
Research Article

***Cyperus surinamensis* Rottb. (Cyperaceae): A New Record for the Flora of Odisha, India**

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Abstract: *Cyperus surinamensis* Rottb. (Cyperaceae), an annual plant native to tropical America and widely naturalised in several parts of Asia has been recorded for the first time from Odisha, India. The species was collected from moist, open habitats near the Mahanadi River areas of Cuttack, Odisha, during recent floristic explorations. A detailed description, habitat notes and photographic evidence are provided to facilitate recognition.

Keywords: Cyperaceae, Mahanadi, new distribution, Odisha

Introduction

The landscape of the Mahanadi River at Cuttack is shaped by its wide channel and distributaries, especially the Kathajodi, which together give the city its island-like form amidst fertile floodplains. The riverbanks are dotted with sandy stretches, marshes and cultivated fields, while the surrounding plain is nourished annually by silt-laden floods. The soils of the Mahanadi floodplain near Cuttack are primarily alluvial, formed by continuous deposition of silt, sand, and clay. These soils are deep, loamy and highly fertile. Vegetation along the banks includes riparian grasses, sedges, reeds and scattered groves of trees (Samal et al., 2023). Cyperaceae is the third largest monocot family with a record of 5734 species distributed worldwide. In India, it is recorded to be about 501 species within 35 genera (Desai et al., 2025) so far. Odisha has a record of 126 species of this family (Saxena and Brahmam, 1996). The genus *Cyperus* records 54 species and 1 variety from the state of Odisha (Saxena and Brahmam 1996; Panda and Panda 2012; Kar et al., 2019; Bezerra and Pinheiro, 2022); 73 species from Western Ghats (Desai et al., 2025). The *Cyperus* genus is characterised by its annual or perennial herbaceous habit, featuring tufted or creeping rhizomes. The stems are erect or obliquely erect, solid

and triquetrous or subterete, typically with leaves only at the base. The leaves are tristichous, narrowly linear and grass-like, although some may be lanceolate or elliptic. The inflorescence is terminal, often umbel-shaped and subtended by foliaceous bracts that resemble leaves. Spikelets are compressed, quadrangular or subterete, containing 1-many flowers. Flowers are bisexual, with the uppermost often being male or barren. Stamens number 1-3, and the nut is trigonous or lenticular, sessile or shortly stipitate (Saxena and Brahmam, 1996). *Cyperus surinamensis* is widely distributed across America, occurring in the southern United States, throughout Mexico, Central America, Caribbean islands and much of South America, including Argentina, Brazil, Colombia, Peru, Uruguay and Venezuela (POWO, 2025). In India, it is distributed in the Gangetic plains of West Bengal, Kerala and Mangalore.

During a floristic survey of the Mahanadi River area in Cuttack, Odisha, a *Cyperus* specimen was collected from the riverbank. Following a critical analysis of the specimen, including comparisons with e-Herbarium specimens and a review of published literature, it was identified as *Cyperus surinamensis* Rottb., a species previously unreported from Odisha. Herbarium specimen is provided for authentication and identification in the field.

Taxonomical Treatment

Cyperus surinamensis Rottb., Descriptionum et Iconum Rariores et pro maxima parte Novas Plantas. 1773; *Cyperus brizaeus* Rich. in Actes Soc. Hist. Nat. Paris 1: 106. 1792; *Cyperus bipontini* Boeckeler in Flora 40: 33 (1857); *Cyperus denticulatus* Schrad. in J.A.Schultes, Mant. 2: 104. 1824; *Cyperus tenuicapitatus* Steud. in Nomencl. Bot., ed. 2, 1: 470. 1840; *Cyperus subnervius* Steud. in Syn. Pl. Glumac. 2: 27. 1854; *Cyperus surinamensis* var. *lutescens* Boeckeler, Linnaea 35: 555. 1868; *Cyperus surinamensis* var. *viridis* Boeckeler in Linnaea 35: 555. 1868; *Cyperus barrancae* M.E.Jones in Contr. W. Bot. 18: 25. 1933.

Perennial, tufted herb with fibrous roots. Culms tufted, trigonous, 60-100 cm tall, scaberulose with minute retrorse prickles. Leaves shorter than culms, flat or V-shaped, linear, 5-12 mm wide, margins with antrorse prickles. Involucral bracts 3-8, unequal, 3-50 cm long and 1.5-12 mm wide, horizontal to ascending, flat or V-shaped, scabrous with retrorse prickles. Inflorescence a compound to decompound anthela, forming globose to subglobose heads, 1-2 cm in diameter; rays 4-12, 1-9 cm long, scaberulose with retrorse prickles, often with raylets. Spikelets 15-40, linear to linear-oblong or ovate-lanceolate, 4-12 × 1.5-2.5 mm, compressed, arranged in dense clusters. Glumes 10-50, ovate-lanceolate, pale yellow, light brown to reddish brown, medially 3-veined, laterally veinless but distinctly reticulate, 2-keeled at base, mucronulate at apex, often scaberulose. Ovary light green, 0.4-0.5 mm long; style brown with 3 pale brown stigmas. Nutlets trigonous, narrowly ellipsoid, 0.5-0.9 × 0.3-0.4 mm, slightly stipitate, brown to reddish brown, obscurely reticulate to rugulose, papillate on surface, acute and apiculate at apex (Figure 1).

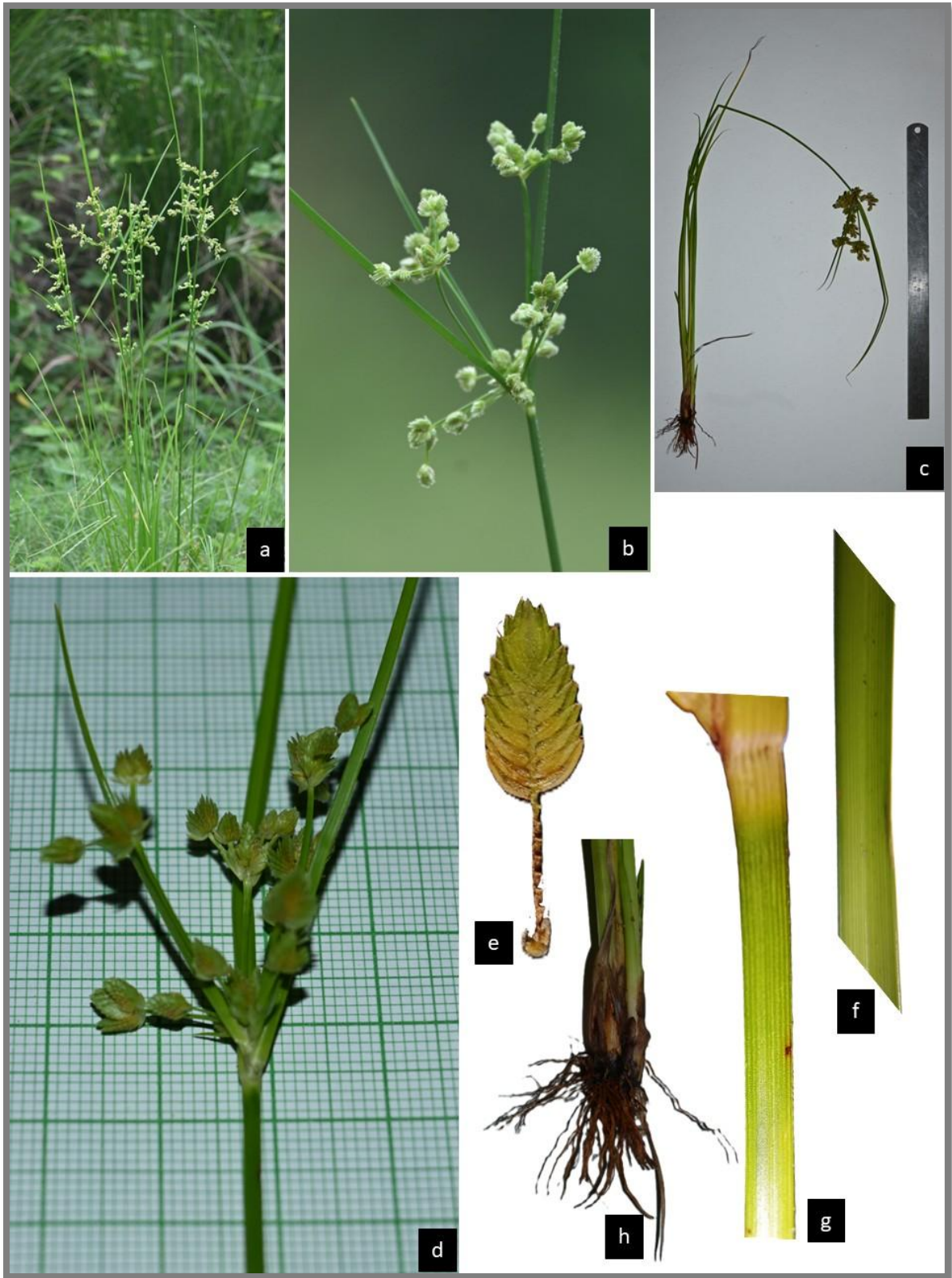


Figure 1: *Cyperus surinamensis* Rottb. a) Habitat, b & d) inflorescence, c) whole plant, e) glume, f) leaf, g) culms, h) root

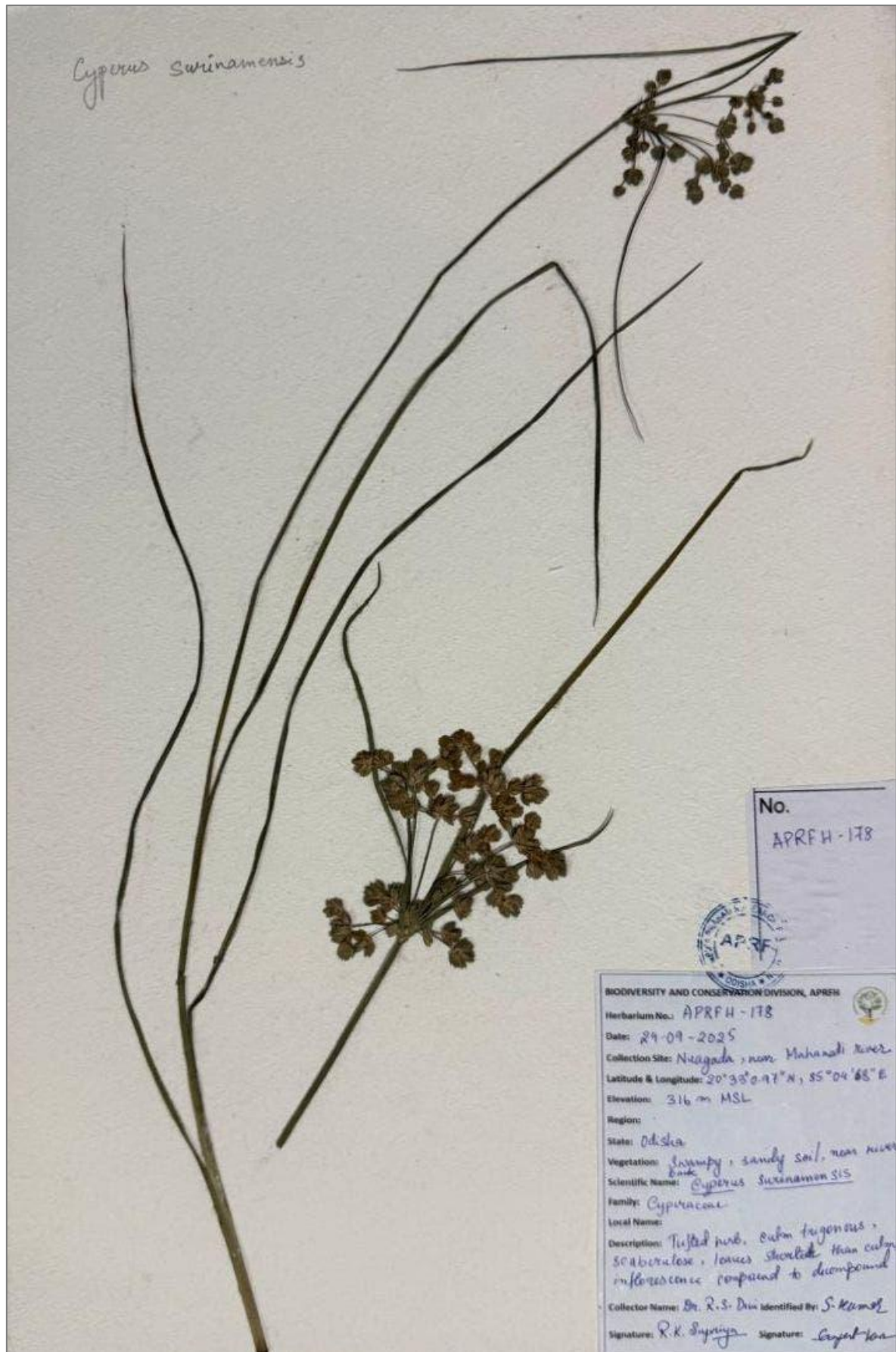


Figure 2: Herbarium specimen of *Cyperus surinamensis* Rottb.

Specimen examined

Cyperus surinamensis Rottb.

India, Odisha, Narsingpur East, Nuagada near Mahanadi River bank, N 20° 33' 097", E 85° 04' 068" and elevation of 316 m MSL, 24 September 2025, R.S Devi 178 (Herbarium of Ambika Prasad Research Foundation) (Figure 2).

Ecology and habitat: It occurs in shallow ditches and along moist sandy areas, preferably in semi-aquatic habitats with sandy to wet loamy soils and in clusters at the bank of the Mahanadi River, Odisha.

Flowering & Fruiting: August - February

Distribution: America, occurring in the southern United States, throughout Mexico, Central America, Caribbean islands and much of South America, including Argentina, Brazil, Colombia, Peru, Uruguay, Venezuela and India from West Bengal, Kerala, Mangalore (Viji et al., 2013; POWO 2025; Khan 2024) and presently from Odisha.

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Conflicts of Interest

Authors declare that there is no conflict of interest.

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