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Taxonomy and Distribution of *Scleria foliosa* (Cyperaceae) in Kerala, India

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Abstract

Scleria foliosa (Cyperaceae) an interesting sedge species is reported here as a new record for Kerala. Detailed description with photographs and relevant notes on distribution are provided for easy identification.

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Keywords

Scleria foliosa; New Record; Thiruvananthapuram; Kerala

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Introduction

Scleria P. Bergius is a pantropic genus of ca. 200 species, some extending to subtropical and warm temperate regions. In India, it is represented by 27 species, of which 14 taxa are found in Kerala (1). The genus can easily be recognized by the presence of rather large nuts, with usually white glistening crustaceous pericarp, a well-developed hypogonium or disk and complete absence of perianth (2).

During floristic explorations in Thiruvananthapuram district of Kerala, India a few specimens belonging to the genus *Scleria* were collected from the wet rocky areas of Ponmudi hills. The specimens were prepared for herbarium as per standard procedure (3) and fixed in Kew solution for further study. Measurements and photographs

were made using a Leica MZ6 stereo microscope. On critical study, the specimens were identified as *Scleria foliosa* Hochst. ex A. Rich., with its major centers of distribution being Trop. & S. Africa, and Madagascar (4). A thorough scrutiny of literature and analysis of its distribution in India confirmed that the species is reported from Rajasthan (Mt. Abu), Maharashtra (Pune), Karnataka (Chickmangalur) and Tamil Nadu (Masinagudi) (2,4,5,6). Regional herbaria like TBGT, UCT, CALI and MH were searched for similar specimens. Apart from these the virtual herbarium of various Herbarium like K, NY, US, E, MO etc. were also referred for better understanding of distribution the species. The species forms a new report from Agasthyamala Biosphere Reserve and an addition to the Flora of Kerala.



Fig. 1. *Scleria foliosa* Hochst. ex A. Rich. **A.** Habit; **B.** Sheath; **C.** Terminal Inflorescence; **D.** Spikelet; **E.** Stamen; **F.** Nutlet

Taxonomic Treatment

Scleria foliosa Hochst. ex A. Rich., Tent. Fl. Abbys. 2:509. 1851

Scleria dumicola Ridl., Trans. Linn. Soc. London, Bot. 2: 169. 1884

Scleria perrieri Cherm., Bull. Soc. Bot. France 70: 279. 1923

Roots fibrous, reddish brown. *Culms* glabrous, 15–150 cm high, 1–3 mm thick. *Leaves* basal and cauline, upper leaves at longer intervals on the culm; lower leaves reduced to bladeless sheaths; sheaths many-nerved, glabrous, 5–15 cm long, 3–6 mm wide, mouth truncate or narrowly ovate, margins membranous, narrowly winged; lamina 11–73 cm long, 4–8 mm wide, glabrous, scabrid on the margins above and sometimes on the midrib beneath and on two prominent nerves on the upper surface towards apex. *Inflorescence* terminal and lateral panicles; terminal panicle sessile, 2–3 cm long; lateral ones single at nodes, 1–2 cm long, distinctly spaced, scarcely to shortly exerted from the sheaths on peduncles which become pendulous when mature; bracts overtopping the panicles. *Spikelets* unisexual; male spikelets 3.5–4 × 0.7–1 mm, subsessile or pedicel shorter than spikelet; female spikelets ovoid, 4–5 mm long; male glumes 3–4 × 0.5–1 mm, stramineous, brownish; female glumes ovate-lanceolate, 3–5 × 0.5–1 mm, glabrous, light brown to blackish-red. *Stamens* 3; anthers 0.8–1 mm long, apiculate. *Nutlet* broadly ovoid, 3–4 × 2–2.5 mm, umbonulate, white or sometimes discolored and brownish, base pitted, surface rugose, mostly longitudinally verrucose-lacunose, glabrous. *Disc* almost to the base, 3-lobed; lobes orbicular-ovate, thick, appressed, white or pale brown. (Fig. 1)

Phenology: Flowering and fruiting was observed from November to May.

Habitat and Ecology: It is naturally growing in the wet rocky areas of Ponmudi hills within the Agasthyamala Biosphere at an altitude of ±774 m. The associated species in the community are *Diplacrum caricinum* R. Br., *Fimbristylis cinnamometorum* Kunth., *Kyllinga odorata* Vahl, *Scleria biflora* Roxb. etc.

Distribution: *Scleria foliosa* is known from Southern Africa and Madagascar. In India, it is reported from Maharashtra, Rajasthan, Karnataka and Tamil Nadu.

Conservation Status: The species has a wide native range, so it is assumed that it is having a large population size. The threat faced by the species is currently not known and considering its wide range the status of the species is assumed as Least concern (LC) (7,8,9).

Specimen examined: INDIA, Kerala, Thiruvananthapuram distr., Ponmudi, ± 774 m, 08° 46' 20.5" N, 77° 06' 21.7" E, 30-05-2018, A. R. Viji 5356 (UCT); Tamil Nadu, Nilgiri Distr., Masinagudi, ± 700 m, 11° 33' 46.4" N, 76° 38' 59.2" E, 08-11-2012 A. R. Viji & A.G. Pandurangan, 75349 (TBGT).

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Competing interests

The authors declared that they have no competing interest.

Authors' contributions

The first author collected the plant specimen, analysed the field data and wrote the manuscript. The second author mentored the project.

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