

***Coelachne madayensis* (Poaceae: Pooideae: Isachneae), a new species from Kerala, India**

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ABSTRACT. A new species of *Coelachne* (Poaceae: Pooideae: Isachneae) from Madayippara in the Kannur District of Northern Kerala, India is described and illustrated. A key for the identification of the Indian congeners is provided.

Keywords. *Coelachne*, India, Kerala, Poaceae

Introduction

The genus *Coelachne* R.Br. (Poaceae: Pooideae: Isachneae) is represented by 10 species distributed in the tropics and subtropics of the Old World (Mabberley, 2008; Clayton et al. 2006+). In India the genus is represented by 3 species, of which one species and one variety are endemic (Prakash & Jain 1984). In Kerala there are 2 species, viz. *Coelachne infirma* Buse [syn. *C. simpliciuscula* (Wight & Arn. ex Steud.) Munro ex Benth.] and *C. perpusilla* (Arn. ex Steud.) Thwaites, which usually occur in wet places (Sreekumar & Nair 1991).

During a floristic survey in July 2011 of the lateritic plateau habitats of Northern Kerala, India, the first two authors noticed a population of a very small species of *Coelachne* in the shallow seasonal pools and nearby wet areas. The specimens turned out not to belong to any described species of *Coelachne*, though they showed some similarity with the Indian species *C. minuta* Bor in their general habit, size, and organization of the spikelets. However, they differed in their non-tufted habit, absence of a ligule, ovate leafblades, flagleaves without a blade, racemes with up to 15 spikelets, lower florets with 0-nerved glumes and paleas, and 3 stamens. Therefore they are here described as a new species.

***Coelachne madayensis* Pramod & Pradeep, sp. nov.**

Coelachnae minutae similis in habitu generali magnitudineque spicularum structura, sed habitu non caespitoso, foliorum laminis ovatis sine ligula, ultimis lamina carentibus, racemis paucispiculatis, glumis paleisque avenis, staminibus 3 differt. TYPE: India, South India, Kannur District, Madayippara, alt. 36 m, 12°1.792'N 75°15.246'E, 25 July 2011, Pramod & Pradeep CUI26681 (holo K; iso BRIT, CALI, SING). (Fig. 1)

Erect aquatic herb, 3–8 cm high, rooting at the lower nodes. **Culm** canaliculate, internodes 3–5 mm long, glabrous, nodes glabrous. **Sheaths** up to 6 mm long, as long as or shorter than the internodes, laxly clasping the culm, distinctly striate, sparsely hispid (especially on the midrib); **ligule** absent; **blades** ovate, 0.8–1.2 × 0.5–0.6 mm, 7–15-nerved, glabrous above, puberulous below, base cordate, margin at base ciliate, apex acute; **flagleaf** sheaths 1–3 cm long, glabrous, margins hyaline, apex pointed, blade absent. **Panicles** 3–6 cm long; branches up to 8 mm long, with gland-like swellings at base. **Spikelets** up to 15, 1–3 per branch, elliptic, 1–1.5 × 0.5–0.7 mm, purplish. **Glumes** ovate, purplish, margins hyaline; lower glume c. 0.75 × 0.5 mm, purplish; upper glume, 0.9 × 0.5 mm. **Lower** lemma lanceolate, 1.5 × 0.5 mm, 0-nerved, purplish, margins hyaline, margins and upper surface pilose. Palea boat-shaped, c. 1.25 × 0.8 mm × c. 0.5 mm, deep purplish, margins hyaline, 0-nerved, upper surface pilose. **Stamens** 3; anthers 1.25 × 0.5 mm, greenish white. **Style** forked, hyaline, stigma plumose. **Upper floret** tufted cottony hairy at base, c. 1.5 × 0.5 mm, purplish. Lemma boat-shaped, c. 1.2 × 0.5 mm, 0-nerved, pilose, purplish, margins hyaline. Palea slightly shorter than lemma, boat-shaped, c. 1 × 0.5 mm, purplish, margins hyaline. **Caryopses** ellipsoid, c. 1 × 0.5 mm, deep purplish, glabrous, shiny.

Ecology. The species is found growing in shallow seasonal pools and nearby wet areas along with, e.g., *Eriocaulon* spp., *Fimbristylis* sp., *Geissaspis cristata* Wight & Arn. var. *tenella* (Benth.) M.R.Almeida, *Isachne veldkampii* K.G.Bhatt & Nagendran, *Rhamphicarpa longiflora* Benth., *Rotala malabarica* Pradeep, K.T.Joseph & Sivar., *R. malampuzhensis* R.V.Nair ex C.D.K.Cook, and *Utricularia* spp. Usually the panicle alone is seen emerging from the water.

Etymology. The new species is named after its type locality, Madayippara in the Kannur District of Kerala, India.

Key to the Indian taxa of *Coelachne*
(Prakash & Jain, 1984, modified)

- 1a. Culms erect. Spikelets 1–1.5 mm long 2
- b. Culms ascending. Spikelets over 1.5 mm long 3

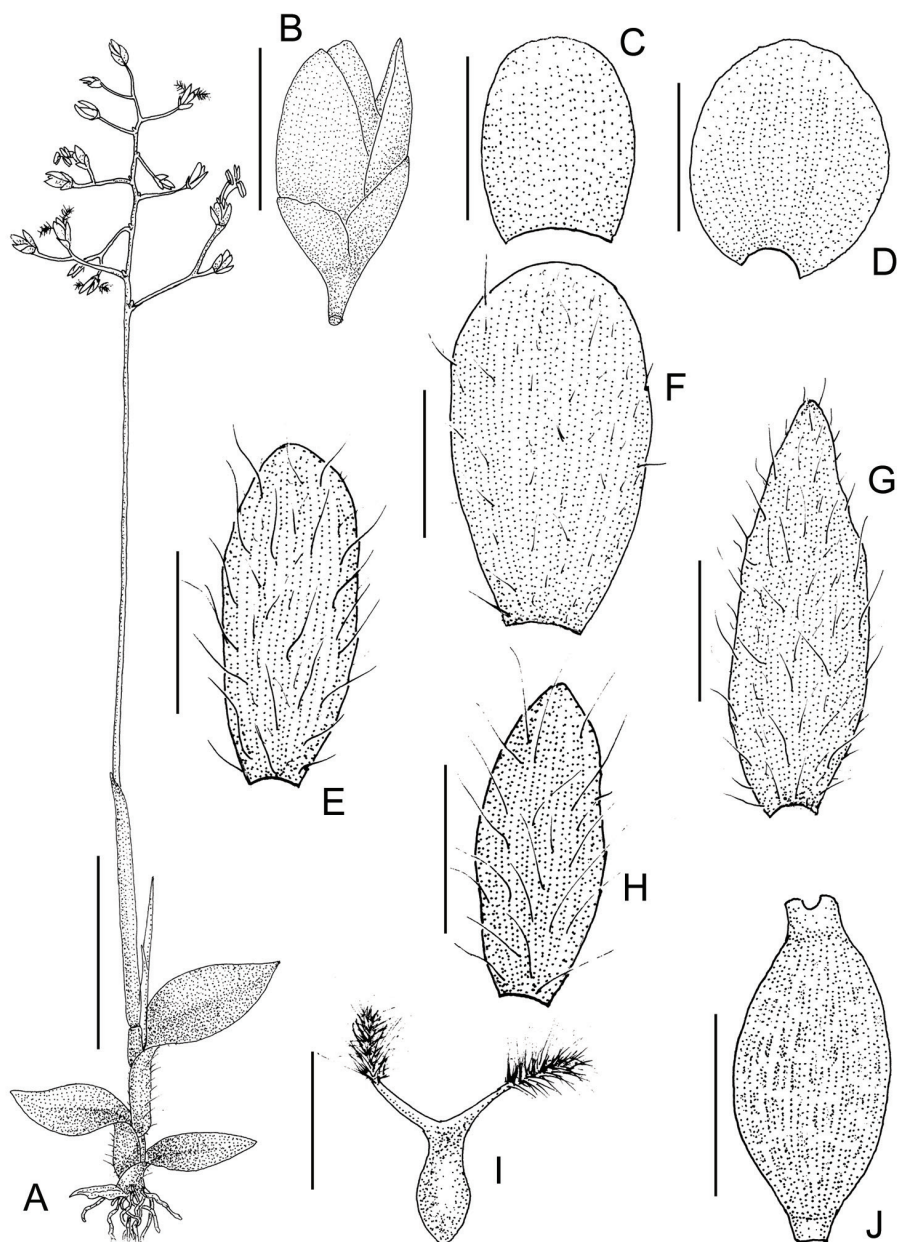


Fig. 1. *Coelachne madayensis* Pramod & Pradeep. **A.** Habit. **B.** Spikelet. **C.** Lower glume. **D.** Upper glume. **E.** Lower lemma. **F.** Lower palea. **G.** Upper lemma. **H.** Upper palea. **I.** Pistil. **J.** Caryopsis. Scale bars: A = 1 cm; B = 1 mm; C–J = 0.5 mm. (Drawn by C. Pramod)

- 2a. Culms not tufted. Sheaths laxly clasping the culm. Ligule absent. Blades ovate. Flagleaf bladeless. Panicle usually with less than 15 spikelets. Lower glume c. 0.75 mm long; upper glume c. 0.9 mm long, 0-nerved. Palea 0-nerved. Stamens 3 *C. madayensis*
- b. Culms tufted. Sheaths firmly clasping the culm. Ligule present, silky hairy. Blades lanceolate. Flagleaf with a blade. Panicle with more than 15 spikelets. Lower glume c. 0.25 mm long; upper glume c. 0.5 mm long, 2-nerved. Palea 2-nerved. Stamens 2 *C. minuta*
- 3a. Panicles few-flowered, very lax. Spikelets 2.5–4 mm long. Lemmas densely bearded at base 4
- b. Panicles many-flowered, mostly contracted and spiciform. Spikelets 1.5–2.5 mm long. Lemmas glabrous at base *C. infirma*
- 4a. Culms slender. Blades flat, linear-lanceolate. Spikelets 3.5–4.0 mm long. Lower glume 1.7–2.0 mm long, 1–3-nerved; upper glume 2.3–2.5 mm long. Upper lemma and palea not keeled, 0- (or 1-)nerved, glabrous or sparsely hairy in the lower half. Anthers 1.5–1.7 mm long *C. perpusilla* var. *nilagirica*
- b. Culms capillary. Blades involute, filiform. Spikelets 2.5–3.0 mm long. Lower glume 1–1.5 mm long, 3–7-nerved; upper glume 1.5–2.0 mm long. Upper lemma and palea 2-keeled, 2-nerved, hairy along the keels and all over the dorsal surface. Anthers 0.8–1(–1.5) mm long *C. perpusilla* var. *perpusilla*

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