

New Victorian endemic species of *Poa* L. (Poaceae)

C.M. Weiller¹, V. Stajsic² and N.G. Walsh²

¹ Bioinformatics Laboratory, Research School of Biological Sciences, The Australian National University, Canberra, Australian Capital Territory 0200, Australia.

² National Herbarium of Victoria, Birdwood Avenue, South Yarra, Victoria 3141, Australia.

Abstract

Three new Victorian species of *Poa*, *P. amplexicaulis* C.M. Weiller & Stajsic, *P. orthoclada* N.G. Walsh and *P. orba* N.G. Walsh are described and illustrated and their distribution, ecology and conservation status discussed.

Introduction

During the course of preparing descriptions of Australian *Poa* species for the *Flora of Victoria*, vol. 2 (Walsh 1994) and the forthcoming *Flora of Australia* (in ed.), some previously undescribed species have come to light. Two of the species described below (*P. orthoclada* and *P. orba*) were treated erroneously in the *Flora of Victoria* (one as a species now believed to be endemic to Tasmania, the other as an introduction from New Zealand). The other, *P. amplexicaulis* is a novelty endemic to the state of Victoria. The opportunity is taken here to describe these new species so that the names are available for use in the forthcoming volume 44 of *Flora of Australia*.

Taxonomy

1. *Poa amplexicaulis* C.M. Weiller & Stajsic *sp. nov.*

Poa sp. aff. *tenera* (Brisbane Ranges), J.H. Ross & N.G. Walsh, Census Vasc. Pl. Victoria 7th edn. 38, 228 (2003).

A *P. tenera* vaginis rubris, ligula amplexicauli, caulibus brevibus, erectis vel suberectis vel planta caespitosa, lemmate glabro plerumque nervato indistincte differt.

Type: 9 km W of Bacchus Marsh, just S of Ballarat – Melbourne railway line, 13.x. 1973, T.B. Muir 5186 (holotype MEL 2138583; isotype CANB).

Slender perennial, caespitose with short suberect stolons. Leaves mostly basal. Culms 14–40 cm high. Mid-culm internodes more or less terete or slightly compressed, glabrous or minutely scabrous immediately below the node, occasionally pigmented. Young shoots intravaginal. Basal leaf sheaths glabrous, strongly reddish and shining, the old sheaths straw-coloured; margins connate for their entire length. Ligule prominent, membranous, usually encircling the culm, decurrent, 0.8–2.6 mm long, smooth, truncate or obtuse (sometimes with an apicule), abaxially sparsely hairy. Leaf blades dull yellow-green or green, occasionally pigmented, folded (the margins usually slightly inrolled), 4–11.5 cm long, 0.2–0.9(–1.3) mm wide when flattened; usually striate; adaxially minutely scabrous; abaxially smooth and glabrous; tip usually tapering and slightly curved to a point or occasionally broad and hooded. Inflorescence narrow, 35–100 mm long. Spikelets with 2–7 florets, 2.8–6.2 mm long, green tinged purple or rarely entirely purple. Glumes partly or entirely pigmented, subequal, 1/2–2/3 the length of the proximal lemma, acute, keel scaberulous, intercostal regions glabrous or scaberulous towards apex; lower glume 1.5–2.1 mm long, 1 or 3 nerved; upper glume 1.7–2.8 mm long, 3 nerved. Lemma 2.3–3 mm long, often with a subapical band of pigment or entirely purple except for a broad colourless band at the apex and a narrow band on the margins, acute to obtuse, 5 nerved, nerves scaberulous in the upper part, glabrous or puberulous on the lower part of the midnerve and towards the base on marginal nerves; intercostal regions glabrous or



Figure 1. a. *Poa amplexicaulis* specimen; b. *Poa amplexicaulis* spikelet (all from Willis s.n., MEL 2138583). Scale interval 1 mm

scaberulous towards apex; web absent. Palea slightly shorter than its lemma, glabrous. Anthers 1.1–1.4 mm long. (Fig. 1 a,b)

Distribution and habitat: *Poa amplexicaulis* is apparently endemic to the upper Werribee River catchment, south-central Victoria, occurring in the Brisbane Ranges, Werribee Gorge and further north to the Bullengarook area in the Pyrite Range, but apparently absent from the intervening White Elephant Range (where soils are derived from Tertiary deposits). Although it may be a locally dominant grass, it is nationally rare with Risk Code assessed here as 'rare', 2RCi (sensu Briggs & Leigh 1996) or 'near threatened', NT (sensu IUCN 2001). It has been observed to resprout following fire. It occurs in dry open-forests with dominant species including *Eucalyptus tricarpa* (L.A.S. Johnson) L.A.S. Johnson & K.D. Hill, *E. macrorhyncha* F. Muell. ex Benth., *E. goniocalyx* F. Muell. ex Miq., *Astroloma humifusum* (Cav.) R. Br., *Boronia anemonifolia* A. Cunn., *Bossiaea obcordata* (Vent.) Druce, *Brachyloma daphnoides* (Sm.) Benth., *Dillwynia* spp., *Joycea pallida* (R. Br.) H.P. Linder, *Platysace lanceolata* (Labill.) C. Norman, *Pomax umbellata* (Gaertn.) Sol. ex A. Rich., *Pseudanthus orbiculatus* (Muell. Arg.) Halford & R.J.F. Hend. and *Pultenaea gunnii* Benth. subsp. *tuberculata* Corrick. Soils are characteristically shallow, often rocky, derived from Ordovician sediments.

Etymology: The epithet *amplexicaulis* (Latin *amplexus* - to encircle; *caulis* - stem) refers to the connate sheath and culm encircling ligule.

Notes: Distinctive features of *Poa amplexicaulis* are the fully connate, conspicuously red leaf sheaths, and the distinct membranous ligule decurrent and encircling the culm. This species is referred to by Walsh (1994, p. 424) in a note under the account of *Poa tenera* F. Muell. ex Hook. f. *Poa amplexicaulis* is further distinguished from typical specimens of *P. tenera* by the sparsely hairy to almost glabrous florets and indistinct lemma nerves.

Specimens examined: Victoria. Brisbane Ranges National Park – Stony Ck, from picnic ground on Switchback Rd to Lower Reservoir, 23 Nov. 1977, *E.G. Errey 1295A* (MEL); McCleans H'Way E of Switchback Rd junction, 6.5 km N of Anakie, 1 Oct. 1977, *A.C. Beauglehole 56606* & *E.G. Errey* (MEL); c. 250 m SW of Aeroplane Rd turnoff on Reids Rd, 26 Oct. 1992, *V. Stajsic 617*, *D.E. Albrecht* & *I.C. Clarke* (HO, K, MEL, S); NE corner near intersection of Aeroplane Rd and Mt Wallace Rd, 26 Dec. 1991, *V. Stajsic 415* & *P. Wlodarczyk* (HO, K, MEL, S); Bacchus Marsh Rd junction of Aeroplane Rd, 6 km NE of Mt Wallace Primary School, 2 Oct. 1977, *A.C. Beauglehole 56758* & *E.G. Errey* (MEL, NPS, RSA); Just off the Melton-Gisborne Rd, between Gisborne and Toolern Vale, 20 Nov. 1992, *V. Stajsic 669* (AD, BRI, K, MEL, NSW); Werribee Gorge State Park, Ironbark (Ingliston) Rd, c. 12 km E of Ballan, 15 Aug. 2001, *N.G. Walsh 5361* (MEL).

2. *Poa orthoclada* N.G. Walsh *sp. nov.*

Poa sp. aff. *gunnii*, J.H. Ross & N.G. Walsh, Census Vasc. Pl. Victoria 7th edn. 37, 228 (2003).

Poa fawcettiae Vickery affinis caulibus erectis rigidis ramosis, foliis erectis tenuioribus brevioribus, ligula membranacea longiore, flosculis glabris vel glabriusculis differt.

Type: Victoria, Snowfields. Alpine National Park, Wonnangatta-Moroka Unit. Foot of Neilsons Crag (The Watchtower), c. 7.7 km NE from Mt Arbuckle, 15.xii.2000 *N.G. Walsh 5272*, (holotype MEL 2089860; isotypes CANB, NSW).

Slender perennial, caespitose, stems usually stiffly ascending with intravaginal branching above base. Leaves basal and cauline. Culms erect, to c. 60 cm high. Mid-culm internodes more or less terete or weakly biconvex, glabrous, smooth, rarely scaberulous, often purplish. Sheaths glabrous, smooth, usually purplish-pigmented; margins connate for up to c. 1/4 of their length. Ligule 0.3–1 mm long, thinly membranous, truncate, distinctly ciliate at apex with cilia c. 0.2 mm long, abaxially ciliolate. Leaf blades dull slaty green, bluish, or distinctly pruinose, inrolled-terete (rarely closely folded), usually stiffly erect, mostly 6–15 (rarely to 40) cm long, c. 0.5 mm diam. (to 1.2 mm wide when flattened), generally smooth but usually minutely scaberulous on margins and near apex. Inflorescence a narrow panicle, to 15 cm long and 8 cm wide, but commonly under 8 cm