

**ANOTHER TWO NEW SPECIES OF DIMERIA (POACEAE)
FROM KERALA, INDIA**

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SUMMARY

Two new species of *Dimeria* R. Br. viz., *D. copei* and *D. kalavoorensis* are described and illustrated.

Dimeria R. Br., a tropical and subtropical genus of over 45 species is represented in India by 32 species of which 19 occur in the state of Kerala (Sreekumar & Nair, 1991; Ravi & Anilkumar, 1992; Ravi, 1995).

The author, during the course of collecting grasses from the coastal district of Alappuzha, Kerala, collected specimens of two distinct species of *Dimeria* from the campus of All India Radio Station in Kalavoor, near Alappuzha Town. After critical study with the help of Dr. Thomas A. Cope (K), they were identified as undescribed species. They are described and illustrated here.

***Dimeria copei* Ravi, *spec. nov.* — Fig. 1**

Dimeria lawsonii (Hook. f.) C. E. C. Fisch. affinis, sed differt culmis robustis, racemis 1 vel 2 (vel 3) longioribus dense sericeis, rhachidi sine allis, spiculis majoribus, 7.5–8 mm longis, callo longiore manifesto pilis longioribus, glumis plus sericeis, gluma superiore late alata omnino secus carinam, arista longiore, 12–14 mm longa, antheris majoribus. — Typus: Ravi 3655, 3 Dec. 1992 (TBGT holo; K, KFRI, MH iso), India, Kerala, Alappuzha District, Kalavoor.

Annual erect robust herb. *Culms* branched and tufted, up to 75 cm tall, nodes bearded. *Leaves* all along the culm; sheaths keeled on the back, broadly hyaline on the margins, glabrous, the uppermost the longest, up to 10 cm long, often with a rudimentary blade; blade linear, up to 22 cm × 2 mm, shortly narrowed to the base, acuminate at the apex, mid-rib broadly flattened above and keeled below, sparsely beset with long bulbous-based hairs on the margins, scaberulous on the margins towards the apex and base; ligule membranous, fimbriate-truncate at the apex, up to 1 mm long. *Racemes* 1 or 2 (or 3), rhachis more or less straight, triquetrous, flattened on the back, up to 10 cm long, 0.6–0.75 mm wide, densely ciliate on the margins, glabrous or very sparsely short-ciliate on the back, sometimes longitudinally ridged with sparse short cilia on the face; pedicels 0.4–0.5(–0.75) mm long, obliquely concave at apex, ciliate on both sides, densely so on the outside. *Spikelets* oblong-elliptic in profile, 7.5–8 mm long including the awn of the upper glume, callus prominent, 0.6–0.8 mm long, callus hairs up to 1 mm long. *Lower glume* subcoriaceous, linear-

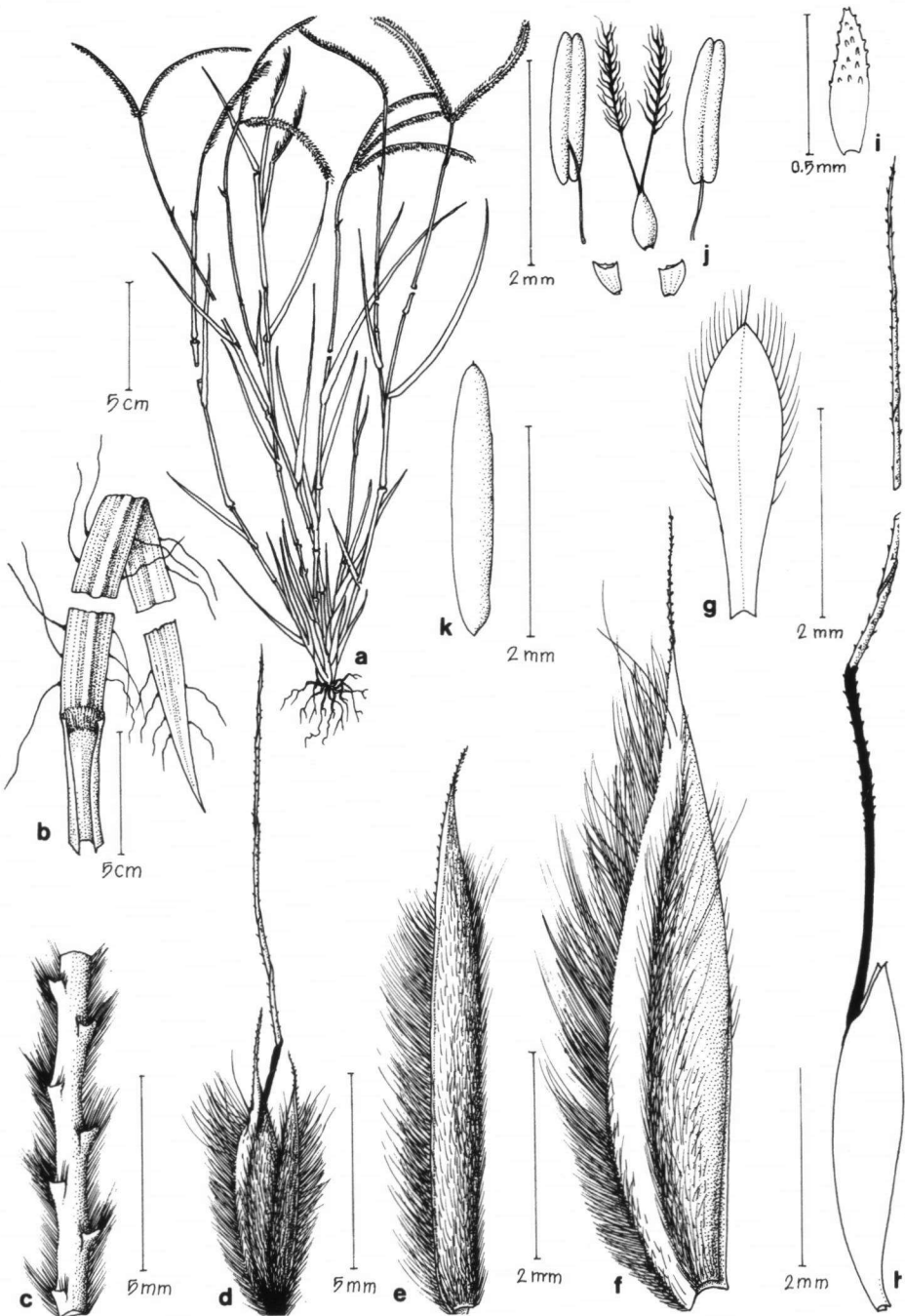


Fig. 1. *Dimeria copei* Ravi. a. Habit; b. leaf; c. rhachis; d. spikelet; e. lower glume; f. upper glume; g. lower lemma; h. upper lemma; i. upper palea; j. lodicules, stamens and pistil; k. grain (all Ravi 3655).

oblong, 5.5–5.75 × 0.6–0.7 mm, acuminate-aristate at apex with the arista 0.5–0.6 (–0.75) mm long, keeled on the back, keel narrowly winged 1/3 towards the apex, ciliate all over, densely so on the keel except towards the scaberulous apex. *Upper glume* oblong-elliptic, 7–7.25 × 1.25 mm, acuminate-awned at apex, awn (0.75–) 1–1.25 mm long, scaberulous, keeled on the back, broadly winged all along the keel, wing c. 0.4 mm wide, densely long-ciliate on the back except towards the scaberulous apex, sparsely short ciliate on its sides with a few long hairs towards the apex, sides subcoriaceous, ciliate in a broad longitudinal line close to the keel, margins hyaline, short ciliate in the middle. *Lower lemma* oblanceolate, c. 3 mm long, cuneate towards the base, acute at apex, hyaline, 1-nerved, ciliate on the margins above the middle, and epaleate. *Upper lemma* oblanceolate, 3.5–4 × 0.75 mm (when folded), hyaline, awned from the sinus of the bifid apex; awn 12–14 mm long with a 3.5–4 mm long column, scaberulous. *Palea* small, lanceolate, c. 0.75 mm long, papillate in the upper half. *Lodicules* cuneate, c. 0.25 mm long. *Stamens* 2; anthers 1.25–2 mm long. *Grain* oblong-elliptic, flattened, 2.5–2.75 × 0.3 mm, subacute to acute and apiculate at apex.

Note — *Dimeria copei* is allied to *D. lawsonii* (Hook. f.) C.E.C. Fisch. but differs from the latter in having robust culms, densely silky 1 or 2 (or 3) and longer racemes, wingless rhachis, larger spikelets, larger prominent callus with longer hairs, more silky-hairy glumes, upper glume broadly winged all along its keel, longer awn, and larger anthers.

Dimeria kalavoorensis Ravi, *spec. nov.* — Fig. 2

Dimeria copei Ravi et *D. lawsonii* (Hook. f.) C.E.C. Fisch. affinis, a priori differt culmis solitariis eramosis filiformibusque, racemis solitariis brevioribus, rhachidi anguste alata, spiculisque brevioribus cum partibus parvioribus; a posteriori differt in habitu, rhachidi angustiore, pedicellis longioribus, callo longiore manifesto pilis longioribus, glumis plus sericeis, gluma superiore late alata omnino secus carinam. — Typus: Ravi 3654, 3 Dec. 1992 (TGBT holo; K, KFRI, MH iso), India, Kerala, Alappuzha District, Kalavoor.

Annual erect herb. *Culms* solitary, unbranched and filiform, up to 45 cm long, rarely rooting at the lower nodes; nodes bearded. *Leaves* all along the culm; sheaths closely enclosing the culm, the uppermost the longest, up to 6 cm long, keeled on the back and glabrous; blade linear, up to 5 cm × 2 mm, shortly narrowed to the base, acuminate at apex, beset with sparse, long, bulbous-based hairs on the margins, especially towards the base, 5-veined, outer lateral veins almost along the margins, mid-vein flattened above and keeled below; ligule membranous, fimbriate-truncate at apex, c. 0.5 mm long. *Raceme* solitary; rhachis more or less straight, triquetrous, flattened on the back, 0.5–4 cm × 0.5–0.6 mm, narrowly winged on the margins, margins ciliate; pedicel 0.5–0.6 mm long, concave at apex, densely ciliate on the outside, sparsely so on the inner side. *Spikelets* elliptic-acuminate in profile, 6–6.5 mm long including the awn of the upper glume; callus 0.5–0.6 mm long, callus hairs up to 1 mm long. *Lower glume* subcoriaceous, narrowly elliptic-oblong, 4.5–5 × 0.5 mm, acuminate-aristate at apex, arista up to 0.5 mm long and scaberulous, keeled on the back, keel narrowly winged above the middle, silky-ciliate on the sides except towards the apex and margins, densely so on the keel except towards the apex. *Upper*

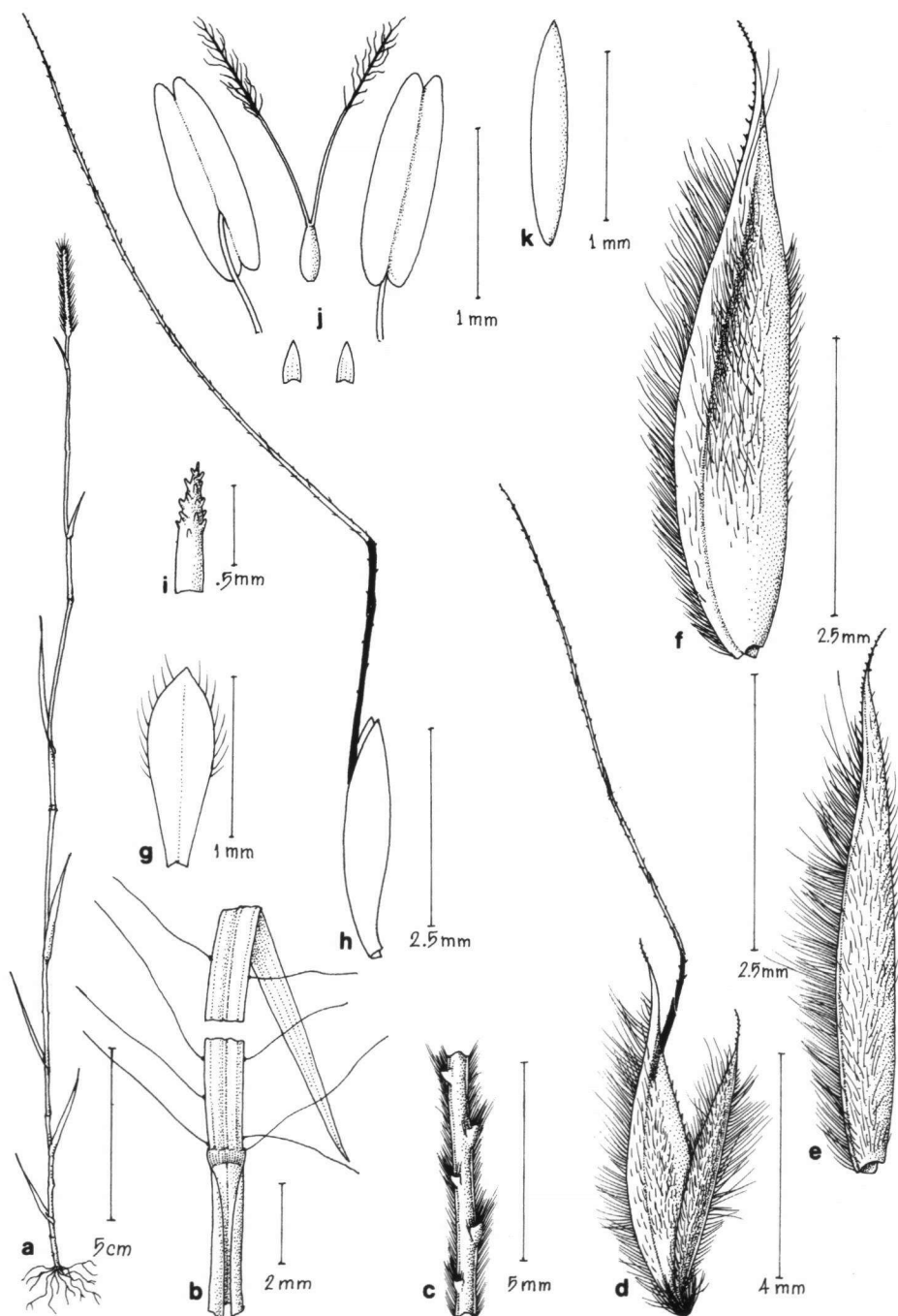


Fig. 2. *Dimeria kalavoorensis* Ravi. a. Habit; b. leaf; c. rhachis; d. spikelet; e. lower glume; f. upper glume; g. lower lemma; h. upper lemma; i. upper palea; j. lodicules, stamens and pistil; k. grain (all Ravi 3654).

glume subcoriaceous, elliptic-oblong, 5–5.25 × 1 mm, acuminate-awned at apex, awn up to 0.75 mm long and scaberulous, broadly winged all along the keel, silky-ciliate all over the wing, densely so on the back of the wing except towards the apex, sides ciliate in a broad longitudinal line close to the keel and the middle, margins ciliate in the middle. *Lower lemma* oblanceolate, c. 2.5 mm long, cuneate towards the base, acute at apex, hyaline, 1-nerved, ciliate on the margins above the middle and epaleate. *Upper lemma* oblanceolate, c. 3 × 0.5 mm (when folded), hyaline, awned from the sinus of the bifid apex; awn 9.5–11.5 mm long with a 3–3.5 mm long column. *Palea* small, elongate-triangular, c. 0.75 mm long, hyaline, papillate towards the upper half. *Lodicules* very thin, triangular-oblong, acute at apex, c. 0.25 mm long. *Stamens* 2; anthers 1–1.5 mm long. *Grain* elliptic to oblong-elliptic, flattened, 1–1.5 mm long, acute at apex.

Note—*Dimeria kalavoorensis* is allied to *D. copei* Ravi and *D. lawsonii* (Hook. f.) C. E. C. Fisch. but distinct from the former in having solitary unbranched filiform culms, solitary shorter racemes, narrowly winged rhachis, and smaller spikelets with smaller parts, and from the latter in habit, narrower rhachis, longer pedicels, longer prominent callus with longer hairs, more silky-hairy glumes, and upper glume broadly winged all along its keel.

The latest work on *Dimeria* of the Indian subcontinent is that of Bor (1960). The two new taxa described here, both allied to *Dimeria lawsonii*, can be accommodated in the key given by Bor, alongside lead number 27 (Bor, 1960: 138), as keyed out below.

27. Upper glume winged from base to apex:—

- 28. Callus very short, 0.4 mm long or shorter; wing of the upper glume tapering to base *D. lawsonii*
- 28. Callus long, 0.5–0.8 mm long; wing of the upper glume more or less uniformly broad:—
- 29. Culms filiform and solitary; raceme 1; rhachis shorter and narrower, up to 4 cm × 0.5–0.6 mm, triquetrous-flattened, winged on the margins; spikelets smaller, 6–6.5 mm long; callus shorter, 0.5–0.6 mm long; awn of the upper glume shorter, up to 0.75 mm long *D. kalavoorensis*
- 29. Culms robust, tufted and branched; racemes 1–3; rhachis longer and broader, up to 10 cm × 0.6–0.75 mm, triquetrous flattened, not winged on the margins; spikelets larger, 7.5–8 mm long; callus longer, 0.6–0.8 mm long; awn of the upper glume longer, 0.75–1.25 mm long *D. copei*

Dimeria copei and *D. kalavoorensis* form extensive patches, pure and mixed, in the type locality. The pure patches of the latter appear somewhat yellowish green during flowering. The type locality, which is an open sandy place, becomes water-logged during the monsoon and shows such associate grass species as *Ischaemum rangacharianum* C. E. C. Fisch. and *Panicum repens* L. and dicot species as the insectivorous *Drosera indica* L. and *Utricularia reticulata* Smith and the root-parasitic *Centranthera cochinchinensis* (Lour.) Merr.

Dimeria copei is named after Thomas A. Cope in recognition of his contributions to agrostology and *D. kalavoorensis* is named after its type locality.

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