

NOTES ON SOME AUSTRALIAN SPECIES OF CYPERACEAE

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ABSTRACT

Wilson, K. L. (National Herbarium of New South Wales, Royal Botanic Gardens, Sydney, Australia 2000) 1980. Notes on some Australian species of Cyperaceae. *Telopea* 1 (6): 457-467, Pl. XXVI-XXVII.—The following new species are described: *Baumea johnsonii*, *Bulbostylis burbridgeae*, *Cyperus portae-tartari* and *C. viscidulus*. *Gahnia australis* (Nees) K. L. Wilson and *G. drummondii* (Steud.) K. L. Wilson are published as new combinations and a key provided to *Gahnia* section *Microstachyae*. *Cyperus lhotskyanus* Boeck. is reinstated, and *Lepidosperma exsul* C. B. Clarke is relegated to synonymy under *Tricostularia neesii* Lehm. *Cyperus compactus* Retz. is recorded as new for Australia. A key is provided to the Australian species of *Bulbostylis*, and *B. eustachii* J. M. Black ex C. M. Eardley is synonymized under *B. barbata* (Rottb.) C. B. Clarke.

INTRODUCTION

Recent collecting in Australia, particularly in the more remote northern areas, has provided material of new species and of little-known species of Cyperaceae.

In this paper, four new species are described and the synonymies of various other species are discussed. Since recent revisions exist for all but one of the genera dealt with here (*Bulbostylis* being the exception), discussion is brief. Of the revised genera, Kükenthal published revisions of *Cyperus* (1935-36), of *Lepidosperma* (1941 a & b), of *Baumea* (1942) as a subgenus of *Cladium*, of *Gahnia* (1943) and of *Tricostularia* (1944). *Gahnia* had previously been revised by Benl (1940).

The work reported in this paper was begun at the National Herbarium of New South Wales and was completed after visits in 1977 to the Royal Botanic Gardens, Kew, to the British Museum (Natural History), to the Royal Botanic Gardens, Edinburgh, and to the Laboratoire de Phanérogamie, Paris.

Unless otherwise indicated, all specimens cited have been seen by the author.

BAUMEA Gaudich.

Baumea has been variously regarded as a subgenus of *Cladium* (Kükenthal, 1942), as a synonym of *Machaerina* (Kern, 1974; Vanhecke, 1974) and as a separate genus (Blake, 1969; Raynal, 1972). I am following Blake and Raynal in retaining *Baumea* as a separate genus.

Baumea johnsonii K. L. Wilson, **sp. nov.** habitu et inflorescentia *B. gunnii* (Hook. f.) S. T. Blake et affinis similis et nullo dubio his speciebus proxima, praecipue culmis foliisque scabridis differt.

HOLOTYPE: NEW SOUTH WALES: Central Tablelands: Govetts Leap, Blackheath, E. F. Constable 5576A, 10.xii.1964 (NSW). ISOTYPES: BRI, CANB, CHR, K, P.

Caespitose perennial. Culms erect, more or less terete to biconvex, scabrous, without nodes, 15-60 cm tall, 1-2 mm diam. Leaves basal, equitant, flattened above, to 150 cm tall, 2-3 mm wide, somewhat soft- to tough-textured, scabrous, shorter than to greatly exceeding culm and inflorescence; sheaths reddish; lowest leaves reduced to sheaths. Inflorescence-bracts reddish, flat, much shorter than lowest branch of inflorescence. Inflorescence paniculiform, (10-) 15-55 cm long, with (10-) 20-35 spikelets; branches slender, somewhat arching, sulcate, \pm scabrous; rhachis elongated between lowest and upper branches, sulcate, scabrous, (5-) 10-38 cm long. Spikelets 6-8 mm long, solitary, with 1 fertile flower, glumes

spreading widely at maturity. *Glumes* 2, linear-lanceolate, long-acuminate, 6–9 mm long, red-brown with paler nerves. *Stamens* 3; anthers 3.0–4.0 mm long, with an apical appendage c. 0.5 mm long. *Style* 3-fid. *Nut* ovoid to ellipsoid, deep golden brown to red-brown, becoming blackish, 2.5–3.5 mm long, strongly 3-costate when immature, sides convex between the costae; base narrow-pyramidal; style-base indistinct, pyramidal, umbonulate at maturity, slightly paler in colour, 0.7–0.8 mm long.

DISTRIBUTION AND HABITAT: Confined to the Central Coast ranges and Central Tablelands of New South Wales. Found in permanently damp, sheltered positions below sandstone cliffs or along creeks.

SPECIMENS EXAMINED: NEW SOUTH WALES: **Central Coast:** c. 1 mile [1.5 km] NW. of Bowens Creek on Mt Irvine road, *Coveny NSW 123150*, 10.1966 (NSW); Linden, *Coveny NSW 123152*, 11.1965 (NSW); Adelina Falls, Lawson, *Coveny 7739 & Hind 7.1976* (NSW). **Central Tablelands:** Green Hill Gully, Mt Wilson, *Gregson NSW 73952*, 4.1902 (NSW); Coxs Cave, Mt Victoria, *Constable 5727*, 3.1965 (K, NSW); Govetts Leap, 2.4 km E. of Blackheath, *Coveny 5996 & Hind 1.1975* (NSW); Govetts Leap, Blackheath, *Coveny NSW 123151*, 10.1966 (NSW); Bridal Veil Falls, Blackheath, *Constable 6063*, 8.1965 (NSW); Blackheath, *Cheel NSW 73951*, 12.1900 (NSW); Centennial Glen, 1½ miles [2.4 km] W. of Blackheath, *Constable 4998*, 9.1964 (NSW); Centennial Glen, Kanimbla Escarpment, Blackheath, *Evans NSW 73949*, 2.1927 (NSW); Popes Glen, Blackheath, *Constable 6061*, 8.1965 (NSW); Valley of Waters, Wentworth Falls, *Constable 5740*, 3.1965 (NSW); Weeping Rock, Wentworth Falls, *Constable 5743*, 3.1965 (NSW); Carrington Falls, 17 miles [27 km] E. of Moss Vale, *Constable 6257*, 10.1965 (NSW).

The epithet is given in recognition of one of Australia's foremost plant taxonomists, Dr L. A. S. Johnson, whose wide-ranging studies of Australian plants have included Cyperaceae.

This species is closely related to *B. gunnii* (Hook. f.) S. T. Blake, *B. muelleri* (C. B. Clarke) S. T. Blake and *B. nuda* (Steud.) S. T. Blake but differs from them in having scabrous leaves and culms. The four species have very similar spikelets and inflorescence structure. They can be distinguished as follows:

1. Leaves flattened, 1.5–2.5 mm wide.
 2. Leaves and culms scabrous. Leaf sheaths reddish. Nut 2.5–3.5 mm long, shortly stipitate *B. johnsonii*
 - 2.* Leaves and culms not scabrous. Leaf sheaths stramineous. Nut 3.0–3.5 mm long, with elongate stipe *B. muelleri*
- 1.* Leaves reduced to sheaths or terete (0.5–1.5 mm diam.).
 3. Leaves long, terete or ± bisulcate, c. 0.5 mm diam. Nut c. 2 mm long. Slender plants with leaves usually much exceeding the inflorescence *B. nuda*
 - 3.* Leaves reduced to sheaths or long terete and then c. 1.5 mm diam. Nut 2.5–3.5 mm long. Stoutier plants with leaves (when developed) as long as the inflorescence *B. gunnii*

BULBOSTYLIS Kunth, *nom. cons.*

Bulbostylis burbidgeae K. L. Wilson, *sp. nov.* ab omnibus ceteris speciebus australiensibus spiculis valde squarrosis, glumis culmisque valde hispidis differt.

HOLOTYPE: WESTERN AUSTRALIA: Abydos Station, S. of Port Hedland, N. T. *Burbidge 5876*, 26.iv.1958 (NSW). **ISOYPES:** BRI; CANB— not seen.

Annual herb. *Culms* erect to spreading, c. 4–25 cm tall, c. 0.5 mm diam., ± terete below inflorescence but becoming biconvex towards the base, strongly and regularly 2–4-costate on each surface, hispid. *Leaves* basal with 1–2 cauline, 3–10 cm long, shorter than culms, channelled on smooth adaxial surface, flattened on abaxial surface with midrib prominent, † hirsute; apex of sheaths hyaline, villous. *Inflorescence-bracts* 1–2 greatly exceeding inflorescence, filiform; the lower erect, 1–5 cm long; the upper shorter, erect or spreading. *Inflorescence* simple,