Ptilotus gardneri Benl sp. nov. (Amaranthaceae)

By G. Benl, F.L.S.*

Abstract

A new species of *Ptilotus*, *Pt. gardneri* Benl, is described from Western Australia. It resembles *Pt. clementii* (Farmar) Benl, but its pubescence in stems and leaves is fundamentally different.

Ptilotus gardneri Benl sp.nov. (Figures 1 and 2).

Descriptio. Perennis valida robusta lanuginosa. *Caules* singuli stricti-erecti plus quam 30 cm alti et 4 mm diametro, sulcati, basim versus lignosi, per totam longitudinem foliati, ramosi, ramulis pluribus ex axillis foliorum orientibus. Pubescentia haud hirsuti-villosa, sed sicut tomentum molle: pilis nodosis 1,5–2 mm longis crispis, inter se intricatis. *Folia* caulina alterna 0,7–1,5 cm distantia (sub)sessilia, laminis oblongi-lanceolatis ad 4,5:1,4 cm longis latisque, nervo medio subtus conspicuo in mucronem ad 0,5 mm longum producto; utrimque pilis (ut in caulibus) dense vestita.

Inflorescentiae amplae, in speciminibus exstantibus sordide (viridi-)canescentes. *Flores* permulti in spicas solitarias, ad 8,5 cm longas et 4,3 cm diametro, conici-cylindraceas, terminales, postea cernuas, denique nutantes congesti. *Rhachis* conspicue villosa, pilis niveis circiter 3 mm longis visu fasciculatis. *Bractea bracteolaeque* in lateribus scariosae et nitentes, integrae, uninerviae, distincte carinatae—carina (atro)fusca—, post lapsum perianthii superstites, subinaequales: Bractea rigidior, elongati-lanceolata ad 10:5,5 mm longa et lata, in cuspidem sensim angustata, imprimis carinam pilosiusculam versus fuscescens. Bracteolae subcordati-concavae adpressae breviores (7:5 mm), distincte apiculatae, praeter carinam hyalinae, omnino glabrae.

Perianthium elongatum rigidi-erectum, postea tepalis divergentibus subcampanulati-patens, basim constrictam, callosam, conicam versus valde indurescens. *Tepala* inferne fere libera in pseudotubum (ad 3,5 mm) intus nitidum conniventia et ima basi anulum parvum formantia, lanceolati-linearia, acuta (marginibus membranaceis superne involutis), tricostata, extus pilosa—pilis irregulariter insertis pallide flavescentibus subtilibus rectis articulatis ad 6 mm longis, apicem nudum (ad 2·5 mm) haud vel plus minusve aequantibus—, inaequiformia: 2 extima 17–18: 2 mm longa lataque, intus glaberrima; 3 interiora paullum minora (15–16: 1·5 mm) intus inferne lana alba undulati-crispata praecipue marginibus (sive uni margini tantum) oriente obsessa.

Stamina 5 aequalia et fertilia, basi cupulam subglabram, circiter 0·8 mm altam—parte libera 0·15 mm, ceterum anulo perianthii insidentem—formantia. *Pseudostaminodia* lobuliformia (Fig. 1c) 0·6–0·9: 0·2–0·4 mm longa et lata, raro integra, plerumque valde fissa et/vel fimbriata interposita. *Filamenta* ligulata ad 1·2 cm longa, basi libera vix dilatata, superne subulata. *Antherae* flavae lineari-oblongae 1·8–2·0: 0·2 mm longae lataeque.

Ovarium (Fig. 1a, b) primo clavatum dein ovoideum sessile, in parte superiore hirsutum—pilulis rectis (0·5 mm) basim styli occultantibus—, ad 2·8 mm longum et 1·8 mm diametro. *Stylus* plus minusve centralis filiformis sigmoideus, circiter 13 mm longus, inferne modice dilatatus et pilos nonnullos patulos ad 0·5 mm longos gerens; *stigmate* parvo papilloso.

Holotype of species: Western Australian Boundary Survey 1936–38. Low plant in rough limestone country. Lat. 17°30′5″; *L. Stokes*, 10 June 1936 (PERTH).

Material. The description is based on the holotype-sheet (Fig. 2) consisting of two plant fragments measuring 34 and 31 cm, respectively. Only one plant bears an inflorescence more or less complete; on the other the spike has already lost its flowers, thus showing the white, unusually long-haired and clustered indumentum of the rachis.

Discussion. While *Pt. clementii* exhibits a villous pubescence all over stems and foliage, the new taxon must be placed in a group of species characterised by a continuous and densely-tomentose coat. Further differences of diagnostic value are the less hairy bracts, the hairless bracteoles, the abruptly pilose ovary (Fig. 1a, b), and the S-shaped style with spreading hairs in its lower part. Contrasting with *Pt. clementii*—see "Australian Plants" 4 (1967): 115, Fig. 2a—the dilated intrastaminodial lobes are mostly considerably more fringed (Fig. 1c). Thus the plant is easily distinguished.

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S-shaped bendings of the style have already been recorded in *Ptilotus beckerianus* (F. Muell.) F. Muell., *Pt. chortophytum* (Diels) Schinz, *Pt. nobilis* (Lindley ex Mitch.) F. Muell. emend. Benl, and *Pt. polystachyus* (Gaud.) F. Muell. emend. Benl. There is no closer relationship either between these species or between one of them and our new taxon.

The plant is named in honour of the late Mr. Charles A. Gardener, formerly Government Botanist of Western Australia in Perth, who not only collected many *Ptilotus* specimens but also recognized several taxa as new.

Ptilotus gardneri can easily be included into my key to the genus, in Mitt. Bot. München **9**: 135–176 (1971). Add in page 145:

20 Crisped hairs form a homogeneous tomentose indumentum on the leaves. Single hairs not recognizable with the naked eye.
(a) Leaves more hairy underneath, margin narrowly reflected. Spikes (shorter than 2 cm) with few flowers, and composed in loose panicle; bracteoles relatively large, golden; tepals (shorter than 10 mm) widely surpassed by their silky hairs. The tiny staminal ring without any lobes; ovary hairless, style straight. See 8+! *Pt. eriotrichus*.
(b) Leaves equally pilose on both sides, margin not reflected. Flowerheads (longer than 5 cm) many-flowered, mostly terminal; bracteoles inconspicuous; tepals (at least 15 mm) not exceeded by their dorsal hairs. Staminal cup with pseudostaminodial lobes, usually fringed; ovary with an apical pubescence, style with an S-shaped bending.—W.A. *Pt. gardneri* Benl, in *Nuytsia* 2; 2(1976).

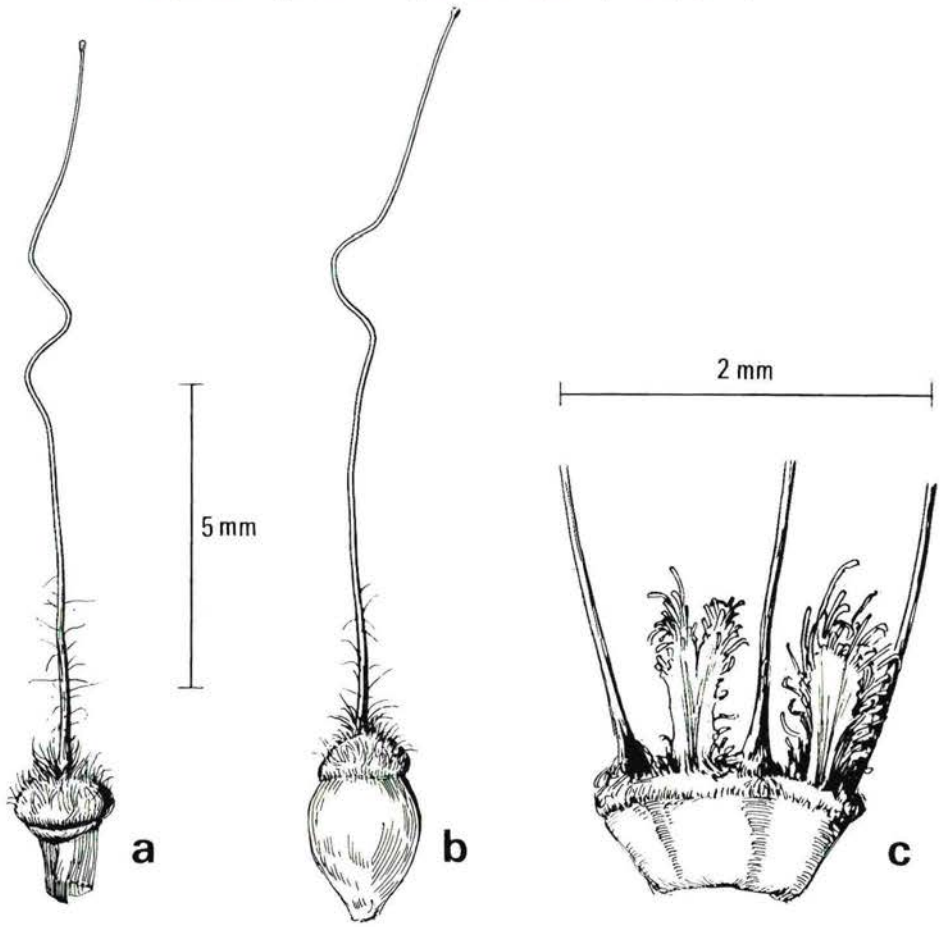

Figure 1. *Ptilotus gardneri* Benl. a and b—Pistil in a younger and in an adult stage. c—Part of staminal cup (cupula) with pseudostaminodes.

Figure 2. *Ptilotus gardneri* Benl. Holotype-sheet.