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Urochloa trichopus Stapf, an addition to the flora of Telangana state, India

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ABSTRACT: *Urochloa trichopus* Stapf (Poaceae) is reported here as an addition to the flora of Telangana state collected from Shadnagar, Rangareddy District, Telangana state. A detailed description and colour photographs are provided to facilitate identification.

KEY WORDS: Poaceae, Urochloa, New addition, Telangana, India.

I. INTRODUCTION

The genus *Urochloa* P. Beauv., belongs to the family Poaceae, subfamily Panicoideae, supertribe Panicodae, tribe Paniceae, subtribe Meiinidinae (Soreng *et al.*, 2017). About 81 species distributed across the world (Tropics & Subtropics); India harbors 27 taxa and 24 taxa in south India (Nagaraju *et al.*, 2020; Prasanna *et al.*, 2020; Kellogg's *et al.*, 2020). The genus is characterized by spikelets more flattened, cuspidate, enclosing a pronounced mucro from the upper lemma; upper lemma obtuse, mucronate or very short-awned. And *Urochloa* differs from *Brachiaria* by its spikelets plano-convex (vs. plum and terete); upper lemma apex mucronate (vs. obtuse). There are several species cultivated worldwide that have been introduced almost everywhere in tropical and subtropical regions.

While exploring the grasses of Telangana state, the authors collected specimens of an interesting grass species from Shadnagar, Rangareddy District. After a critical study, it was identified as *Urochloa trichopus* Stapf of Poaceae. The perusal of relevant literature (Pullaiah, 2015; Reddy & Reddy, 2016) revealed that this species was not reported from Telangana. Hence, it is reported here as new distributional record to the flora of Telangana state. A detailed description and photo plate are provided to facilitate its easy identification.

A. LITERATURE SURVEY

In the recent years, the state floras such as Flora of Telangana: The 29th State of India (Pullaiah, 2015) and Flora of Telangana State (Reddy & Reddy, 2016) include 208 grass species and 198 grass species, respectively. In addition, Reddy (2018) has reported additional grasses (30 species) with additional information, with the total species of Poaceae reported being 228. *Urochloa trichopus* Stapf, was not reported from Telangana State by Pullaiah (2015), Reddy & Reddy (2016) and Reddy (2018).

II. MATERIALS AND METHODS

During the field explorations for the project "Grasses of Telangana state", a palatable grass was collected at Shadnagar, Telangana, India. The specimen was identified as *Urochloa trichopus* Stapf, based on the relevant literature (Bor, 1960). The specimens (BSID008936) were processed by standard herbarium techniques and deposited at BSID, Hyderabad. The micro morphological observations were made under a dissecting microscope Olympus SZ 61 and images captured using a microscope mounted camera Magcam DC5 (Magnus 5.1 mp, 1/25' CMOS Sensor).

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III. TAXONOMIC TREATMENT

Urochloa trichopus Stapf, Fl. Trop. Afr. [Oliver et al.] 9(4): 589. 1920. *Brachiaria stolonifera* Gooss., Bull. Misc. Inform. Kew 1934(5): 195 (1934). *Eriochloa trichopus* Hochst. ex Benth., J. Linn. Soc., Bot. 19: 89. 1881. *Urochloa mosambicensis* (Hack.) Dandy, J. Bot. 69: 54. 1931. *Panicum trichopus* Hochst., Flora 27(1): 254. 1844. Kellong. & al., Checklist of the grasses of India 297. 2020; Prasanna & al., Poaceae in Mao & Dash (eds.) Fl. Plants of India- an annotated checklist – Monocotyledons. 440.2020.

Caespitose perennial. Culms 30–150 cm, high, terete, erect; nodes pubescent, lower nodes rooting; internodes 5–20 cm long, terete, pubescent. Leaves basal and cauline; leaf sheaths 10–26 × 1–2 cm, terete-keeled, hirsute, margin serrate; ligule ciliate, 1.5-2.5mm long; leaf blades, linear-lanceolate, 5–40 × 1–1.5 cm, base amplexicaul keeled, margin ciliate and wavy at base, apex acuminate, both surface hairy, mid nerve prominent on abaxial surface. Inflorescence 10–38 cm long, terminal and axillary; exerted from sheath; racemes 6–8, 3–9 × 0.4–0.6 cm, alternate, peduncle hairy; spikelets paired; arranged on abaxial side, 2 rows; rachis triquetrous, angles serrulate; hispid and bristly; pedicels 0.2–0.5 mm long, bristly. Spikelets 4–5 × 1.5–2.3 mm, ovate-elliptic, hirsute, apex beaked. Lower glume 3–3.5 × 1–1.3 mm, elliptic-lanceolate, coriaceous, membranous, 3-nerved, prominent on abaxial surface, base hirsute, margins inrolled, apex truncate-lacerate, 1–2 stiff hairs (colour less) on the mid nerve of abaxial surface, 2–2.5 mm long. Upper glume 4.5–5 × 1.5–2.2 mm, ovate, chartaceous, 7-nerved, nerves are joined at the apex, hispid on abaxial surface, margins entire, inrolled, acuminate at apex. Florets 2; lower floret barren or male (3–4 stamens); upper floret bisexual (3 stamens) or female. Lower lemma 4–4.5 × 2–2.5 mm, ovate, chartaceous, 3- nerved, 2-keeled, densely hirsute on keels, light violet in colour, sparsely hairy on dorsal surface, margins inrolled, acuminate at apex. Lower palea 3–3.7 × 2–2.8mm, ovate, chartaceous, hyaline, 2-nerved, 2-keeled, sparsely hairy and flat on dorsal surface, acuminate at apex. Lodicules 2; 0.1–0.2 mm long. Stamens 3–4; 2–2.5 × 0.3–0.4 mm. Upper lemma 2–2.5 × 1.3–1.5 mm, ovate, coriaceous, 3–5 nerved, 2-keeled at base and rugose on dorsal surface, margins inrolled; mucronate at apex, 0.6–0.8 mm long, antrorsely barbellate. Upper palea 2–2.3 × 1–1.4 mm, ovate, coriaceous, 2-nerved, 2-keeled, flat on dorsal surface, indurate, rounded at apex. Lodicules 2, 0.2–0.3 mm long. Stamens 3, 1.5–1.8 × 0.2–0.3 mm. Ovary 0.3–0.45 × 0.2–0.3 mm, oblong; stigma 0.9–1.3 mm long, plumose.
Flowering & Fruiting: June–August.
Habitat: Growing as weed; as good fodder.
Specimen examined: India: Telangana, Rangareddy district, Shadnagar, (N 17.12477°, E 78.27546°, 607 msl), 20.07.2020, *S. Nagaraju* 008936 (BSID). Figure 1 & 2.

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Figure 01: A. Habit; B–D Inflorescence.

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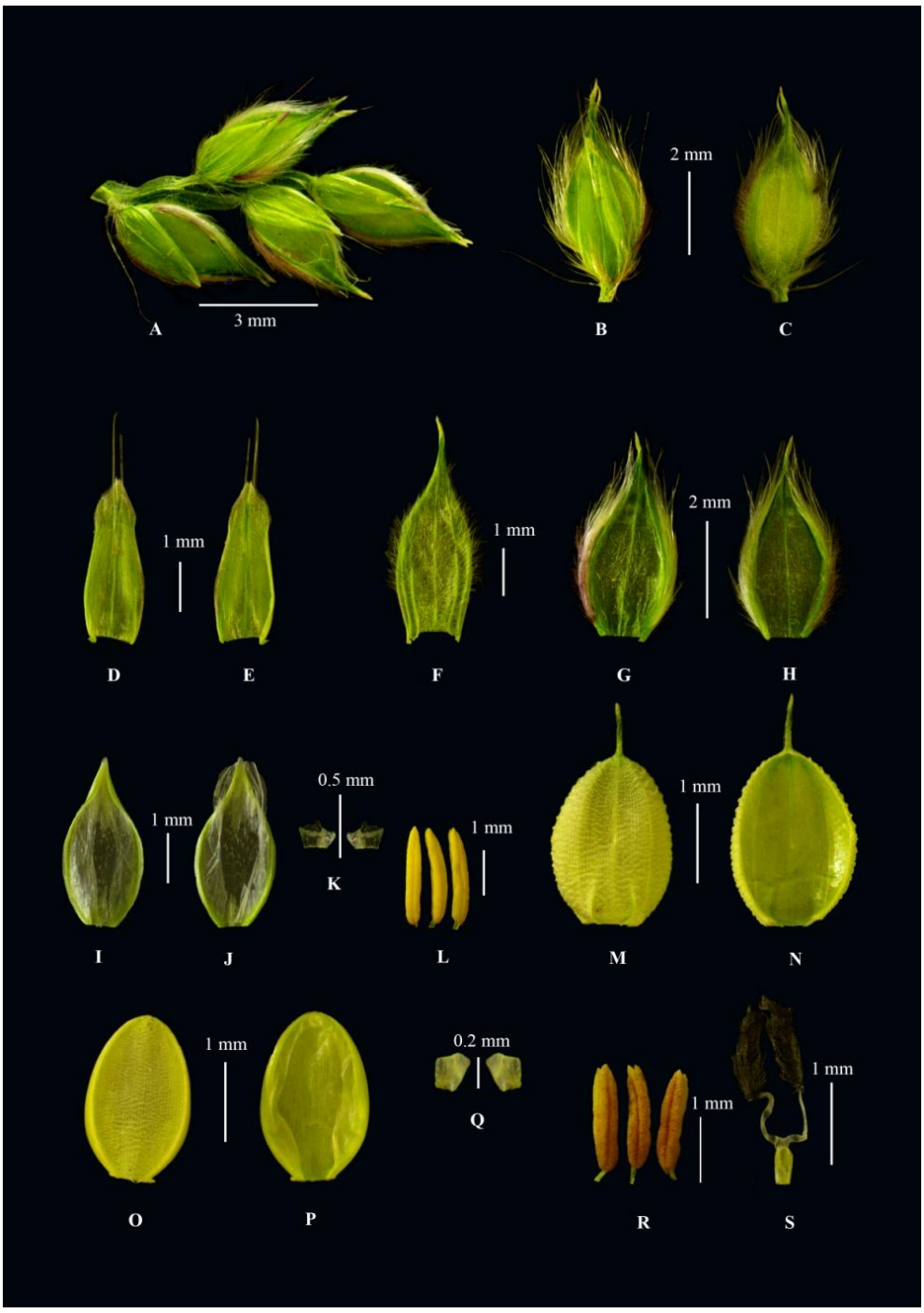

Figure 02: A. Rachis with spikelets; B&C. Abaxial and adaxial view of spikelet; D&E. Abaxial and adaxial view of lower glume; F. Upper glume; G&H. Abaxial and adaxial view of lower lemma; I&J. Abaxial and adaxial view of lower palea; K. Lodicules; L. Stamens; M&N. Abaxial and adaxial view of upper lemma; O&P. Abaxial and adaxial view of upper palea; Q. Lodicules; R. Stamens; S. Pistil.

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