, testa smooth or sculptured.

A monogenic family of 12 species worldwide with 10 endemic to Australia, mainly in south-western W.A. and one species each in New Zealand and India. A single species recorded in S.A.

Hydatella Diels and Trithuria Hook.f. were traditionally regarded as two closely-related genera (recognised on the basis of plant sexuality and fruit dehiscence) within the family Centrolepidaceae and allied to the grasses and sedges, but recent molecular studies have shown that they represent a single genus and are members of the basal angiosperm family Hydatellaceae in the order Nymphaeales (Rudall et al. 2007; Saarela et al. 2007; Sokoloff et al. 2008). Although the family consists of a single genus (Trithuria), the family name Hydatellaceae (based on the now synonymous Hydatella) has priority.

1. TRITHURIA Hook.f.

Fl. Tasman. 2: 78 (1858).

(Chreis, three; thyris, window; referring to the 3-way dehiscence of the fruit of T. submersa.)


Description and distribution statement as for family (monogenic family).


Annual herb, green but usually becoming reddish; leaves lax, straight, narrow-linear, acute, 1–4 cm long, to 1 mm wide. Reproductive units numerous, scapose or rarely sessile; scapes erect, filiform, unbranched, accrescent, to 5 cm high, leafless, glabrous; involucre spreading; bracts 4–6, acuminate, 1-veined, subequal, 3–4 mm long, glabrous; male florets 2–5; anther oblong, c. 0.6 mm long, purple; filament 1–2 mm long, rigid; female florets 10–25, c. 2 mm long, densely packed in a hemispherical cluster; ovary ovoid to trigonous, style apparently absent, stigmatic hairs 3–6. Fruit a capsule, obovoid-trigonal, c. 0.6 × 0.3 mm, splitting along the 3 ribs, with 3 panels attached at the apex and opening outwards from the base after falling from the pedicel; seed ovoid, c. 0.4 ×
0.25 mm, rugose, brown. **Trithuria. Pl. 1.**


**References**

