

# *Eleusine multiflora* (Poaceae: Chloridoideae), a new record for India

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## इल्यूसिन मल्टीफ्लोरा (पोएसी: क्लोरीडोयोडी), भारत के लिये नवीन अभिलेख

कोनिकल मम्बेट्टा प्रभुकुमार, चंद्रासरील नारायणन सुनील, वल्लारत्ता वेत्तिल नवीन कुमार, नारायण भवदास, तरुण छावड़ा एवं इंदिरा बालाचंद्रन

### सारांश

प्रस्तुत शोध पत्र में इल्यूसिन मल्टीफ्लोरा होस्चट. एवं ए. रीच. नामक जाति को भारत के लिये प्रथम बार अभिलेखित किया गया है। इस जाति का विस्तृत वर्णन, चित्रण एवं वितरण प्रस्तुत किया गया है।

### ABSTRACT

*Eleusine multiflora* Hochst. ex A. Rich. is reported here for the first time from India. Detailed description, illustration and distribution of the species are provided.

**Keywords:** *Eleusine multiflora*, India, New Record, Nilgiris, Poaceae

### INTRODUCTION

The genus *Eleusine* Gaertn. (Poaceae: Chloridoideae) commonly known as 'goosegrass' with about 10 species (The Plant List, 2013) distributed in Asia, Africa & South America. Except *E. indica*, *E. tristachya* and *E. coracana*, all other species of *Eleusine* are limited in distribution (Mehra, 1963). Most of them are localized in Eastern and North East Tropical Africa which is considered as

the centre of diversification of the genus (Phillips, 1972). In India, the genus is represented by 2 species viz. *E. indica*, a common weed in most places and *E. coracana* (L.) Gaertn., a cultivated cereal (Moulik, 1997).

During the course of a botanical exploration in Nilgiris district of Tamil Nadu, authors have collected an unknown species of *Eleusine*. After consulting relevant floras and literatures and herbarium specimens, we established the identity of the specimen as *Eleusine multiflora* Hochst.

ex A. Rich. which is distributed mainly in Northern Africa, Europe, Arabia and North America (Richard, 1987; McVaugh, 1983). So far there is no distributional record for this species from India hence here it is described as a new distributional record to the flora of India.

#### KEY TO THE INDIAN SPECIES OF *ELEUSINE*

1. Spikes oblong to ovate, up to 2.7 cm long; rachis winged; lemmas cuspidate or mucronate at apex  
*E. multiflora*
2. Spikes linear to linear-oblong, 3.5–15.5 cm long; rachis not winged; lemmas acute to obtuse at apex 2
3. Spikelets ovate, non-shattering, closely overlapping; grain globose, brown, exposed between the gaping lemma and palea when ripe  
*E. coracana*
4. Spikelets elliptic, disarticulating between the florets; grain elliptic to oblong, blackish, never exposed when ripe  
*E. indica*

#### TAXONOMIC TREATMENT

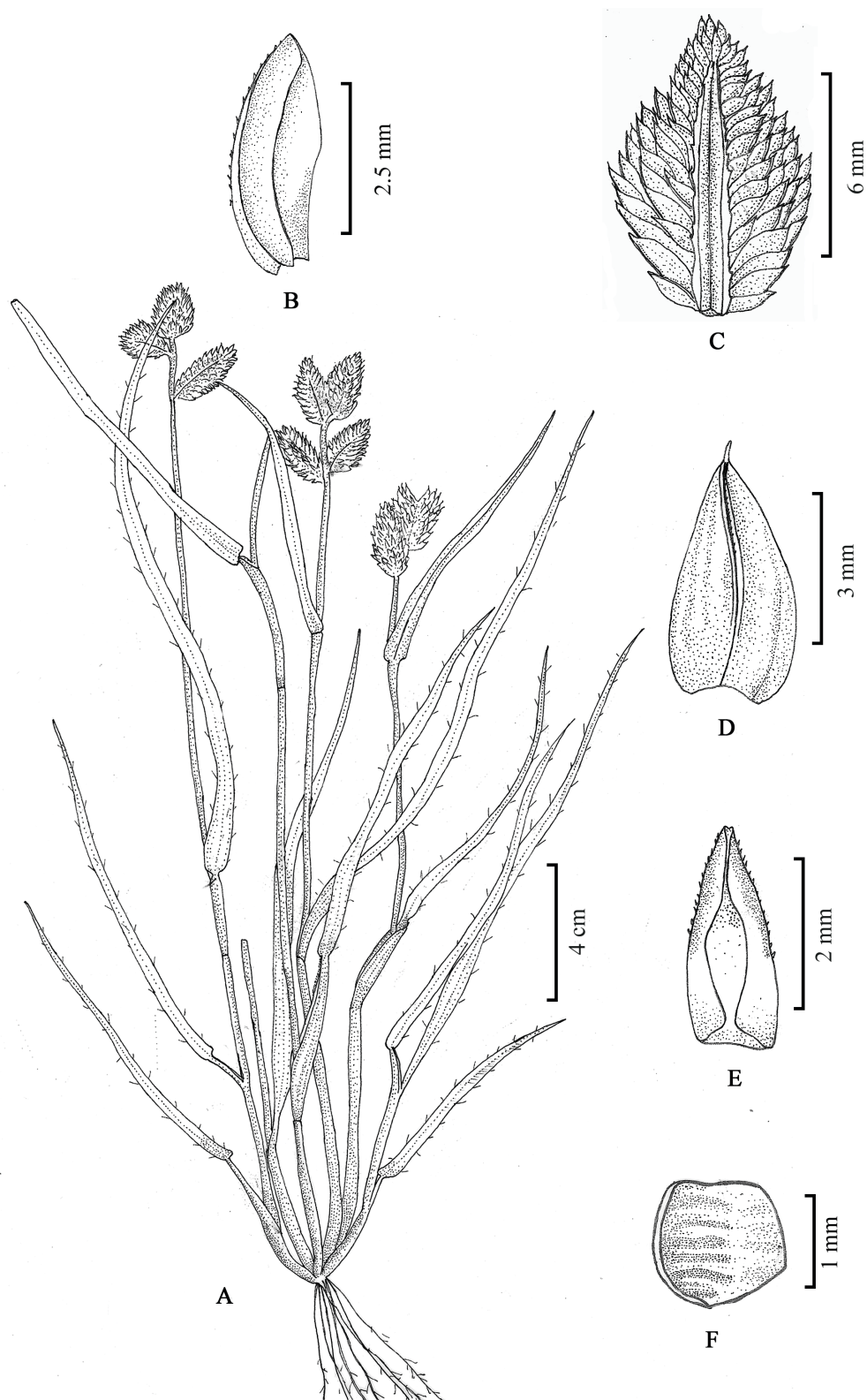
***Eleusine multiflora*** Hochst. ex A. Rich., Tent. Fl. Abyss. 2: 412. 1851 (1850); S.M. Phillips, Kew Bull. 27 (2): 253. 1971. Type: Ethiopia, near Adoa, Schimper 110 (P, holotype; K, isotype!).

*Eragrostis kwaiensis* Peter in Fedde, Repert. Spec. Nov. regni Veg. Beih. 40 (1) (Anh.): 99 (1930) & 322 (1931). Type: Tanzania, W. Usambaras, Kwai, Apr. 1911, Eichinger 3333 (EA, holotype; K, isotype!). (Pl. 1.; Fig. 1)

Tufted annuals. Culms geniculate, 16–40 cm high. Leaf blades linear, flat or conduplicate, 7–22 × 0.3–0.6 cm, rounded at base, margins scabrous towards apex, acute at apex, sparsely pilose; ligule a ciliate membrane, truncate, c. 1 mm long, hyaline; leaf sheath keeled, 2–8 cm long, glabrous, mouth sparsely bearded. Inflorescence composed of 2–7, short, broad spikes alternately arranged on a short axis towards the apex of the culm. Spikes oblong to ovate, ascending, 1.4–2.7 × 1–1.5 cm, pale green; rachis flat, narrowly winged, wing incised. Spikelets sessile, secund, ovate to broadly ovate, 6–12 × 3–4 mm, laterally



**Plate. -1:** *Eleusine multiflora* Hochst. ex A. Rich Habit (Inset: Inflorescence).



**Fig. 1:** *Eleusine multiflora* Hochst. ex A. Rich. A. Habit; B. Upper glume; C. Spikelet; D. Lemma; E. Palea; F. Caryopsis.

compressed, compactly arranged in two rows, 7–15-flowered, breaking at maturity. Lower glume oblong, sub-acute at apex,  $2.8 - 3.6 \times 0.8 - 1$  mm, 1-nerved, keeled, winged on the keel, wing scabrid on upper part, chartaceous. Upper glume oblong, acute to obtuse at apex,  $3-3.6 \times 1-1.5$  mm, 3-nerved, keeled, winged on the keel, scabrid. Lemma ovate – lanceolate, obtuse, cuspidate or mucronate at apex,  $3.5-5 \times 2.5-3$  mm, 3-nerved, mid-nerve keeled with 1–3 subsidiary nerved close to each side of it, chartaceous. Palea ovate-lanceolate,  $3-4 \times 1.3-1.5$  mm, hyaline, 2-nerved and 2-keeled, winged, scabrid along the margins of wings. Stamens 3; filaments c. 1.5 mm long; anthers 1–1.2 mm long, yellow. Ovary c. 1 mm long, ovoid; style c. 1.5 mm long; stigma c. 2 mm long, feathery, yellow. Caryopsis broadly oblong, laterally compressed,  $1-1.2 \times$  c. 1mm, sulcate on the hilum side, granular and rugose, dark brown to black.

**Flowering and Fruiting:** Most of the seasons (Phillips, 1972). The present collection during the first week of June. **Habitat:** A weed of cultivation and other disturbed sites (Ibrahim & Kabuye, 1988).

**Distribution:** Europe; Northern Africa: North east tropical, east tropical and South Asia-temperate: Arabia. North America: Mexico (Phillips, 1972).

**Specimens examined:** India: Tamil Nadu, Nilgiris district, Bikkapathimund Reserve Forest, 04.06. 2016, K.M.

Prabhukumar & C.N. Sunil 9217 (CMPRI). Nilgiris district, Bikkapathimund Reserve Forest, 04.06. 2016, C.N. Sunil & K.M. Prabhukumar 7134 (SNMH!).

## ACKNOWLEDGEMENTS

KMP and IB are thankful to Authorities of Arya Vaidya Sala, Kottakkal for the support and Tata Trusts, Mumbai for financial assistance. Thanks are also due to Mr. Binu Prakash for his assistance in the field.

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