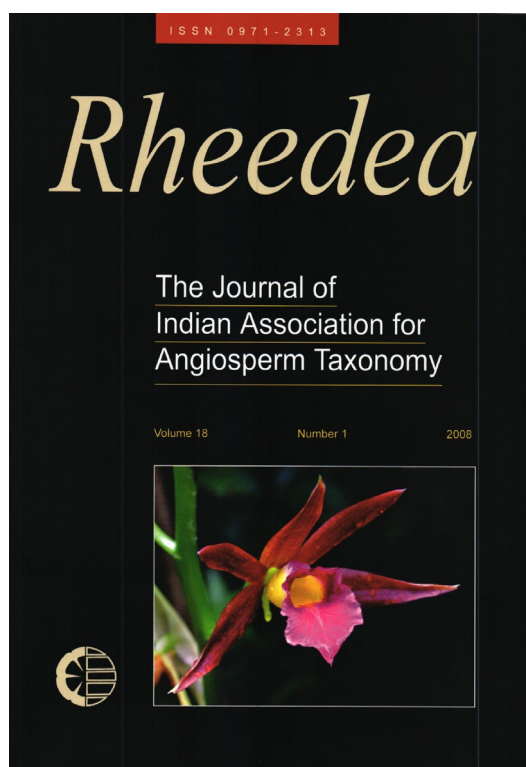




Notes on 3-flowered Paniceae (Poaceae) from India and the Cape Verde

Veldkamp J.F., Potdar G.G. & S.R. Yadav



How to cite:

Veldkamp J.F., Potdar G.G. & S.R. Yadav 2008. Notes on 3-flowered Paniceae (Poaceae) from India and the Cape Verde. *Rheedeia* 18(2): 91-93.

<https://dx.doi.org/10.22244/rheedeia.2008.18.02.05>

Received: 14.03.2006

Revised and accepted: 26.11.2008

Published in print: 31.03.2009

Published Online: 31.03.2009

Notes on 3-flowered Paniceae (Poaceae) from India and the Cape Verde

J. F. Veldkamp, G. G. Potdar¹ and S. R. Yadav²

National Herbarium of The Netherlands, Leiden University, PO Box 9514, 2300 RA Leiden
The Netherlands.

E-mail: veldkamp@nhn.leidenuniv.nl

¹Department of Botany, Shivaji University, Kolhapur 416 004, Maharashtra, India.
E-mail: girishpotdar@yahoo.com

²Department of Botany, Shivaji University, Kolhapur 416 004, Maharashtra, India.
E-mail: sryadavdu@rediffmail.com

Abstract

Urochloa supervacua (C.B. Clarke) Noltie, a member of the Poaceae - Panicoideae - Paniceae, possessing 3-flowered spikelet has been collected from Sindhudurg district of Maharashtra, which forms a new state record. Since only brief descriptions exist, a detailed one with illustrations is provided. In addition, a new combination in *Urochloa* P. Beauv. of the Cape Verde Islands is proposed.

Keywords: *Urochloa supervacua*, New Record, Maharashtra, India, New combination, *Urochloa caboverdiana*

Introduction

During a botanical tour to the Konkan region in June 2004 specimens of an obviously panicoid grass were collected in the scrub forest on a lateritic plateau near the Khawane village in the Sindhudurg district of Maharashtra. The Paniceae in principle have 2-flowered spikelets. By reduction these have become 1-flowered in many species, but here the spikelets were uniformly 3-flowered. Very few panicoids have 3-flowered spikelets: *Brachiaria lata* (Schumach.) C.E. Hubb. subsp. *caboverdiana* Conert & C. Köhler from the Cape Verde Islands, *Lasiacis anomala* Hitchc., *Panicum quadriglume* (Döll) Hitchc. from S. America, and *Urochloa supervacua* (C.B. Clarke) Noltie from Bhutan, India and Nepal. The last one originally was described as *Panicum supervacuum* C.B. Clarke (1888). The Asian taxon is rarely mentioned in literature, not unlikely because it is not to be found in the account of Hooker f. (1896). Bor (1960) regarded it as an aberrant form of *Brachiaria ramosa* (L.) Stapf [= *Urochloa ramosa* (L.) T. Q. Nguyen]. Possibly because of these authorities it is not mentioned in the work of Basappa and Muniyamma (1983) either. The only other brief description of it is by Noltie (2000). The epithet means 'redundant', referring to the extra

lemma in the spikelet, and has apparently been used only once again, and also by Clarke for a *Hypolytrum* Rich. (Cyperaceae) from Brazil. Comparison showed that the plants from Khawane belonged to this and revealed that the species had a much wider distribution than was known. Because of the paucity of data a detailed description with illustrations was made. These observations also showed that *U. ramosa* and *U. supervacua* differ considerably as shown in the keys.

1a. Ligule of 1-1.5 mm long hairs. Blades 6-22 mm wide. Spikelets densely crowded on lowermost racemes. Spikelets 2-flowered. Spikelets 2.8-3 mm long. Glumes approximate; lower glume 1-1.3 mm long; upper glume 2.5-2.7 mm long, 7-nerved. First lemma 2.5-2.7 mm long, back slightly sulcate. Second lemma 2-2.5 mm long, apex mucronate, dull. Third lemma absent. Anthers 0.7-0.8 mm long.....
..... **U. ramosa**

1b. Ligule of c. 0.5 mm long hairs. Blades 3.5-8 mm wide. Spikelets loosely scattered on lowermost racemes. Spikelets 3-flowered. Spikelets 3.2-4 mm long. Glumes remote; lower glume 1.6-1.9 mm long;

upper glume 2.8-3.2 mm long, 5-nerved. First lemma 2.8-3.2 mm long, back flattened. Second lemma 2.8-3.2 mm long, apex crested, shiny. Third lemma 2.3-2.7 mm long. Anthers 1-1.2 mm long.....
 **U. supervacua**

Urochloa supervacua (C. B. Clarke) Noltie, Edinburgh J. Bot. 56: 394. 1999. *Panicum supervacuum* C. B. Clarke, J. Linn. Soc. 24: 407, t. 1888. Lectotype: C. B. Clarke 35103 (BM, holo; K), designated by Noltie (l. c. 394). **Fig. 1**

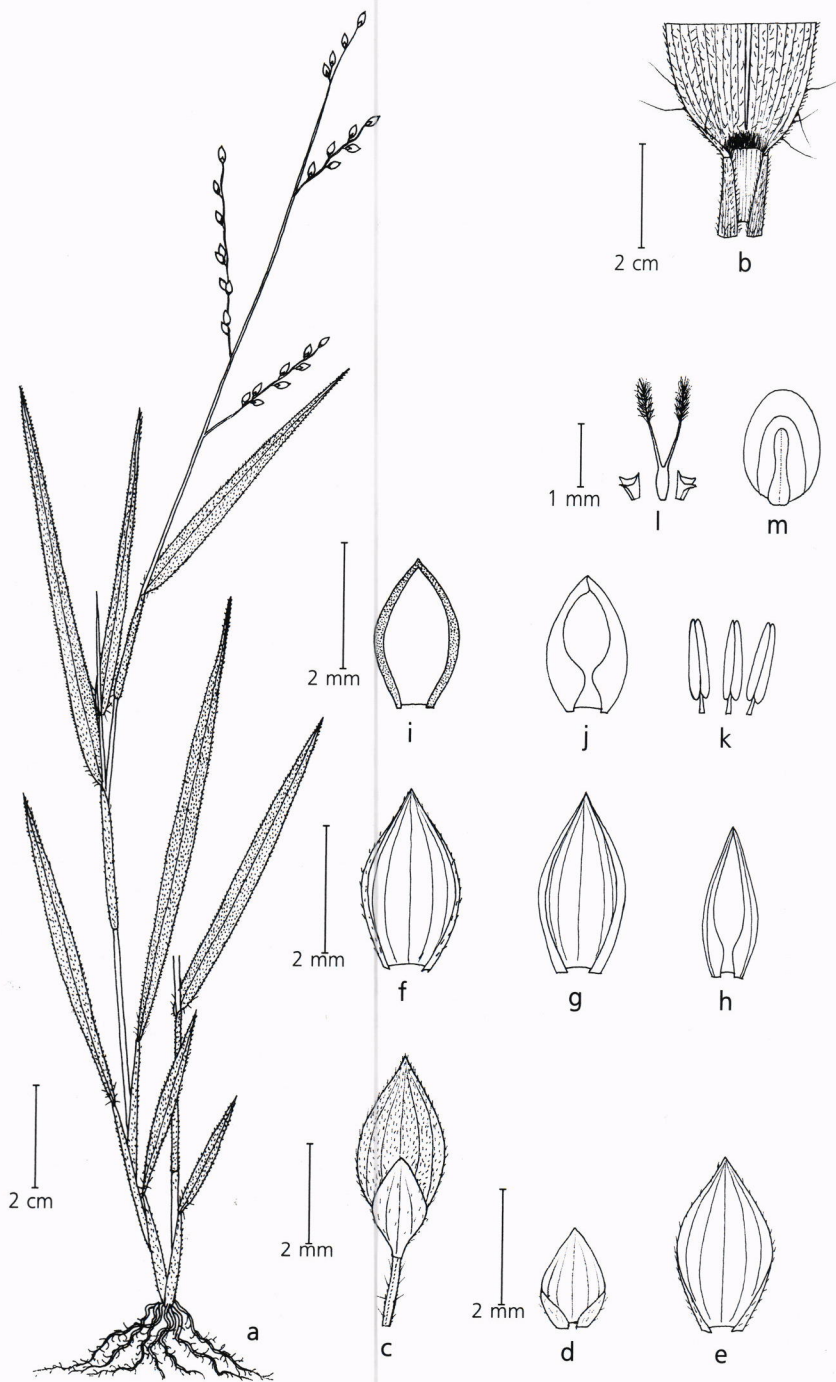


Figure 1. *Urochloa supervacua* (C. B. Clarke) Noltie – a. Habit; b. Collar; c. Spikelet; d. Lower glume; e. Upper glume; f. First lemma; g. Second lemma; h. Palea; i. Third lemma; j. Palea; k. Stamens; l. Pistil & Lodicules; m. Caryopsis.

Annual to perennial herbs. Culms tufted, neither rhizomatous nor stoloniferous, usually geniculate at base, rooting at nodes or not, 9-55 cm tall, 1-3 mm in diameter at base, nodes puberulous. Sheaths distally puberulous; ligule of c. 0.5 mm long hairs; blades linear, 3-12 x 0.35-0.8 cm, base attenuate or rounded, usually slightly pseudopetiolate; margins smooth to scaberulous, puberulous below. Peduncle puberulous below the inflorescence; common axis 3-9.5 cm long. Racemes 3-8, erecto-patent; rhachis of racemes triquetrous, 0.3-0.4 mm wide, margins scabrous, puberulous, axils puberulous; lowermost racemes simple, sometimes branched, 1.5-4.5 cm long; spikelets loosely scattered; upper racemes distant; pedicels 0.5-2 mm long, puberulous, sparsely pilose. Spikelets usually solitary, the basal sometimes paired, ellipsoid, base stipitate, 3.2-4 mm long; glumes remote; lower glume 1.6-1.9 x 1-1.2 mm long, base amplexicaul, apex rounded, acute or apiculate, 5-nerved, usually with cross-veins; upper glume 2.8-3.2 x 1.6-1.8 mm, apex acute to acutely crested, 5-nerved, without cross-veins, puberulous, apical pubescence absent; first lemma 2.8-3.2 x 1.5-1.6 mm, back flattened, apex acutely crested to acuminate, 5-nerved, without cross-veins; palea absent; second lemma membranous to coriaceous, 2.8-3.2 x 1.3-1.5 mm, apex crested, glabrous, 5-nerved, nerves without cross veins; palea usually absent, when present 2.3-2.5 x 0.8-1 mm, 2-nerved; third upper lemma 2.3-2.7 x 1.3-1.5 mm, apex crested, transversally rugulose, shiny, 5-nerved; stamens 3, anthers 1-1.2 mm long; ovary 0.4-0.5 x 0.1-0.2 mm; lodicules 2. Caryopsis elliptic, 1.6-1.8 x 1-1.3 mm.

Flowering & Fruiting: June–September.

Specimens Examined: **India**, Maharashtra, Konkan, Sindhudurg distr., Khawane village Potdar 2053 (L, Shivaji University). **Bhutan**, Tashigang distr. Noltie *et al.* 134 (E); Tashigang, Punakha distr. Noltie *et al.* 290 (E); Bajo, Wangdi Phodrang J.R.I. Wood 5911 (E); Punakha Dzong. For more localities, see Noltie (1999).

Distribution: Bhutan, Nepal, India (Maharashtra, Uttar Pradesh, West Bengal).

Habitat: Scrub forests of lateritic plateaus in the vicinity of sea, cultivated grounds, rice fields, road side ditches, scrub on river silt; 100-1700 m altitude.

Urochloa caboverdiana (Conert & C. Köhler) Veldk., Potdar *et* S. R. Yadav, *comb. et stat. nov.*

Recent studies have shown that nearly all the species attributed to *Brachiaria* belong to *Urochloa* P. Beauv. The few remaining ones have been transferred to *Moorochloa* Veldk. (2004). Köhler (1987) mentioned

that there were 5 taxa of *Brachiaria* in the Cape Verde Islands. One of these is the 3-flowered one mentioned above: *Brachiaria lata* (Schumach.) C.E. Hubb. subsp. *caboverdiana* Conert & C. Köhler which is extensively discussed, described, and depicted in *Senckenbergiana Biol.* 67 ('1986', 1987) 432, t. 1, f. a-k. As there is no combination for the taxon in *Urochloa* we here rename this to *Urochloa caboverdiana* (Conert & C. Köhler) Veldk., Potdar & S. R. Yadav, *comb. et stat. nov.* As true (biflorous) *U. lata* (Schumach.) C.E. Hubb. does not occur in the Cape Verde archipelago it seemed better to regard the two as related species, not as subspecies.

Acknowledgements

The authors would like to thank Dr. H. E. Noltie (E) for supplying original material of *U. supervacua* on loan for verification, The Ministry of Environment & Forests, New Delhi for financial assistance and The Head of Institution, Shivaji University for providing laboratory facilities.

Literature Cited

- Basappa, G. P. & M. Muniyamma.** 1983. New taxa in *Brachiaria* Griseb. (Poaceae). *Proc. Indian Acad. Sci. B*, 49, 4: 377-384.
- Bor, N. L.** 1960. *The grasses of Burma, Ceylon, India and Pakistan*. Intern. Ser. Monogr. Pure & Applied Biol., Bot. 1: 285.
- Clarke, C. B.** 1888. On *Panicum supervacuum*, sp. nova. *J. Linn. Soc.* 24: 407, t.
- Conert, H.J. & C. Köhler.** 1986', 1987. *Brachiaria lata* subsp. *caboverdiana* n. subsp. (Poaceae: Panicoideae: Paniceae). *Senckenbergiana Biol.* 67: 432, t. 1, f. a-k].
- Hooker, J.D.** 1896. *Panicum* sect. III. *Brachiaria*. *Flora of British India* 7: 33-39. Reeve & Co, Brook nr Ashford.
- Köhler, C.** 1987. Die Arten der Gattung *Brachiaria* von den Kapverdischen Inseln (Phanerogamae: Poaceae). *Cour. Forsch.-Inst. Senckenberg* 95: 211-213.
- Noltie, H. J.** 1999. Notes relating to the flora of Bhutan: XXXIX. Gramineae II. *Edinburgh J. Bot.* 56: 394.
- Noltie, H. J.** 2000. *Flora of Bhutan* 3, 2: 706, t. 40, f. d. Royal Botanic Gardens Edinburgh/Royal Government of Bhutan.
- Veldkamp, J.F.** 2004. Miscellaneous notes on mainly Southeast Asian Gramineae. *Reinwardtia* 12: 135-140.

Received : 14.3.2006

Revised and accepted : 26.11.2008