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Little bluestem grass *Schizachyrium brevifolium* (Sw.) Nees ex Buse, from Kawal Wildlife Sanctuary Tiger Reserve, an addition to the flora of Telangana State, India

Nagaraju Siddabathula*, P.S. Annamma

Botanical Survey of India, Deccan Regional Centre, Room nos. 228–238, Kendriya Sadan, GPOA, Sultan Bazar, Koti, Hyderabad– 500 095, Telangana, India.

ABSTRACT: *Schizachyrium brevifolium* (Sw.) Nees ex Buse, (Poaceae) is reported here as an addition to the flora of Telangana, collected from Kawal Wildlife Sanctuary Tiger Reserve, Mancherial District, Telangana state. Diagnostic description and colour photographs are provided to facilitate identification.

KEYWORDS: *Schizachyrium*, grasses, Telangana, Kawal Tiger Reserve.

I. INTRODUCTION

The genus *Schizachyrium* Nees, belongs to the family Poaceae, subfamily Panicoideae, supertribe Andropogonodae, tribe Andropogoneae, subtribe Andropogoninae (Soreng *et. al.*, 2017). It is a Tropical & S. Africa, W. Indian Ocean, Tropical & Subtropical Asia to W. Pacific, America genus comprises about 66 species distributed worldwide. India harbours 6 species, among them 3 species occurs in southern India (Prasanna *et al.*, 2020; Nagaraju *et. al.* 2020). The genus is characterized by Inflorescence of racemes interrupted by spathes or spatheoles; racemes solitary; joints and pedicels thickened upwards, cupuliform. *Schizachyrium* is closely related to *Andropogon* but differs by its solitary racemes, cupular joints and pedicels at apex, convex lemma of the sessile spikelet.

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. *Schizachyrium brevifolium* (Sw.) Nees ex Buse, was not reported from Telangana State by Pullaiah (2015), Reddy & Reddy (2016) and Reddy (2018).

II. MATERIALS AND METHODS

During the field explorations for flora of Kawal Wildlife Sanctuary Tiger Reserve, a fragile grass was collected at Tiger Reserve, Telangana, India. The specimen was identified as *Schizachyrium brevifolium* (Sw.) Nees ex Buse, based on the relevant literature (Bor, 1960). The specimens (BSID004006) 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^o CMOS Sensor).

III. TAXONOMIC TREATMENT

Schizachyrium brevifolium (Sw.) Nees ex Buse in Miq., Pl. Jungh.: 359. 1854; C.E.C. Fisch. in Gamble, Fl. Madras 3: 1752. 1934; Bor, Grass. Burma Ceylon India and Pakistan: 215. 1960; S. Moulik, Grass. Bamb. India 1: 218. 1997; Karthik. & al., Fl. Ind. Enum. Monocot. 256. 1989; Kellong. & al., Checklist of the grasses of India 426. 2020;



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Prasanna & al., Poaceae in Mao & Dash (eds.) Fl. Plants of India- an annotated checklist – Monocotyledons 418. 2020. *Andropogon brevifolius* Sw., Prodr.: 26. 1788; Hook. f., Fl. Brit. India 7: 165. 1896.

Tufted annuals; culms delicate, erect or scrambling and decumbent, 9–65 cm high, branched, glabrous; nodes glabrous. Leaf blade oblong–lanceolate or oblong–linear, 2–4 × 0.3–0.7 cm, distichous; scabrid, flat or folded, apex obtuse–acute or shortly mucronulata, base truncate–sub rounded, margins serrulate; leaf sheaths, 1.5–3.5 cm, keeled, scabrid; ligule membranous, lacerate, 0.7–1.1 mm long. Racemes axillary, solitary, 1.8–2.6 cm long, spatheate; peduncle capillary, 1–1.2 cm long; rachis fragile, linear to clavate; joints triquetrous, 2–2.2 mm long, apex bidentate; callus bearded 0.7–0.9 mm long. Spikelets paired, dissimilar. Sessile spikelet oblong-linear, 2.1–2.8 × 0.5–0.7 mm, apex acute brownish, awned. Lower glume linear-lanceolate, 2.6–2.9 × 0.9–1 mm, sub leathery, apex 2-toothed, margins incurved, sharply inflexed towards apex, 5-nerved, flanks keeled toward apex, keels wingless, back flat, scabrous with prominently long white hairs, 0.6–0.8 mm long; upper glume boat shaped, linear-lanceolate, 2.2–2.5 × 0.3–0.4 mm, chartaceous, 3-nerved, 1-keeled, keel serrulate, apex acuminate–aristate, ca. 0.2 mm long, serrulate, margins ciliate, brownish; florets 2; lower fertile, bisexual, epaleate; upper barren, epaleate; lower lemma oblong-lanceolate, 1.2–1.5 × 0.4–0.5 mm, membranous to chartaceous, apex bifid or emarginate, margins ciliate and incurved; upper lemma oblong-lanceolate, 1.8–2.5 × 0.3–0.4 mm, hyaline, deeply 2-lobed, near base, nerveless, outer margins ciliate, awn from sinus, geniculate, 6–7 mm long, column twisted, brownish, barbellate, yellow; stamens 3, 0.3–0.5 mm long; lodicules 2, 0.15 mm long; caryopsis narrowly oblong–linear, 0.9–1.5 × 0.2 mm, brownish. Pedicelled spikelet represented by aristulate glumes.

Flowering & Fruiting: July–December.

Habitat: In moist rock crevices of hill slopes.

Distribution: INDIA: Andhra Pradesh, Assam, Bihar, Chhattisgarh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Odisha, Rajasthan, Tamil Nadu, Tripura, Uttar Pradesh, Uttarakhand, West Bengal (Kellogg et al., 2020; Prasanna et al., 2020).

Specimen examined: India, Telangana, Mancherla District, Jannaram Forest Division, Birsaipeet Range, Rampur Beat (N 19° 13' 35.5", E 078° 51' 47.5", 385 msl), 29.10.2013, *P.S. Annamma 004006* (BSID). Figure. 1.

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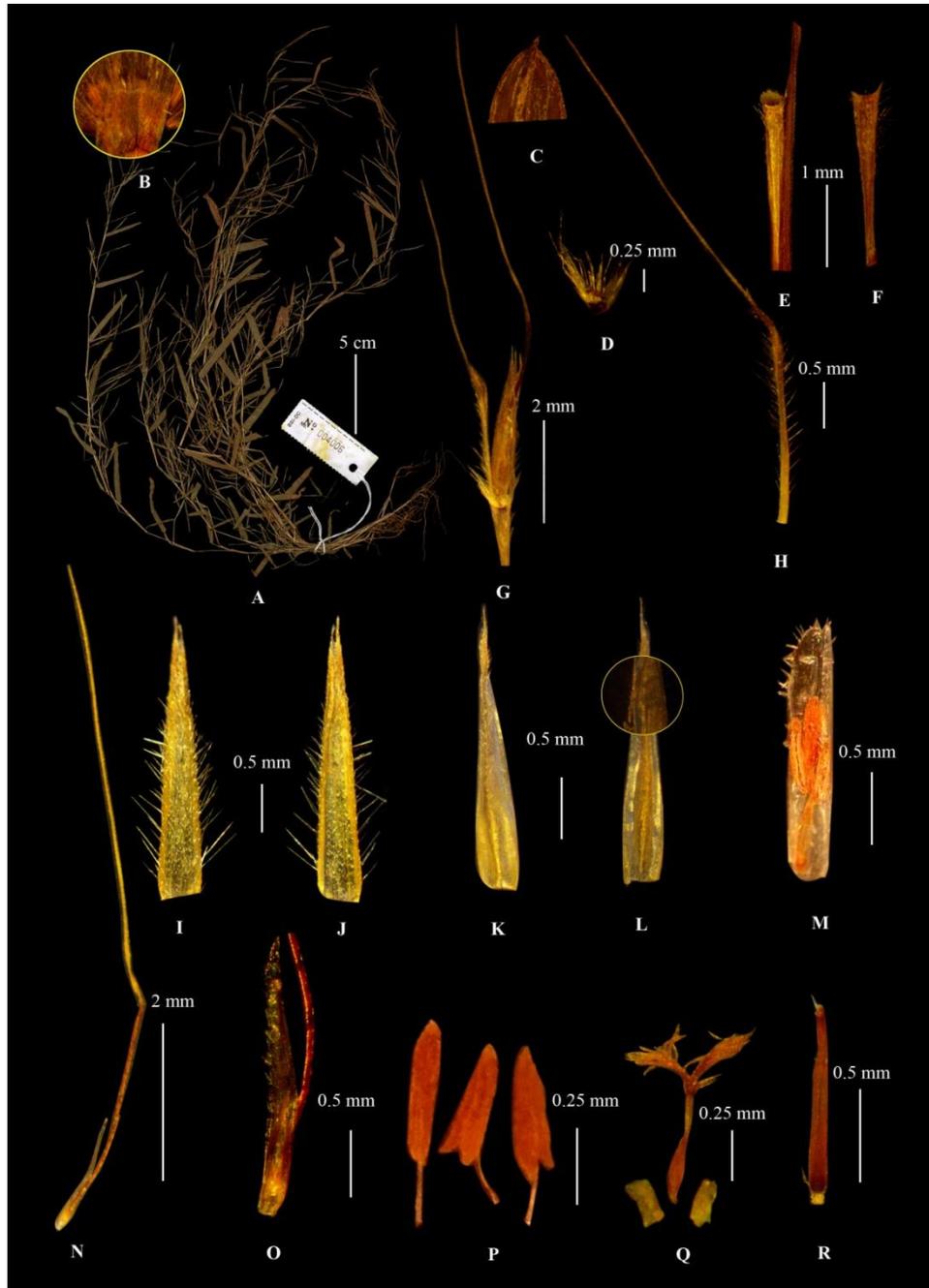


Figure 01: *Schizachyrium brevifolium* (Sw.) Nees ex Buse

A. Habit; B. Ligule; C. Leaf apex; D. Callus; E&F. Pedicel; G. Sessile and pedicelled spikelets; H. Pedicelled spikelet; I-R. Sessile spikelet; I&J. Abaxial and adaxial view of lower glume; K&L. Abaxial and adaxial view of upper glume; M. Lower lemma; N. Upper lemma; O. Enlarged view of upper lemma; P. Stamens; Q. Pistil with lodicules; R. Caryopsis