

***Triglochin protuberans* (Juncaginaceae): a New Species from Western Australia**

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Abstract

Triglochin protuberans Aston sp. nov., an annual species from south-western Western Australia, is described and its diagnostic features illustrated.

Introduction

Collections of Juncaginaceae from all major herbaria in Australia were obtained on loan for preparation of the family account for the *Flora of Australia*. Amongst specimens of the annual species of *Triglochin*, several consistently similar collections differing from already described taxa were located. D.C. Edinger later forwarded two further collections of the new entity. This is now described here as a new species, *T. protuberans*.

Taxonomy

Triglochin protuberans Aston, sp. nov.

Herba annua, 3-13 cm alta. Folia gracilia, c. teretia, 1-7 cm longa, breviora scapo fructifero; vaginae auriculis latis obtusis terminatis. Infructescentia racemus laxis est, 1-6 cm longa, fructibus 2-8 in pedicellis 1.5-5(-9) mm longis. Fructus c. anguste angulo-ovati (anguste trullati) in circumscriptione, (4-)4.7-6.1 mm longi, loco latissimo 1.1-1.6 mm diametris. Carpella fertilia matura 3, connata ventraliter; pagina dorsalis marginem rotundatam et sulco longitudinali ad costam porca demissa angusta inclusa, margines quoque prope basin protuberatio facti; carpellum infra portuberationes duos contractum deorsum.

Type: Western Australia, 8 miles [12.9 km] E of Malcolm, A.S. George 2764, 22.viii.1961 (holotype PERTH).

Annual herb, 3-13 cm high. *Leaves* \pm terete, often thread-like, 1-7 cm long, 0.2-0.5 mm diam., always much shorter than the infructescence and usually less than half as long; basal sheath with broad obtuse, rarely shortly pointed, auricles to 0.25 mm long. Scape at fruiting erect to spreading, 2-13 cm long, 0.25-0.4 mm diam. *Inflorescence* insufficiently known. *Infructescence* a lax open raceme 1-6 cm long, 5-12 mm diam.; pedicels c. 1.5-5(-9) mm long, 0.1-0.2 mm diam. Fruits c. 2-8 per infructescence, \pm narrowly angular-ovoid (narrowly trullate) in outline, (4-)4.7-6.1 mm long, 1.1-1.6 mm diam. across the near-basal bulges. Carpels 6, 3 fertile alternating with 3 sterile, ventrally united; dorsal surface of each mature fertile carpel with rounded edges and with a longitudinal groove containing a low narrow ridge down its midline, each edge developing into a rounded bulge near the carpel base or rarely the bulges lacking; carpel tapered downwards below the two bulges; mature carpels readily separating; sterile carpels forming a persistent, 3-winged carpophore. (Fig. 1)

Phenology: Flowers and fruits Aug. - Oct.

Etymology: The epithet *protuberans* refers to the typically prominent bulges which occur near the base of mature fertile carpels. A suggested English name for the species is *Bulged Arrowgrass*.

Distribution and Conservation Status: Known only from six collections from south-

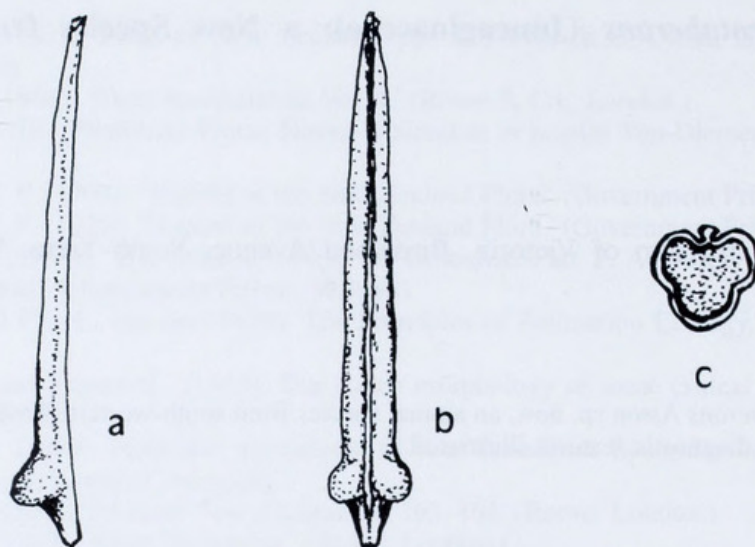


Fig. 1. *Triglochin protuberans*, mature fertile carpels (George 2764): **a** lateral view, x 12; **b** dorsal view, x 12; **c** transverse section from above the bulges, dorsal surface at top, x 10.

western Western Australia, with three from the Yalgoo to Paynes Find area, one from Malcolm, one from the Stirling Range, and one from an indefinite locality. The species is likely to occur at other sites but to have been insufficiently collected. The only measure of abundance given on herbarium labels is "common" for *Keighery* 8786. It is poorly known and rates a conservation code of 3K (Briggs and Leigh 1995).

Habitat: Apparently from ephemeral freshwater sites although one collection (*Keighery* 8786) is from the vicinity of a salt lake. Specimen labels indicate that collections were from red loam along a creek (type collection), from grey mud over clay in winter-wet flats, around claypans in open Mulga scrub, and at the margin of a pool in low *Acacia* woodland over sparse scrub and ground vegetation.

Notes: *Triglochin protuberans* has distinctive fruits and obtuse, not long-tapered and acute, sheath auricles. Although not confined to this species, the open, few-fruited infructescence is an additional aid to identification. The collection from the Stirling Range (*Keighery* 8786) is unusual in lacking the carpel bulges but agrees in all other aspects of habit and fruit.

Until now, the few collections of *T. protuberans* have been placed under *T. centrocarpum* (*sens. Aust. auct. var., non Hook. sensu stricto.*)

Specimens examined: WESTERN AUSTRALIA: W.A. [no precise locality], *J. Drummond s.n.*, date unknown (MEL 2056601; MEL 2056602); Yalgoo, C.A. *Gardner* 7754, 10.x.1945 (PERTH); Unnamed salt lake SE of Ellens Peak, Stirling Range, *G.J. Keighery* 8786, 28.x.1983 (PERTH); SW corner of Marda Marda Paddock, Burnerbinmah Station, NW of Paynes Find, *S. Toole et al.* 51, 11.ix.1996 (PERTH); Near Marda Marda Bore, Marda Marda Paddock, Burnerbinmah Station, coll. ?, 20.viii.1997 (PERTH).

Acknowledgements

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