



ERIOPHORUM COMOSUM (WALL.) NEES (CYPERACEAE), A NEW DISTRIBUTIONAL RECORD FOR PENINSULAR INDIA

Viji, A. R. and A. G. Pandurangan*

Plant Systematics & Evolutionary Science Division,
Jawaharlal Nehru Tropical Botanic Garden and Research Institute,
Palode, Karimancode P.O., Thiruvananthapuram, Kerala, India – 695 562

* Corresponding author: agpandurangan@gmail.com tel – 9446422458; fax - +91(0)472 2869646

ABSTRACT: *Eriophorum comosum* (Wall.) Nees, a tufted wiry sedge species has been reported for the first time from Nilgiris, Western Ghats, Peninsular India. The study provides a detailed taxonomic description, illustration, photographs and relevant information based on fresh collections.

Key words: Taxonomy, Cyperaceae, *Eriophorum*, Western Ghats, Nilgiri Biosphere Reserve, Tamil Nadu.

INTRODUCTION

The genus *Eriophorum* commonly known as cotton-grass or cotton-sedge is established by Linnaeus in 1753. It is characterized by the presence of smooth silky white or brownish red elongated perianth bristles. There are about 25 species in the genus and distributed in the cool temperate regions of Himalaya, Afghanistan, Bangladesh, Bhutan, China, Indonesia, Myanmar, Nepal, Pakistan, Vietnam and Indonesia [1]. The members of the genus form an important constituent in the alpine flora of the Northern and Western Himalayan regions. In India, 3 species viz. *E. comosum* (Wall.) Nees, *E. microstachyum* Boeck. and *E. scheuchzeri* Hoppe are recorded so far and most of them confined in the northern regions [2, 3, 4].

While studying the family Cyperaceae in Nilgiri Biosphere Reserve, the authors collected an interesting sedge species from Nilgiri district, a part of Western Ghats in Tamilnadu. On critical examination and scrutiny of literature, it has been identified as *Eriophorum comosum* (Wall.) Nees, a species so far known from Northern India [1, 2, 3, 4, 5, 6]. Hence, the present collection forms a new distributional record and also an addition to the flora of Peninsular India. Therefore, it is described with illustration, photographs and relevant notes to facilitate its easy identification in the field.

TAXONOMIC TREATMENTS

Eriophorum comosum (Wall.) Nees in Wight, Contr. Bot. India, 110. 1834; Clarke in Hook.f, Fl. Brit. India 6: 664. 1894; Songyun & al., in Wu & Raven. Fl. China, 23: 175. 2010; *Scirpus comosus* Wall. in Roxb., Fl. Ind. 1: 234. 1820.

Herbs, perennial, 14 – 90 cm high. *Rhizomes* 1 – 2 cm x 0.5 – 1.5 cm. *Culms* 1 – 4 per plant, 14 – 70 cm tall, 1 – 2 mm thick, smooth, obtusely trigonous; the base surrounded by firm, black to brown, old leaf sheaths. *Leaves* basal, many, overtopping the inflorescence, blades 20 – 90 cm long, 0.5 – 1 mm wide, green, gradually narrowed and setaceous towards apex, margin involute, scabrous; sheaths 3 – 10 cm long, blackish - brown towards the base. *Inflorescences* compound to decompound, dense, 6 - 15 x 6 – 20 cm; involucre bracts 4 - 6, spreading, arranged in 2 - 3 whorls, unequal, leaf-like, 3 - 60 cm long, 0.5 - 1 mm wide, overtopping the inflorescence; primary rays spreading, unequal, 2 - 10 cm long, smooth, obtusely angular; secondary rays, slender, smooth, 1 - 3 cm long. *Spikelets* many, solitary or cluster of 2 or 3, oblong – ellipsoid, 7- 13 x 1.5 - 2 mm. Glumes closely imbricate, ovate – lanceolate, membranous, keeled; keel excurrent into a mucro at acute to obtuse apex, sides faintly nerved, whitish – hyaline at margins, brown spotted, 2.5 - 3 x 1 – 1.5 mm (including 0.3 – 0.5 mm mucro); basal 4 glumes empty. *Perianth bristles* many, surpassing glume at maturity, ca. 8 mm long, smooth, silvery, shining, straight. *Stamens* 2; anthers narrowly ovoid with lanceolate scabrous high- red crest, 1.8 mm long (including 0.5 mm crest); filaments ca. 1 mm long. *Ovary* oblong; style ca. 1 mm long, stigma 3, ca. 2 mm long. *Achenes* narrowly oblong, trigonous, compressed, smooth, beaked, ca. 3 x 0.5 mm (including the short beak), brown to black. (Fig. 1 & 2).

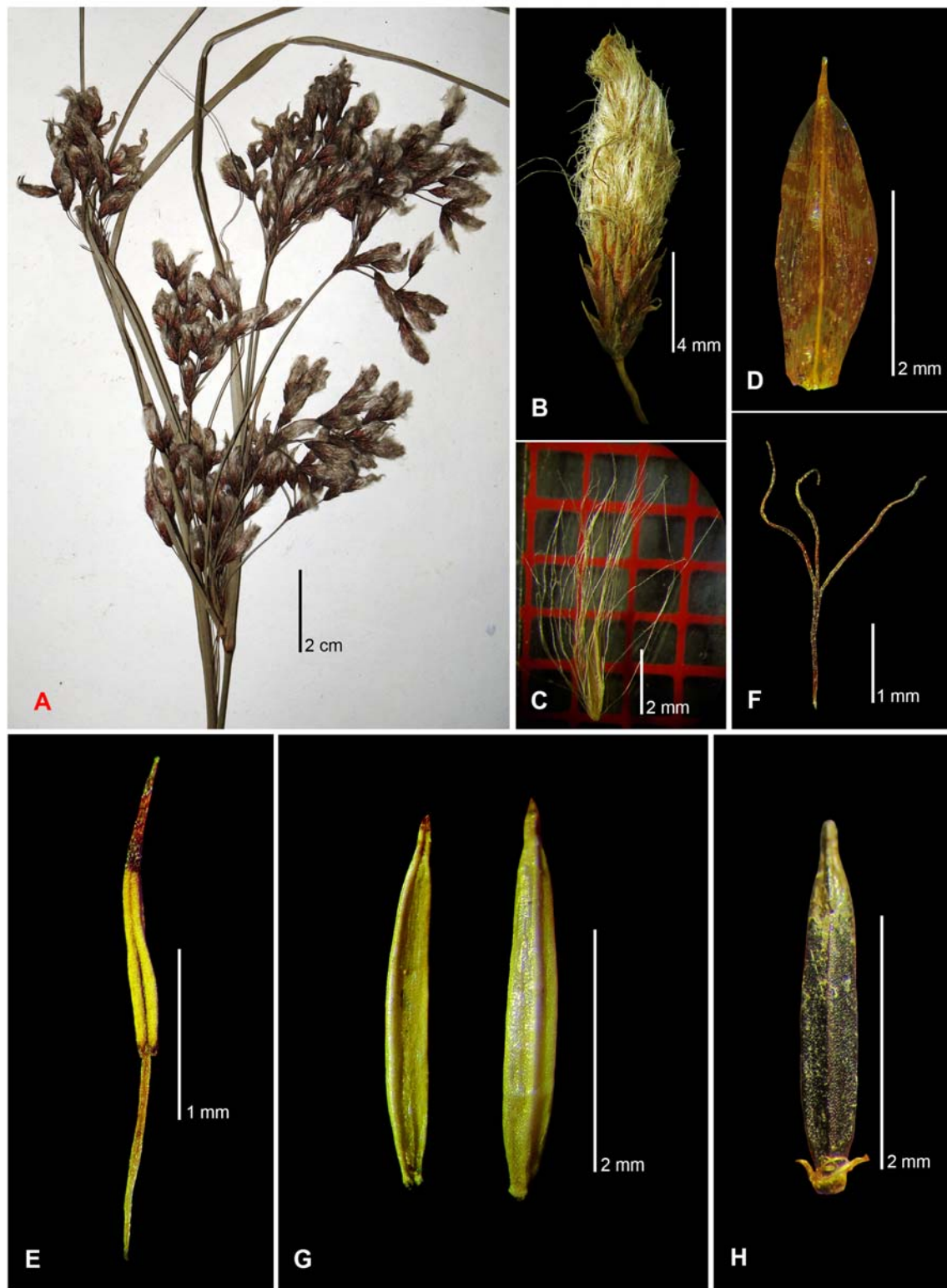


Fig. 1. *Eriophorum comosum* (Wall.) Nees A. Inflorescence; B. Spikelet; C. Perianth bristles; D. Glume; E. Stamen; F. Style and stigma; G-H. Nut.

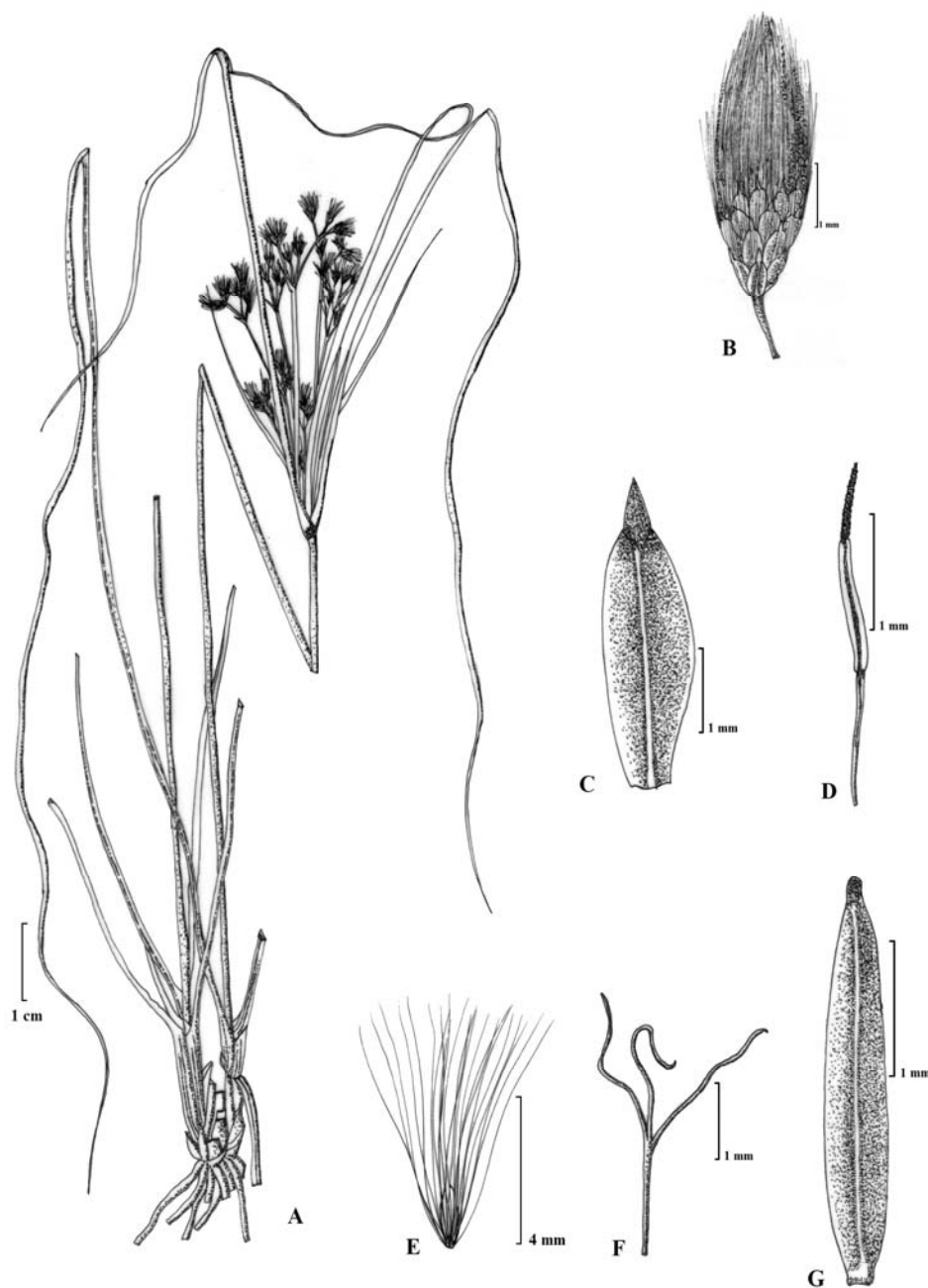


Fig. 2. *Eriophorum comosum* (Wall.) Nees A. Habit; B. Spikelet; C. Glume; D. Stamen; E. Perianth bristles; F. Style and stigma; G. Nut.

Flowering and Fruiting: November – March.

Uses: The Gujjar and Bekarwal tribes in Jammu and Kashmir use the leaves for tying purposes (Singh *et al.*, [4].

Habitat: It is naturally growing in the rock crevices at an altitude of over 2000 m from sea level and the environmental conditions at Nilgiri Plateaus are comparable to that of its original habitats in Himalayan region. The associated species in the community are *Eragrostis nigra* Nees ex Steudel, *Fimbristylis uliginosa* Hochst. ex Steudel, *Isachne kunthiana* (Wight & Arn. ex Steudel) Wight & Arn. ex Thwaites etc.

Distribution: *Eriophorum comosum* is so far known from the countries of Himalaya including China and further extended towards east to Indonesia, Vietnam etc. In India the species is reported from Jammu Kashmir, Bengal, Bihar, Orissa and Rajasthan and now extended to Western Ghats beyond Vindhyas is of phytogeographical significance.

Remarks: As stated above, there are 3 species of *Eriophorum* L. recorded from India. Therefore, a key has been given to identify these species in the field.

Key to the Indian species of Eriophorum.

- 1a. Culms densely tufted; involucre bracts leaf like2
 1b. Culms solitary; involucre bracts glume like**E. scheuchzeri**
 2a. Plants 14 – 90 cm tall; inflorescence compound to decomposed umbel;
 anther with lanceolate, scabrous high-red crest**E. comosum**
 2b. Plants 5 – 15 cm tall; inflorescence reduced to 1 - 3 terminal spike;
 anther not crested**E. microstachyum**

Specimen examined: INDIA, Tamil Nadu, Nilgiri district, Kundha, ±2300 m, N 11°13'44.8" E 76°34'08.6", 23-03-2012, A. R. Viji & A. G. Pandurangan, 72320 (TBGT)

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