A NEW SPECIES OF *TETRARRHENA* R. Br. (POACEAE) FROM VICTORIA AND NEW SOUTH WALES

by

NEVILLE G. WALSH*

ABSTRACT

Walsh, Neville G. A new species of *Tetrarrhena* R. Br. (Poaceae) from Victoria and New South Wales. *Muelleria* 7(1): 95–98 (1989). — *Tetrarrhena turfosa* is described as a new species with notes on distribution and ecology. Its relationship to other members of the genus is discussed.

INTRODUCTION

In the course of preparing the account of Poaceae for a forthcoming Flora of Victoria, several apparently unnamed taxa have been encountered. The majority of these are in groups currently under study by others and should, in due course, be dealt with by them. The species described herein has long been recognised as being distinct but has evaded formal recognition. As it seems no specialists are presently dealing with *Tetrarrhena*, the opportunity is here taken to validate the status of a sixth member of the genus.

TAXONOMY

Tetrarrhena turfosa N. G. Walsh, sp. nov.

Gramen perenne, rhizomatosum, caespitosum vel ascendens, 0·2–1·3 m altum. *Folia* erecta, laevia et glabra. *Vaginae* amplexicaules. *Ligulae* ciliatae, ad 0·5 mm longae. *Laminae* involutae, 2–7 cm longae, 0·3–0·8 mm latae, obtusae interdum inflatae apicibus. *Inflorescentia* racemosa, angusta, erecta, spicam simulans, 1–3 cm longa. *Spiculae* 3–10, subsessiles, saepe purpuratae, 4·8–6·8 mm longae. *Glumae* subaequales, ovatae, 1–2 mm longae. *Lemma* sterilis infernum longitudine circa $\frac{2}{3}$ partes lemmatis sterilis superni, ambo oblongae, obtusae, carinatae vix, nervi 5–7 ellevati manifeste, scabri. *Lemma* fertilis aequans fere lemma sterilem supernum, carinatum, scaberulum. *Palea* aequans fere lemma sterilem. *Antherae* quatuor, circa 3 mm longae.

TYPUS: Victoria — Western. Grid D 18. Grampians, 3 miles (6·4 km) SW. of Halls Gap, 0·15 miles (0·24 km) west of junction with Mt Rosea Track, along watercourse. Associated species include: *Pultenaea subumbellata*, *Sprengelia*, *Selaginella*, *Restio complanatus*, *Lepidosperma* spp. *Gymnoschoenus*, *Gahnia sieberiana*, 18.i.1969, *Beauglehole 30309* (HOLOTYPUS: MEL 597060. ISOTYPI: AD, BRI, CANB, HO, NSW).

A rhizomatous, perennial grass, forming compact tufts, commonly to *c.* 0·6 m high in exposed sites, or with leafy, branched, ascending strands to 1·3 m high amongst taller vegetation. *Leaves* erect, smooth and glabrous. *Sheaths* tightly encircling stem. *Lamina* tightly involute, 2–7 cm long, 0·3–0·8 mm diameter, terminating in a blunt, sometimes slightly swollen tip. *Ligule* a ciliate rim to 0·5 mm long, sometimes with a few marginal hairs to 1 mm long. *Inflorescence* an erect, spike-like raceme 1–3 cm long. *Spikelets* 3–10 per raceme, 4·8–6·8 mm long, subsessile, often purplish. *Glumes* subequal, the upper usually slightly larger, ovate, 1·1–2 mm long, smooth and glabrous. *Lower sterile lemma* about $\frac{2}{3}$ as long as upper, both oblong, blunt, hardly keeled, the 5–7 nerves prominently raised and scabrid. *Fertile lemma* almost equal to upper sterile lemma, keeled, uniformly scaberulous, obscurely 5–7 nerved. *Palea* about as long as lower lemma, membranous. *Anthers* 4, about 3 mm long. (Fig. 1).

SELECTED SPECIMENS EXAMINED (Total number examined 43):

New South Wales — Barrington Tops, swamps and grasslands, 7.i.1934, *Vickery* (NSW 115676).

*National Herbarium of Victoria, Birdwood Avenue, South Yarra, Victoria, Australia 3141.

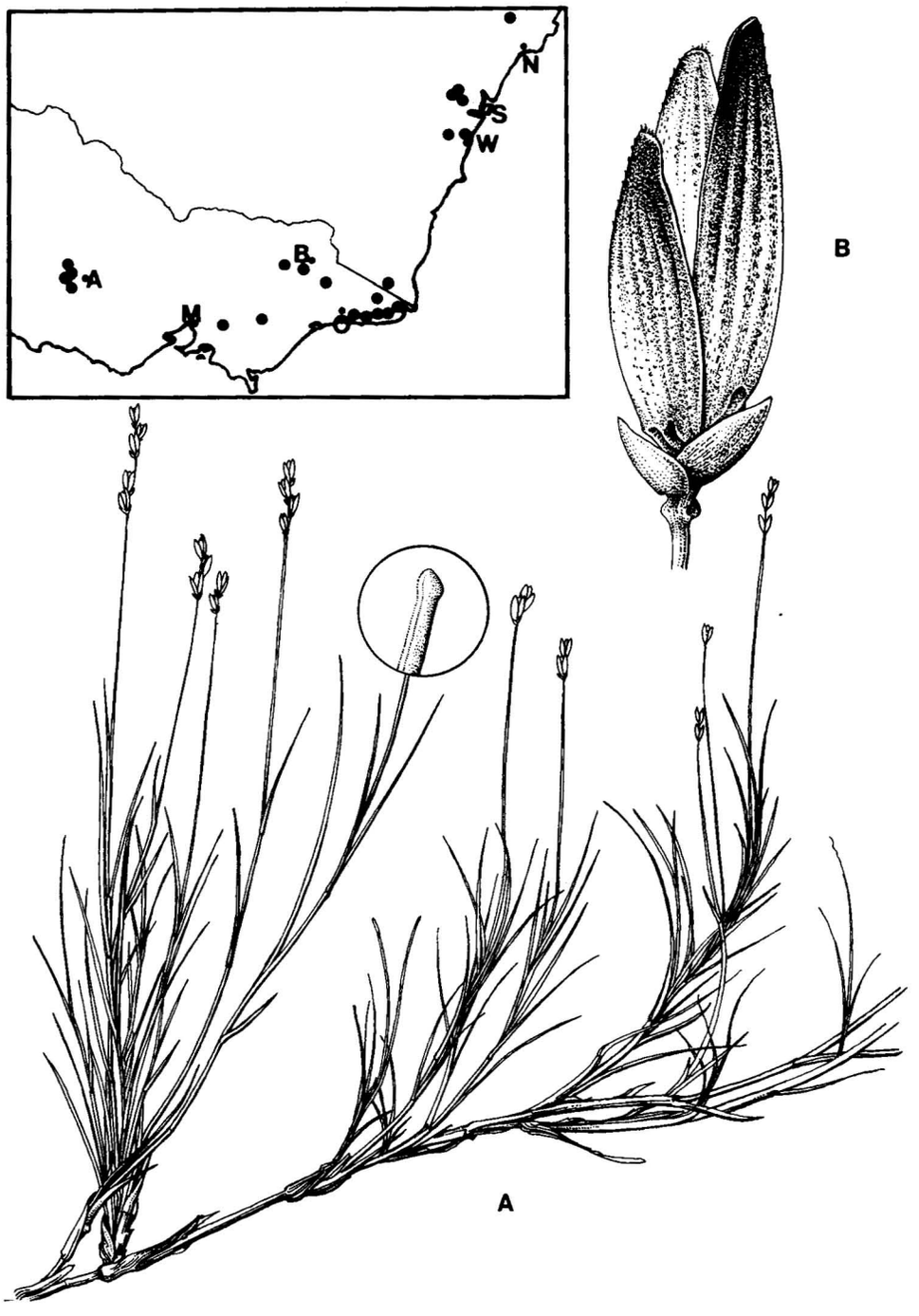

Fig. 1. *Tetrarrhena turfosa*. a — habit, $\times\frac{1}{2}$; inset — leaf tip $\times 5$. b — spikelet $\times 10$, from Beauglehole 30309 (type). Inset — distribution of *T. turfosa* (n.b. each dot may represent more than one collection); places represented are A = Ararat, M = Melbourne, B = Mt. Bogong, O = Orbost, W = Wollongong, S = Sydney, N = Newcastle.

Centennial Park, vi.1897, *Camfield s.n.* (NSW 115689). Katoomba, swampy places, alt. 3100 ft, 22.i.1939, *Blake 13920* (NSW 115671). Bridal Veil Falls, Blackheath, alt. 3450 ft, *Constable s.n.* (NSW 56320). 1·5 miles N. of Hilltop near Mittagong, 6.ii.1965, *McBarron 10538* (NSW 115680).

Victoria — Mt Buffalo, Crystal Brook, near 'Tucker Box' corner, 21.ii.1963, *Willis s.n.* (MEL 113885). Bogong High Plains, 20.i.1940, *Patton s.n.* (MEL 597061). Nunniong Plateau, *c.* 0·5 ml. SW. of Reedy River Chasm, 3.ii.1973, *Beauglehole 41349* (MEL 527466). Mallacota–Wingan coast, 0·9 ml. NE. of Little River Mouth, 22.xii.1969, *Beauglehole 32695* (MEL 564478). Erica district, beside Beynons Road, *c.* 3 km south of Morgans Mill, 10.i.1980, *Scarlett 80-3* (MEL 596706).

DISTRIBUTION AND CONSERVATION STATUS (Fig. 1):

Occurs mostly on and seaward from the Dividing Range from as far north as the Barrington Tops area in New South Wales south to the Victorian border and west to The Grampians in south-western Victoria. The species is locally common in appropriate habitats, although some populations (e.g. near Mt Wog Wog in south-eastern NSW, and subalpine to subalpine sites in Victoria) are disjunct and would appear to be quite small. Fortunately the species is well reserved in national parks in both states and its conservation status is therefore considered to be secure.

ECOLOGY:

The grass is invariably associated with heathy and sedge-rich vegetation in swamps and fringing watercourses from near sea-level in eastern Victoria to subalpine situations (to *c.* 1650 m) in both states. Soils are typically sodden and peaty, chiefly derived from or formed upon sandstone, but on Mt Buffalo and the Bogong High Plains the parent materials are granite and basalt respectively. Commonly associated plants are typified by those species accompanying the type collection, i.e. with strong representation of the Epacridaceae, Cyperaceae, Restionaceae and, particularly at higher altitudes, *Sphagnum* mosses. The main flowering and fruiting period is from November to February.

NOTES:

T. turfosa is the taxon first recorded as an apparently undescribed species by Willis (1970) and subsequently by Beauglehole (1980) and Forbes and Ross (1988) as *Tetrarrhena* sp. It would appear to be most closely allied to *T. acuminata* R. Br. (near which it occasionally occurs) and the recently described *T. oreophila* D. I. Morris of Tasmanian alps and subalps to which it bears a strong superficial resemblance. From *T. acuminata*, it differs primarily in the shorter (<7 mm) spikelets, the obtuse, not acuminate sterile lemmas and the smooth, inrolled, not scabrous or flat leaf blades.

From *T. oreophila* it is distinguished by the obtuse, strongly scabrous and prominently 5–7 nerved sterile lemmas, in contrast to those of the Tasmanian endemic which are acute to acuminate, minutely scaberulous or almost smooth and lacking prominent nerves.

Material of *T. turfosa* at NSW had been segregated as an ecological variant of *T. juncea* R. Br. Examination of the types from BM and K (including the type of *T. tenacissima*, a later synonym), and all specimens of *T. juncea* at MEL and NSW confirms that there is no continuity of variation from that species to *T. turfosa*. *T. juncea*, a forest species, is infamous for its harshly scabrous, leaves and wiry stems and differs otherwise from *T. turfosa* in its relatively longer glumes, and more tapered, virtually smooth lemmas. Both *T. juncea* and *T. oreophila* are atypical in the genus (and belie the feature on which the generic name is conferred) in possessing 6 and 2 (or 1) anthers respectively rather than the 'typical' tetrandrous condition.

The two other species of *Tetrarrhena* are *T. laevis* R. Br., confined to the south-west of Western Australia and *T. distichophylla* R. Br., which typically has pubescent spikelets and leaves and is a species of poor, dryish country in southern Victoria, south-eastern South Australia and Tasmania.

The specific epithet '*turfosa*' (from a peat bog) pertains to the species well-defined preference of habitat.