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RESEARCH ARTICLE

Chrysopogon asper B. Heyne ex Blatt. & McCann (Poaceae: Andropogoneae) - addition to the flora of Telangana, India.

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Abstract

The present study is addition of Chrysopogon asper B. Heyne ex Blatt. & McCann from Poaceae as a new record to the grass flora of Telangana. In addition to this Ecology and distribution was provided.

Keywords: Distribution, Ecology, Grass, New record, Poaceae.

Introduction

The genus *Chrysopogon* Trin., comprises ca. 48 species, distributed in tropical and subtropical regions of the Old World to Pacific, South central and Southeast North America, and Cuba in the Carribean (Clayton *et al.* 2006 onwards). In India, it is represented by 23 species (Kellogg *et al.* 2020; Prasanna *et al*. 2020; Nagaraju *et al.* 2021) and 14 species were reported in Eastern Ghats (Pullaiah, 1997; Kabeer & Nair, 2009; Pullaiah & Karuppusamy, 2020). Among 14 species recorded from Eastern Ghats, 12 are reported from Andhra Pradesh; 6 are from Odisha (Saxena & Bramham, 1996), 9 species from Tamil Nadu (Kabeer & Nair, 2009) and 3 species from Telangana (Pullaiah, 2015; Reddy & Reddy, 2016) and recently *Chrysopogon serrulatus* added to the flora of Telangana by Nagaraju *et al.* (2021).

During the floristic explorations of Telangana state, the authors collected specimens of an interesting grass species from Amrabad Tiger Reserve, Nallamalais, Nagarkurnool district, Telangana. After a critical study, it was identified as *Chrysopogon asper* B. Heyne ex Blatt. & McCann 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.

Materials and Methods

An intensive and extensive floristic survey was conducted from 2012 to till date in the Eastern Ghats of Telangana. The plant specimens were collected at Mallaiah loddi, Mannanur Range area and made herbarium following the standard method (Jain & Rao, 1977). The mounted specimens were identified with the help of available literature (Pullaiah & Karuppusamy, 2020). The phenological record of the plants, habitat, associated species, soil type were noted. Herbarium specimens were deposited at Telangana State Herbarium, Dr. BRR Government Degree College for future reference.

Observations and Results

After a critical study, the specimens were identified as *Chrysopogon asper* B. Heyne ex Blatt. & McCann (Figure 1). A scrutiny of relevant literature has revealed that the species is not reported from Telangana state (Pullaiah, 2015; Reddy & Reddy, 2016; Reddy 2018). Hence the present distribution of this grass species forms new distributional record for the Telangana State.

Key to the species of *Chrysopogon* in Telangana

1. Pedicels half the length of sessile spikelet or longer:
   2. Pedicels glabrous or nearly so……***C. aciculatus***
   2. Pedicels villous with rusty hairs or pale hairs:

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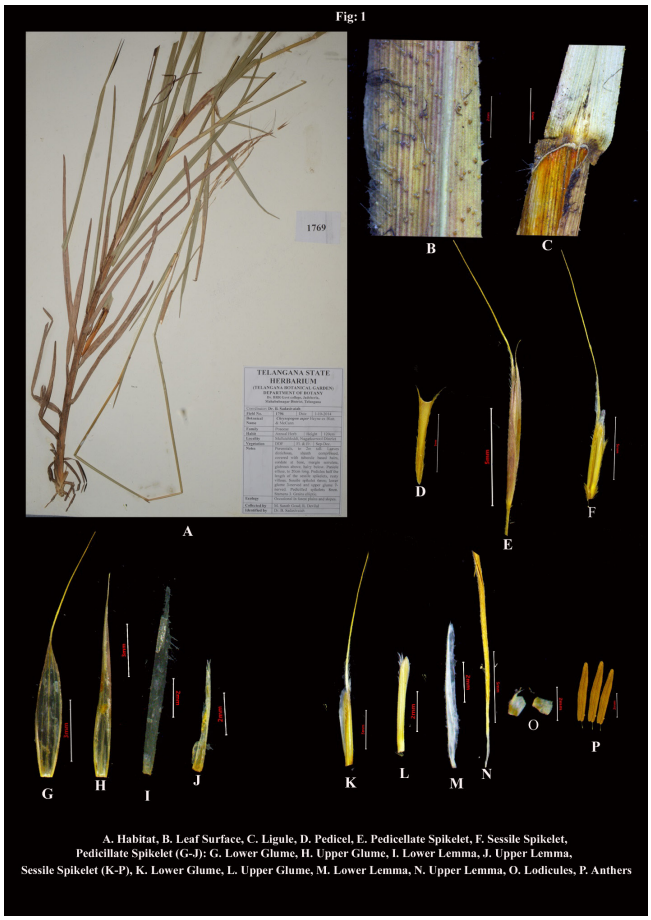

Figure 1: *Chrysopogon asper* B. Heyne ex Blatt. and McCann

3. Lower glume of the pedicelled spikelet with a long awn, upper glume not or very short awn.....***C. asper***

3. Both glumes of the pedicelled spikelets awned ……
…….....***C. orientalis***

1. Pedicels shorter than half the length of sessile spikelets:

4. Upper glume of sessile spikelet shortly ciliate in upper quarter … …….....***C. serrulatus***

4. Upper glume of sessile spikelet with long golden hairs in lower two thirds…. ***C. fulvus***

Taxonomic treatment

Chrysopogon asper

B. Heyne ex Blatt. & McCann, Bombay Grasses 68. 1935. *Andropogon asper B.* Heyne ex Hook.f., Fl. Brit. Ind. 7: 189. 1896.

Perennials, stoloniferous. Culms erect, stout, to 2 m high, nodes glabrous. Leaf sheath 5–15 cm, broad, hirsute below, glabrous above, ciliate near mouth. Ligule 0.55–0.66 mm, fimbriate rim. Leaf blades distichous, 10–50 × 1–2 cm, elliptic-linear-lanceolate, base cordate, tubercle based hairy above, spinulose beneath the midrib, apex acuminate, spinulosely serrulate on the margin, cilia tubercle based. Panicles 15–30 cm long, effuse. Sessile spikelet 7–8 × 1–1.7 mm, narrowly elliptic, awned; callus long villous, 3.38–4.2 mm, bearded with rufous hairs. Lower glume 5.5–6 × 0.4–0.6 mm, oblong-lanceolate, narrowly boat shaped, coriaceous, scabrid towards apex, apex acute-aristate, margins ciliate, 5-nerved, keeled towards apex; keel hispid from upper half. Upper glume 5.5–6 × 0.6–0.8 mm, oblong-elliptic, coriaceous, faintly 3-nerved, awned; awn straight, 12–15 mm long; 1-keeled, ciliate dorsally, margins ciliate. Lower lemma 5–6 × 0.3–0.5 mm, oblong-lanceolate, hyaline, apex acute, margins ciliate, 1-nerved, 1-keeled, epaleate. Upper lemma 5.6–6.5 × 0.2–0.4 mm, hyaline to a base of awn, awned; awn 1.5–2 cm long, geniculate, epaleate. Lodicules 2. Stamens 3; anthers 3–3.8 × 0.3–0.5 mm. Pedicelled spikelet 10–13 × 0.9–1.3 mm, linear, awned. Pedicel 4–4.5 × 0.4–0.5 mm, margins densely covered with rufous hairs. Lower glume 9–9.5 × 1.9–2.2 mm, elliptic-lanceolate, membranous, sparsely ciliate on dorsal side, apex acute, margins inflexed, 5-7-nerved, 2-keeled, awn 8-12 mm. Upper glume 10–13 × 01–1.5 mm, narrowly lanceolate, membranous, apex acute, faintly 3-nerved, margins inflexed. Lower lemma 7–8 × 0.8–1.2 mm, narrowly elliptic-oblong, hyaline, apex acute, margins ciliate, 2-nerved, epaleate. Upper lemma 5–4.8 × 0.6–0.9 mm, narrowly linear, hyaline, apex acute, margins inflexed, nerveless or faintly 1-nerved. Epaleate. Stamens 3.

Flowering and Fruiting

August to November.

Habitat

Rare in forest slopes along with other grasses like *Sehima nervosum, Cymbopogon spp., Eulalia spp., Heteropogon spp.* between 600-900m elevations.

Specimens Examined

Mallaiah Loddi, Mannanur Forest Range, Nagarkurool District, Telangana, M. Sharat Goud & B. Sadasivaiah 1769.

Distribution

Andhra Pradesh, Karnataka, Kerala, Maharashtra, Tamil Nadu, Telangana. Endemic to Peninsular India.

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