

First Asian record of the New World species *Cyperus drummondii*

Cyperus L. is the second largest and one of the most diverse genera of the family Cyperaceae. The genus comprises of about 950 species (Ribeiro et al. 2021), and constitutes the dominant vegetation in wetlands and disturbed habitats.

As part of the taxonomic revision of the genus *Cyperus* L. in Kerala, an interesting specimen of the genus belonging to section Luzuale was collected. On critical examination with protologue and type specimen (K000950498!), it was identified as *Cyperus drummondii* Torr. & Hook.

The species has hitherto been known from relatively undisturbed wet habitats and coastal prairies of America (Bryson & Carter 1994) from the West Indies, Central America, South America and North America. Thus, the present collection represents a new record for the Asian continent and therefore a detailed description, photographs and other relevant notes are provided for easy identification.

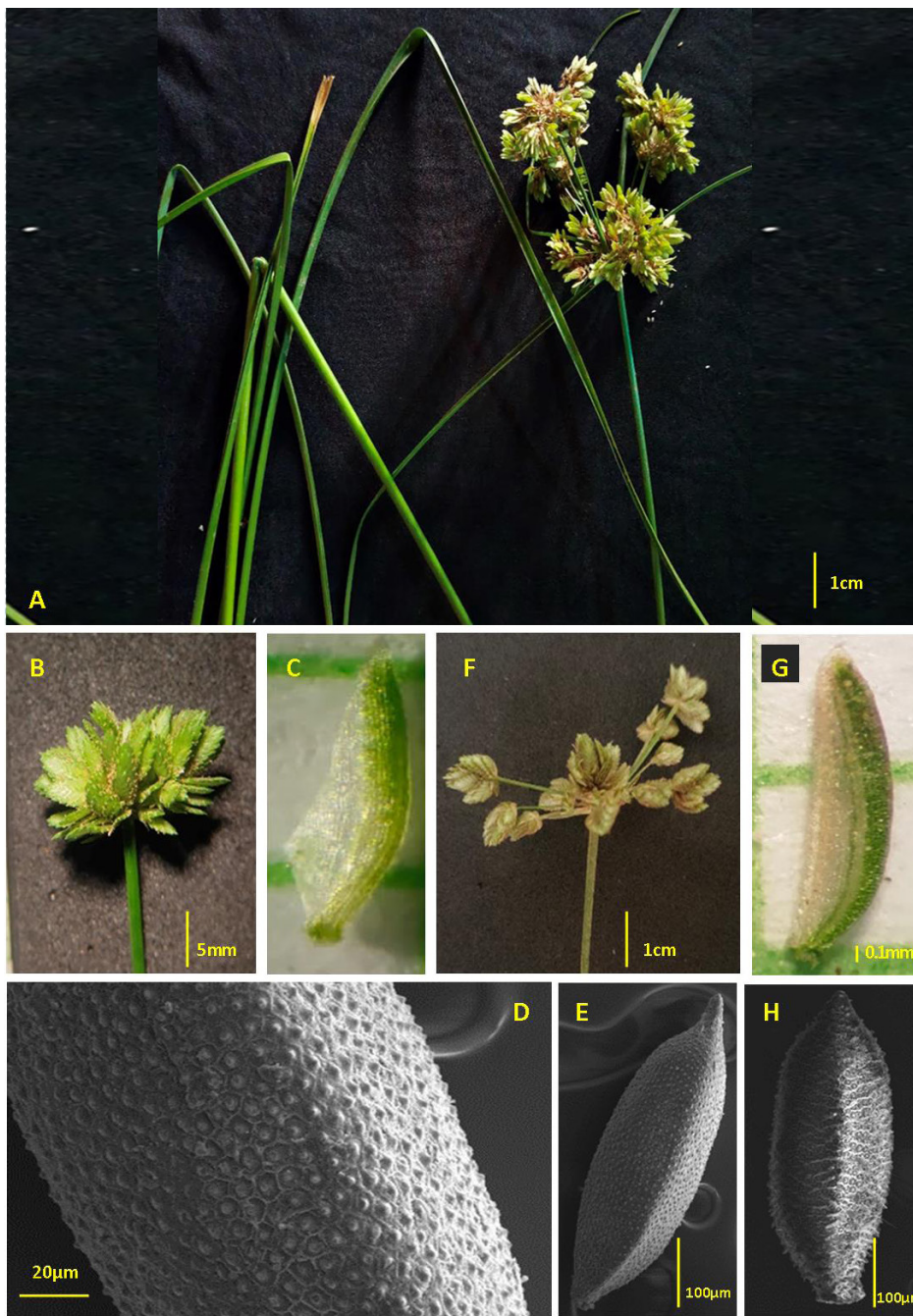
Cyperus drummondii Torr. & Hook. is a complex taxon under the subgenus *Pycnostachys* and several taxonomic changes have been proposed by various authors. The species was first described by Torrey (1836) based on specimens from Texas. Later, this species was treated as a variety by Kükenthal (1935–1936), and a subspecies of *C. virens* Michx. by Denton (1978). Tucker (1994) lowered its taxonomic level to the

synonym of *Cyperus virens*. However, the recent quantitative and numerical taxonomic studies by Carter et al. (1999) reinstated its species status.

This species is closely allied to *C. surinamensis* Rottb., readily distinguished by its nature of inflorescence, narrower and more compact spikelets, scabrid nature of culm angles, septate leaf blade and nature of nut.

Cyperus drummondii Torr. & Hook.,
Ann. Lyceum Nat. Hist. New York. 3:437, errata.
1836.
Type: USA: Texas, 1835, Drummond 449
(Lectotype—K000950498!, designated by Denton
(1978: 262))

Herbs, cespitose rhizomatous perennials. Rhizomes 0.5–2 cm diameter. Culm trigonous, 45–140 × 0.2–0.4 cm, scabrid on angles with all three types of crystalline prickles. Leaves 4–8, usually shorter than the culm, cross ribs 65, are present between the veins, V-shaped, scabrid, apex acute, 25–75 × 0.2–0.4 cm. Inflorescence compound, globose heads 0.5–1.5 cm diameter, rays 3–5, 1–6 cm long, secondary rays usually absent. Involucral bracts 3–5, 20–48 × ca. 0.3 cm, margins scabrid. Spikelets 10–35, oblong to linear-lanceolate, 1.5–3 × 1–2 mm, floral scales 18–40, pale green, turning brown when mature, 2-keeled, distinctly 1-ribbed, not distinct when mature, 1.2–1.5 × ca. 1 mm, acute, glabrous or with few spines. Stamen-1, anther ca. 0.8 mm long. Nut brown, stipitate, ca. 0.9 × 0.3 mm,



A–E. *Cyperus drummondii* Torr. & Hook.: A—Habit | B—Spike | C—Glume | D & E—SEM images of nut. F–H. *Cyperus surinamensis* Rottb.: F—Spike | G—Glume | H—SEM image of nut.

apiculate, surface puncticulate with dark brown borders.

The scanning electron microscopic studies of *C. drummondii* nuts revealed that the epidermal cells are more or less isodiametric. The periclinal cell wall is thick with conspicuously sinuous appearance. The central silica body fill the entire part of the cell.

Phenology: May to October

Ecology: Found in waterlogged areas along with *Cyperus surinamensis* Rottb., *Lipocarpa chinensis* (Osbeck) J. Kern, *Cyperus distans* L..

Specimen examined: 5011, 27.vi.22, India, Kerala, Thiruvananthapuram District, Elavattom, coll. B.S. Anakha.

References

- Bryson, C.T. & R. Carter (1994).** Notes on *Carex*, *Cyperus*, *Kyllinga* (Cyperaceae) in Mississippi with records of eight species previously unreported from the state. *Sida* 16(1): 171–182.
- Carter, R., D.K. Alexander, C.T. Bryson & A. Lazari (1999).** The taxonomy of *Cyperus virens* and *Cyperus drummondii* in the southeastern United States. *Sida* 18(4): 1049–1063.
- Denton, M.F. (1978).** A taxonomic treatment of the Luzulae group of *Cyperus*. *Contributions from the University of Michigan Herbarium* 11(4): 197–271.
- Kükenthal, G. (1935–1936).** Cyperaceae- Scirpoideae- Cypereae [Cyperus]. In: Engler, A. & L. Diels (eds.). *Das Pflanzenreich IV. 20* (Heft 101), Wilhelm Engelmann, Leipzig, 671 pp.
- Ribeiro, A.R. do, L. Pereira-Silva, J.P.S. Vieira, I. Larridon, V.S. Riebeiro, G. Felitto, G.S. Siqueria, A. Alves-Araujo & M. Alves (2021).** *Cyperus prophyllatus*: an endangered aquatic new species of *Cyperus* L. (Cyperaceae) with an exceptional spikelet disarticulation pattern among about 950 species; including (micro) morphological data. *PLoS ONE* 16(6): e0249737. <https://doi.org/10.1371/journal.pone.0249737>.
- Torrey, G.C. (1836).** Monograph of North American Cyperaceae. *Annals of Lyceum Natural History New York* 3:1–448.
- Tucker, G.C. (1994).** Revision of the Mexican Species of *Cyperus* L. (Cyperaceae). *Systematic Botany Monographs* 43: 1–213.

B.S. Anakha¹ & A.R Viji²

¹ PG Department of Botany, Christian College, Kattakada, Thiruvananthapuram, Kerala 695572, India.

² PG Department of Botany, Iqbal College, Peringammala, Thiruvananthapuram, Kerala 695563, India.

Emails: ¹anakhabs2013@gmail.com (corresponding author), ²vijihari1982@gmail.com

Citation: Anakha, B.S. & A.R. Viji (2023). First Asian record of the New World species *Cyperus drummondii*. *Plantasia* #34, In: *Zoo's Print* 38(4): 36–38.