

A new species of *Bulbine* (Asphodelaceae) from Western Australia

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Abstract

Keighery, G.J. A new species of *Bulbine* (Asphodelaceae) from Western Australia. *Nuytsia* 15(2): 241–244 (2004). A new species of *Bulbine* Wolf, *B. pendula* Keighery, is described and illustrated. The species is confined to cracking clay wetlands in the Pilbara, Carnarvon, Ashburton and Great Sandy Desert Biogeographical Regions of arid Western Australia.

Introduction

The author is currently reviewing the taxonomy of many of the genera of the Liliaceae *s. lat.* in Western Australia, which were last studied in preparation for the “Flora of Australia” in 1987. These studies are uncovering many previously unrecognised or informally treated novelties in a wide range of genera. One previously informally recognised taxon is treated in this paper.

In her studies of the genus *Bulbine* Wolf, Watson (1986, 1987) noted that populations of *Bulbine semibarbata* from the Pilbara with pendulous flowers and fruits may deserve separate status. With the aid of recent field studies by M.E. Trudgen on this taxon in the Pilbara, the author concurs that this is a distinct taxon that deserves specific status.

Taxonomy

Key to species of *Bulbine* in Western Australia

- 1. Seeds winged, all stamens bearded **B. alata**
- 1. Seeds not winged, only three stamens bearded
 - 2. Flowers and capsule erect **B. semibarbata**
 - 2. Flowers and capsule pendulous **B. pendula**

Bulbine pendula G.J. Keighery, *sp. nov.*

A Bulbine semibarbata flores et fructus pendens statim dignoscenda.

Typus: 5 km E of Juna Downs Homestead, Hamersley Range, 22°51'S, 118°32'E, Western Australia, 9 Aug. 1973, M.E. Trudgen 370 (*holo*: PERTH 06088074).

Annual *herb*, roots fibrous, but not tuberous. *Leaves* basal, soft, fleshy, 2–3 mm wide at midpoint, 6–9 cm long, green, glabrous. *Scapes* 1–4, terete, erect, 12–21 cm long. *Flowers* pendulous. *Perianth segments* yellow, 7–8 mm long. *Stamens* and style inclined in opposite directions, the three inner stamens long and bearded near apex of filament, the three outer ones short and glabrous, anthers yellow-brown. *Ovules* 2 per locule; style straight, 0.5–1 mm long, stigma 3-lobed. *Capsule* pendulous on a recurved pedicel 8–35 mm long, yellow, globose, 3–4 mm long. *Seeds* without wing, brown, dull, angular, 4–5 mm long. (Figure 1A, B)

Selected specimens examined (14 seen). WESTERN AUSTRALIA: Creeks near Minilya River, 31 Aug. 1932, C.A. Gardner 3258 (PERTH); W boundary fence, c. 25 km W of homestead, adjacent to Hamersley monitoring site No. 1, Hamersley Station, 22°18'S, 117°28'E, 5 Aug. 1998, L.J. Ingram 5580 (PERTH); 14 km E of Mount Palgarve, Ullawarra Station, Barlee Range, 2 Aug. 1989, S. van Leeuwen 662A (PERTH); c. 100 m S of HGM site 30 from Silvergrass project area, c. 70 km NW Tom Price, 22°18'S, 117°15'E, 1 Sep. 1998, M. Maier MXM 001 (PERTH); c. 8 km E of Hamersley Station Homestead on track to Cooks Yards, 22°21'S, 117°46'E, 6 Sep. 1995, A.A. Mitchell PRP707 (PERTH); 2.3 km north-north-west of Cooks Bore, Hamersley Station, 22°21'S, 117°47'E, Western Australia, 5 Sept. 1992, M.E. Trudgen 11430 (PERTH); Between Gap Well and the Nanutarra to Wittenoom road on Hamersley Station, 22°26'S, 117°47'E, 5 Sept. 1992, M.E. Trudgen 10620 & S.M. Maley (PERTH); Piedawarra Flats, Mt Augustus, 7 July 1971, D.G. Wilcox s.n. (PERTH); Rudall River, 22°35'S, 122°10'E, 14 Aug. 1971, P.G. Wilson 10502 (PERTH).

Distribution. Arid Western Australia in the Carnarvon, Ashburton, Pilbara and Great Sandy Desert Biogeographic Regions (Thackway & Creswell 1995). These occurrences are well to the north of records for *Bulbine semibarbata*. (Figure 1C)

Habitat. Recorded as occurring on cracking red clay soils in tussock grasslands of *Astrebla pectinata* or mixed herbfields dominated by *Polymeria longifolia*, *Astrebla elymoides* and *Dichanthium sericeum* (Trudgen pers. comm.). Populations range from small to many hundreds of plants in these habitats.

Flowering period. Flowering recorded, from August to September, probably after winter rains. Mature fruits and seeds produced as flowering ends in September.

Conservation status. The species is conserved in Karijini National Park, Rudall River National Park and probably in Mount Augustus National Park. Not considered under threat.

Etymology. The specific name refers to the pendulous flowers and fruit.

Notes. *Bulbine* is one of a number of genera of Liliaceae s. lat., including *Thysanotus* R. Br., *Tricoryne* R. Br. and *Wurmbea* Thunb., which have recently discovered or recognised taxa present in the arid zone in and around the Pilbara. This is of considerable biogeographic interest as nearly all of these genera are species rich in southern Australia, and the new taxa are closely related to southern species. More discoveries of these taxa can be expected.



Figure 1. A - *Bulbine pendula*, whole plant in fruit; B - seed; Drawn from A.A. Mitchell PRP707 (PERTH). C - Distribution of *Bulbine semibarbata* • and *Bulbine pendula* ♦ .

References

- Thackway, R. & Creswell, I.D. (1995). An Interim Biogeographic Regionalisation for Australia, version 4. (Australian Nature Conservation Agency: Canberra.)
- Watson, E.M. (1986). Cytoevolutionary studies in the genus *Bulbine* Wolf (Liliaceae). 2. The Australian annual taxa (*B. semibarbata* s.l.). *Australian Journal of Botany* 34: 505–522.
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