

SHORT COMMUNICATIONS

Re-evaluation of some infraspecific taxa in *Ptilotus* (Amaranthaceae)

This short communication is a continuation of work evaluating infraspecific taxa in Western Australian *Ptilotus* R.Br. (Davis 2009; Davis & Butcher 2010a, 2010b) for the forthcoming *Flora of Australia* treatment of Amaranthaceae. After examining the type of *Ptilotus grandiflorus* F.Muell. var. *lepidus* (F.Muell.) Benth. (= *P. lepidus* F.Muell.) from MEL and collections of *P. grandiflorus sens. lat.* at PERTH, it is apparent that *P. grandiflorus* var. *lepidus* does not have taxonomic merit and should be synonymised under *P. grandiflorus*. Conversely, after examining the infraspecific taxa of *P. humilis* (Nees) F.Muell. it is clear that *P. humilis* var. *parviflorus* Benth. warrants the rank of species. It is here elevated as *P. parviflorus* (Benth.) R.W.Davis.

Taxonomy

Ptilotus grandiflorus F.Muell., *Fragm.* 1: 237 (1859). *Type*: Ad flumen Murchison, *A. Oldfield s.n.* (*holo*: MEL 1058701, image seen).

Ptilotus lepidus F.Muell., *Fragm.* 4: 89 (1864); *Ptilotus grandiflorus* F.Muell. var. *lepidus* (F.Muell.) Benth., *Fl. Austral.* 5: 243 (1870). *Type*: near Shark Bay, W.A., *M. Brown s.n.* (*holo*: MEL!).

Prostrate or ascending *herbs*, to 30 cm high. *Stems* ribbed, sparsely hairy to glabrous, with nodose hairs. *Basal leaves* oblanceolate, 30–80 mm long, 2–10 mm wide, sparsely hairy to glabrous, with nodose hairs. *Cauline leaves* alternate, oblanceolate, 5–40 mm long, 1–10 mm wide, sparsely hairy to glabrous, with nodose hairs. *Inflorescences* terminal, solitary or clustered, pink or white, ovoid to cylindrical, 10–35 mm long, 14–23 mm diam.; *bracts* narrowly ovate, translucent, 4.4–5.5 mm long, glabrous, apex slightly apiculate, with an obscure midrib; *bracteoles* narrowly ovate to obovate, translucent, 4.4–5.3 mm long, glabrous, apex slightly apiculate, with an obscure midrib. *Flowers* pedicellate; *outer tepals* pink to white, (5)6–10.5 mm long, puberulent except at the very base, sericeous at base, with nodose to subverticillate hairs, apices truncate to rounded, serrated; *inner tepals* with a basal tuft of hairs on inner surface; *staminal cup* 0.9–1.1 mm long; *stamens* 5; *ovary* glabrous; *style* slightly curved to straight, central to sub-centrally fixed to ovary, 1.1–1.2 mm long. *Seed* not seen.

Selected specimens. WESTERN AUSTRALIA: 250 m N of the Greenough River on W boundary of East Yuna Reserve, 15 Nov. 1997, *P.G. Armstrong s.n.* (PERTH); between Hamelin Pool and Shark Bay, Aug. 1940, *W.E. Blackall* 4582 (PERTH); 9 km N of Nerren Nerren rest area on North West Coastal Highway, 16 Oct. 2005, *G. Byrne* 1735 (PERTH); 6 km SSE of Meegea Hill, Milly Milly Station, 9 May 1995, *R.J. Cranfield* 9751 (PERTH); 56 km W of Mullewa on Yalgoo Road, 15 Oct. 1996, *B.A. Fuhrer* 96/35 (MEL, PERTH); Coolcalalaya Road, Northampton, 22.9 km NE of North West Coastal Highway, 5 Oct. 2004, *F. Hort, J. Hort & J. Shanks* 2331 (PERTH); Perenjori Hills, 13 Oct. 2005, *R. Meissner & Y. Caruso* 368 (PERTH); 16 km W of Barnong turnoff on the Mullewa to Yalgoo Road, 20 Oct. 2003, *L. Sweedman* 6198 (PERTH); Yuna Nature Reserve, 1.3 km from the west end of Campbells Road, 28 Sep. 2007, *M.E. Trudgen & M. Guest* MET 22546 (PERTH).

Distribution and habitat. *Ptilotus grandiflorus* occurs in near-coastal areas from Shark Bay to Geraldton, stretching inland to Kalgoorlie in the south-east of its range and to Meekatharra in the north-east. Often found in *Acacia* scrublands and open *Eucalyptus* woodlands, usually growing on red sand or sandy loams.

Notes. Although Mueller (1859, 1864) described both *Ptilotus grandiflorus* and *P. lepidus* he gave no indication of the differences between these taxa, saying only that they were somewhat similar. Bentham (1870) regarded tepal length to be the only morphological difference between *P. grandiflorus* and *P. lepidus* (4–5 lines long, *c.* 8–10 mm long, in *P. grandiflorus* and to 3 lines long, *c.* 6 mm long, in *P. lepidus*). He therefore reduced *P. lepidus* to a variety of *P. grandiflorus*.

Examination of the type of *P. lepidus* (= *P. grandiflorus* var. *lepidus*) found that tepal size has a greater measurement range than previously given by Bentham, ranging from 5.5–7.5 mm long. Based on the specimens currently held at PERTH, tepal lengths in *P. grandiflorus sens. lat.* were found to vary from 6–10.5 mm long. Given that tepal size can vary due to seasonal effects, that tepal lengths overlap between the varieties, and that there are no other discernable morphological or quantitative differences between them, it is concluded here that *P. grandiflorus* var. *lepidus* should not be recognised as a distinct taxon and it is therefore synonymised under *P. grandiflorus*.

Ptilotus parviflorus (Benth.) R.W.Davis, *stat. et comb. nov.*

Ptilotus humilis (Nees) F.Muell. var. *parviflorus* Benth., *Fl. Austral.* 5: 245 (1870). *Type:* S.W. Australia, 1860, *Mr Burges s.n.* (*holo:* K 000356830, image seen).

Ptilotus humilis (Nees) F.Muell. subsp. *parviflorus* (Benth.) Benl ms, *nom. inval.*

Prostrate *herbs*, to 6 cm high. *Stems* glabrous or sparsely hairy, with crisped nodose hairs. *Basal leaves* oblanceolate, 10–40 mm long, 1–5 mm wide, glabrous or sparsely hairy, with nodose hairs. *Cauline leaves* alternate, oblanceolate or obovate, 5–40 mm long, 1–3 mm wide, glabrous or sparsely hairy, with nodose hairs. *Inflorescences* terminal, solitary or sometimes clustered, white-green with pink tinge, ovoid to cylindrical, 5–25 mm long, 8–10 mm diam.; *bracts* ovate, translucent, 3.5–4 mm long, glabrous or hairy, attenuate at apex, with an obscure midrib; *bracteoles* ovate, translucent, 3.5–4 mm long, glabrous, attenuate at apex, with an obscure midrib. *Flowers* pedicellate; *outer tepals* white-green with pink tinge along medial section, 3.8–4.5 mm long, with sparse, silky, verticillate hairs on lower half, puberulent on the distal half, hairs simple, apices truncate to slightly rounded, serrated; *inner tepals* with a basal tuft of hairs on inner surface; *staminal cup* 0.5–0.8 mm long; *stamens* 5; *ovary* glabrous; *style* straight, centrally fixed to ovary, 0.6–0.9 mm long. *Seeds* glossy, brown, 0.7–0.9 mm long.

Selected specimens. WESTERN AUSTRALIA: Mount Manning Range, 12 Sep. 1980, *A.A. Burbidge* 203 (PERTH); SE of Coolcalalaya Station, 13 Oct. 1988, *A.H. Burbidge* 4246 (PERTH); *c.* 4.4 km SSE of North West Peak, Mount Manning Range, 3 Nov. 1995, *N. Gibson & B. Moyle* 3387 (PERTH); Drages Paddock, 4 km E of Woolgorong homestead, 17 Sep. 1996, *M. Officer* MO 138 (PERTH); Woolgorong Homestead, 29 Aug. 1995, *M. Officer* MO 98 (PERTH).

Distribution and habitat. *Ptilotus parviflorus* is relatively poorly collected and is only known from disjunct populations north and north-east of Geraldton, and to the far south-east at Mount Manning

Range. It grows in scrublands on sandy or sandy-clay soils. The distributions of the widespread *P. humilis* and *P. parviflorus* overlap in the Geraldton region, however, no intermediates have been observed.

Notes. Although *Ptilotus parviflorus* is superficially similar to *P. humilis*, on close inspection there are obvious and significant floral differences between them. For example, in *P. parviflorus* the tepals are 3.8–4.5 mm long with a sparse, silky indumentum of verticillate hairs, the bracteoles are ovate, the ovary and style are slender and 0.6–0.9 mm long, and the seeds are globose. By comparison, in *P. humilis* the tepals are 5–7.7 mm long with a much longer, denser, woolly indumentum of verticillate hairs, the bracteoles are orbicular, the ovary and style are stouter and 0.4–0.6 mm long, and the seeds are ovoid.

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