



Flora of Australia

Asplenium bulbiferum subsp. gracillimum

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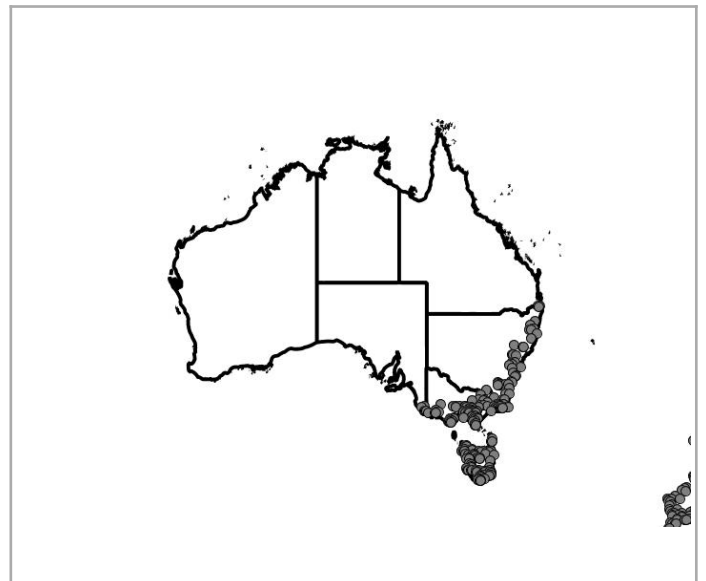
Asplenium bulbiferum subsp. *gracillimum* (Colenso) Brownsey

- Brownsey, P.J. in McCarthy, P.M. (ed.) (1998), Aspleniaceae. *Flora of Australia* 48

P.J. Brownsey

Ferns with ±erect fronds. Rhizome erect, scaly. Stipe and rachis brown on underside, green above, abundantly scaly; stipe 7-40 cm long, 1.5-4 mm diam. Lamina 2-3-pinnate at base, narrowly elliptic to elliptic, 16-60 cm long, 4-30 cm wide, dark green, thin, abundantly scaly, often bulbiferous on upper surface. Primary pinnae in 15-30 pairs, ovate to narrowly ovate; apices acuminate; longest pinnae near middle, 3-28 cm long, 1.2-5 cm wide. Secondary pinnae ±linear to narrowly ovate or ovate, acute or obtuse, sessile or shortly stalked; basal acroscopic one the largest, to 1.2-3.7 cm long and 4-14 mm wide. Tertiary pinnae to 14 mm long and 4 mm wide. Sori to 5 mm long. Perispores dark with fimbriate wings and veined lacunae; exospores $42.1-51.2 \times 29.4-34.7 \mu\text{m}$ (means).

Distribution: Occurs near the south-eastern coast from the Qld/N.S.W. border to the Vic./S.A. border and in Tas.; also New Zealand.



Common Name: Mother Spleenwort

Habitat: Epiphytic on branches or tree fern trunks, among boulders, on banks or near waterfalls in gullies, or along creek banks in rainforest or wet sclerophyll forest; confined to high altitudes in the northern part of its range.

Representative Herbarium Specimens: S.A.: Myora forest, *I.B. Wilson 705* (AD, CANB). Qld: Mt Merino, Lamington Natl Park, *S.T. Blake 21502* (BRI, NSW). N.S.W.: Waterfall Ck, Mt Wilson, *R.G. Coveny 5931 et al.* (BRI, NSW). Vic.: Spring Ck, Barkly-Goulburn State Forest, *A.C. Beauglehole 79317* (MEL, NSW). Tas.: St Mary State Reserve Gorge, Launceston, *R.J. Chinnock P940* (AD, HO).

Notes: Brownsey (1977) demonstrated that the *A. bulbiferum* complex in New Zealand includes tetraploid and octoploid cytotypes which were referred to subsp. *bulbiferum* and subsp. *gracillimum*, respectively. The octoploid cytotype is distinguished morphologically by its larger spores, more tapering stipe scales and rather smaller fronds which are generally darker green and only rarely bulbiferous. Subsequent investigations have shown that the two cytotypes are ecologically separated, the tetraploid plant being characteristic of valley bottoms and wet forest while the octoploid is more common in drier sites. The two occur together in many areas and frequently hybridise, the hybrids producing aborted spores. On the basis of this evidence, C.C. Ogle, *New Zealand J. Bot.* 25: 591-593 (1987), proposed that the two should be raised to species status. No chromosome counts are yet available for Australian material of this complex, but examination of herbarium specimens and measurements of spores from 14 different populations from all parts of its range suggest that only the octoploid cytotype is present and that it should therefore be referred to subsp. *gracillimum*. It is possible that the tetraploid subsp. *bulbiferum* may remain undetected in the wetter parts of Tas. and Vic. In Australia, *A. bulbiferum* subsp. *gracillimum* is known to hybridise with *A. hookerianum*, *A. appendiculatum* and *A. obtusatum* subsp. *northlandicum*.

Illustrations: P.J.Brownsey, *New Zealand J. Bot.* 15: 62, fig. 16 (1977); D.L.Jones & S.C.Clemesha, *Austral. Ferns & Fern Allies* 2nd edn, 84, fig. 68 (1981); P.J.Brownsey & J.C.Smith-Dodsworth, *New Zealand Ferns & Allied Pl.* 107, fig. 130, pl. 24B (1989).

Source: Data derived from *Flora of Australia* Volume 48 (1998), a product of ABRS, ©Commonwealth of Australia

Conservation Status

QLD - Least concern

SA - Endangered

Nomenclature

Brownsey, P.J. in McCarthy, P.M. (ed.) (1998), *Aspleniaceae. Flora of Australia* 48 : 307, Fig. 108, Map 283

nomenclatural synonym: *Asplenium gracillimum* Colenso: 307

misapplication *Asplenium marinum* var. *bulbifera* (G.Forst.) F.Muell. by Mueller, F.J.H. von (1866), *Fragmenta Phytographiae Australiae* 5(36): 132: 307

