

A NEW SPECIES OF ISCHAEMUM LINN. (POACEAE) FROM KERALA, INDIA

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Ischaemum tadulingamii N. C. Nair & P. V. Sreekumar, *spec. nov.* — Fig. 1.

Ischaemo commutato Hackel affinis sed pilis calli 1–2 mm longis, glumis inferioribus spicularum sessilium distincte 11–13-nervis ovato-lanceolatis breviter acuminatis omnino chartaceis sine nodulis, carinis non alatis, flosculis inferioribus cassis, spiculis pedicellatis plerumque redactis differt. — *Typus*: *Sreekumar 71863* (CAL; iso K, MH), India, Kerala State, Idukki District, Eravikulam National Park, c. 2200 m alt., 7-4-1980.

Tufted annuals or perennials. *Culms* 10–30 cm high, erect; nodes glabrous. *Leaves* linear-lanceolate, 2–10 by 0.4–0.6 cm, shortly acuminate, narrowed and tapering at the base, sparsely villous with tubercle-based hairs. Sheaths 2–8 cm long, equal to or shorter than the internodes, striate, villous with sparse tubercled hairs, throat sparsely villous. Ligule 2–3 mm long, ovate, acute, membranous. *Racemes* 2 or 3, 2–6 cm long, stout; spathe 2–10 cm long, glabrous. Joints of racemes linear, turbinate, 3.5–4 mm long, coriaceous, long villous along the margins and dorsal angle. *Sessile spikelets* ovate-lanceolate, 6–7 mm long; callus densely bearded, hairs 1–2 mm long. Lower *glume* ovate-lanceolate, 6–6.5 by 1.75–2 mm, acuminate, without nodules, chartaceous, distinctly 11–13-nerved, with a few long hairs on dorsal side towards base, margin narrowly and evenly inturred, not winged, scabrid in the upper half; upper glume 5.5–6 by 1.25–1.5 mm, boat-shaped or ovate-lanceolate when spread, acuminate, keels rounded except towards the minutely winged and scabrid apex, chartaceous, 3–5-nerved, covered with very short adpressed hairs, especially towards the base, margins infolded and ciliate in the upper half. Lower floret empty. Upper floret bisexual. First *lemma* lanceolate, 4.5–5 by 1–1.5 mm, delicate, hyaline, faintly 3-nerved, margins infolded and ciliate in the upper half, glabrous elsewhere. Second lemma lanceolate, 4–4.5 by 1–1.5 mm, delicate, hyaline, faintly 3-nerved, margins ciliolate in the upper half, apex notched, lobes acute. Awn 10–12 mm long, geniculate, column 5–6 mm long, chestnut brown, arista pale, scabrid. First *palea* elliptic-lanceolate, 4–4.5 by 1–1.25 mm, delicate, hyaline, 2-keeled, margins infolded and ciliate in the upper half. Second palea oblong, 3–4 by 0.75–1 mm, delicate, hyaline, 2-keeled, glabrous, apex rounded. *Lodicules* of upper floret obovate, 0.6–0.75 by 0.4–0.5 mm, retuse at apex, faintly 5–7-nerved, median nerve prominent. *Lodicules* of lower floret obovate, oblique, c. 1 by 0.5 mm, faintly 3–5-nerved,

apex wavy and 2 horned. *Stamens* 3, anthers 1.5–2 mm long. Caryopsis obovate with 2 horns at apex, c. 2 by 0.75 mm. *Pedicelled spikelet* ovate-lanceolate, 4–6 mm long, unawned, usually reduced, sterile. Pedicels linear, turbinate, 3–4 mm long, villous along the margins and dorsal angle, hairs 0.5–2 mm long. Lower *glume* ovate-lanceolate, 4.5–6 by 1.25–1.5 mm, winged on one margin, wing scabrid, smooth, chartaceous, faintly 9–11-nerved, glabrous, margins inturned, scabrid towards sharply at apex; upper glume ovate-lanceolate, 3–5 mm long, keel rounded, glabrous, apex acute. Florets empty.

Ecology. Tufted perennial grasses growing in clumps near edges of streams and along rocky areas in grasslands, locally rare.

Notes. This species is allied to *Ischaemum commutatum* Hackel, but markedly differs from it as shown in the following table:

	<i>I. commutatum</i>	<i>I. tadulingamii</i>
Lower leaves	usually pseudo-petiolate	not pseudo-petiolate, narrowed at base
Racemes	2	2 or 3
Joints and pedicels	linear, slightly turbinate	distinctly turbinate
Callus hairs	up to 1 mm long	1–2 mm long
Lower glumes of the sessile spikelets	oblong, obtuse, crustaceous below, coriaceous above, usually with a few nodules, keels narrowly winged	ovate-lanceolate, acuminate, chartaceous throughout, flat, without nodules, keels not winged
Nerves on the lower glumes	7–9, faint and very obscure	11–13, green, distinct
Lower floret of the sessile spikelet	male	empty
Pedicelled spikelet	well developed	reduced

This species is named after C. Tadulingam, one of the pioneers in the studies on South Indian grasses.

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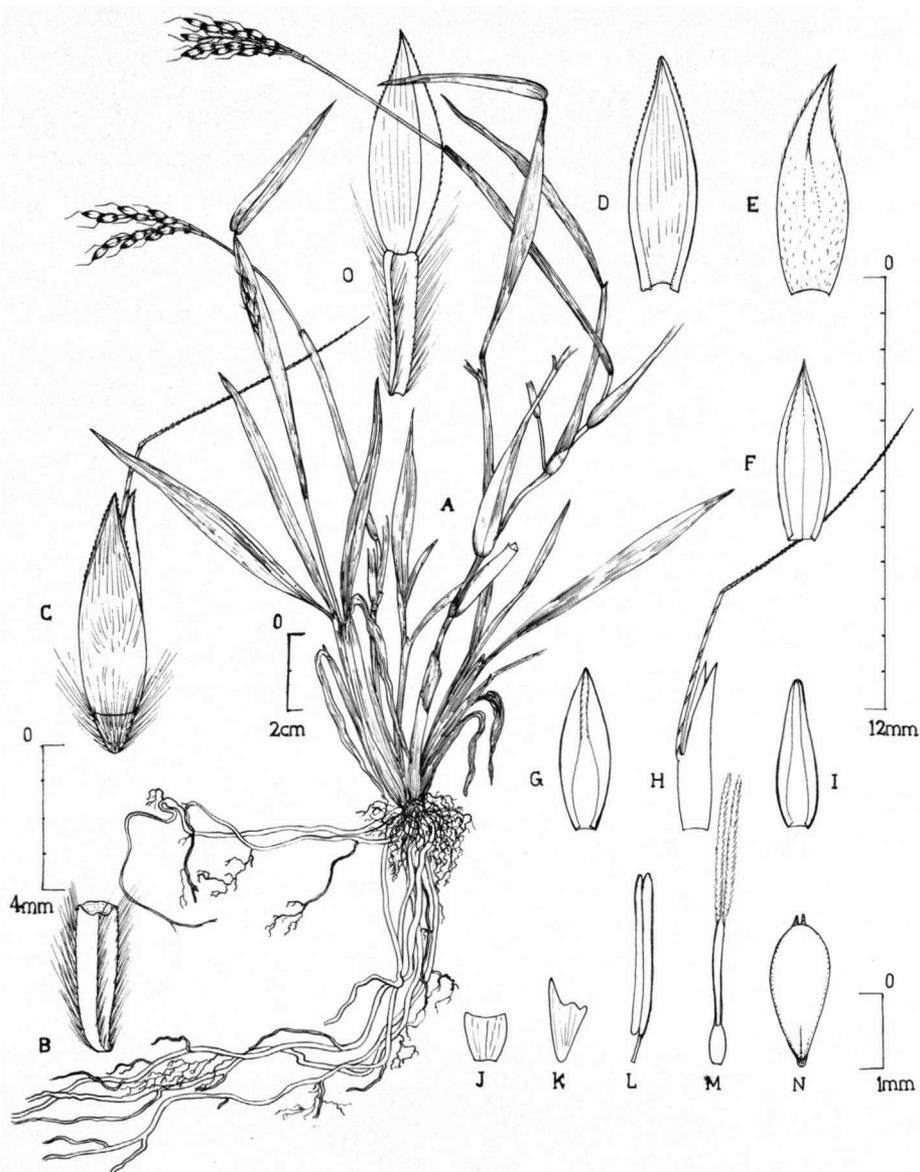


Fig. 1. *Ischaemum tadulingamii* N.C. Nair & P.V. Sreekumar. A. plant; B. joint (rhachis); C. sessile spikelet (dorsal view); D. lower glume of the sessile spikelet (ventral view); E. upper glume (dorsal view); F. lower lemma (ventral view); G. palea (ventral view); H. upper lemma (lateral view); I. upper palea (ventral view); J. lodicule of the lower floret; K. lodicule of the upper floret; L. stamen; M. pistil; N. caryopsis; O. pedicelled spikelet (dorsal view).