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A NEW SPECIES OF CURCUMA FROM SOUTH INDIA

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ABSTRACT. A new species of *Curcuma* (Zingiberaceae) is described from Kerala, India: *C. coriacea* Mangaly & Sabu. It is characterized by coriaceous leaves with pubescence on both surfaces, and is probably restricted to open grasslands at higher elevations of Western Ghats.

During our collection trips for a detailed study of South Indian Zingiberaceae a new species of *Curcuma* was discovered, first from Ponnambalamedu, east of the Sabarimala Temple in Pathanamthitta District, and subsequently from Painavu near Idukki in Idukki District, and Silent Valley in Palghat District; all places are on the western slopes of Western Ghats in the central part of Kerala.

Curuma coriacea Mangaly & Sabu, **species nova** (Fig. 1).

Curcuma plicata Wall. similis, sed radicibus tubera longa cylindrica gerentibus, foliis coriaceis utrinque dense pubescentibus, inflorescentia laterali, corolla vivide flava differt.

Perennial rhizomatous herb, 30–43cm tall with pseudostem either green or with violet tinge. Rhizome small, cylindrical to conical, without lateral tubers but with several fleshy roots, many of them ending in long (10–18cm) cylindrical root tubers; sometimes the entire root becoming tuberous. Rhizome and root-tubers non-aromatic and white inside. Leaf-blade thick, straight, coriaceous, 27–35 × 10–15cm, elliptic, partially folded along the midrib (plicate), with a hyaline strip on the margin, pubescent on both surfaces; base acute, tip acute to acuminate; alternate veins prominent. There is a gradual transition from vegetative bracts to the leaves; ligules not prominent. Inflorescence: scape 5–10cm, longer if rhizome is deep in soil; spike 5–10cm, coma present. Lower sterile bracts pink to green, rather loosely arranged. Fertile bracts 5–6 × 2.5–3.0cm; slightly recurved, fused below almost half its length, light green with light pink in the middle extending towards the tip, each bract subtends a cincinnus of flowers; bracts of coma longer, deep pink to violaceous, terminal bracts smaller. Flowers as long as bracts or slightly longer c.6.0cm, yellow, subtended by a bracteole c.1.5cm long. Calyx tubular, 1.3cm long, with three terminal teeth and with a cleft on one side, pubescent. Corolla bright yellow; posterior lobe boat-shaped, mucronate. Staminodes yellow, lip deep yellow, emarginate. Anther 4mm long, connective extending to an expanded flap, anther lobes basally spurred, spurs divergent and pointing forward. Ovary c.2.5mm, pubescent, trilocular, with many ovules on axile placenta. Style filiform, stigma vaguely 4-lobed, funnel-shaped. Fruit slightly trigonal, ovate, 1.2 × 0.7cm, pubescent, with a persistent bracteole. Seeds smooth, ovate-elliptic, with a narrower basal region and covered by a digitate aril.

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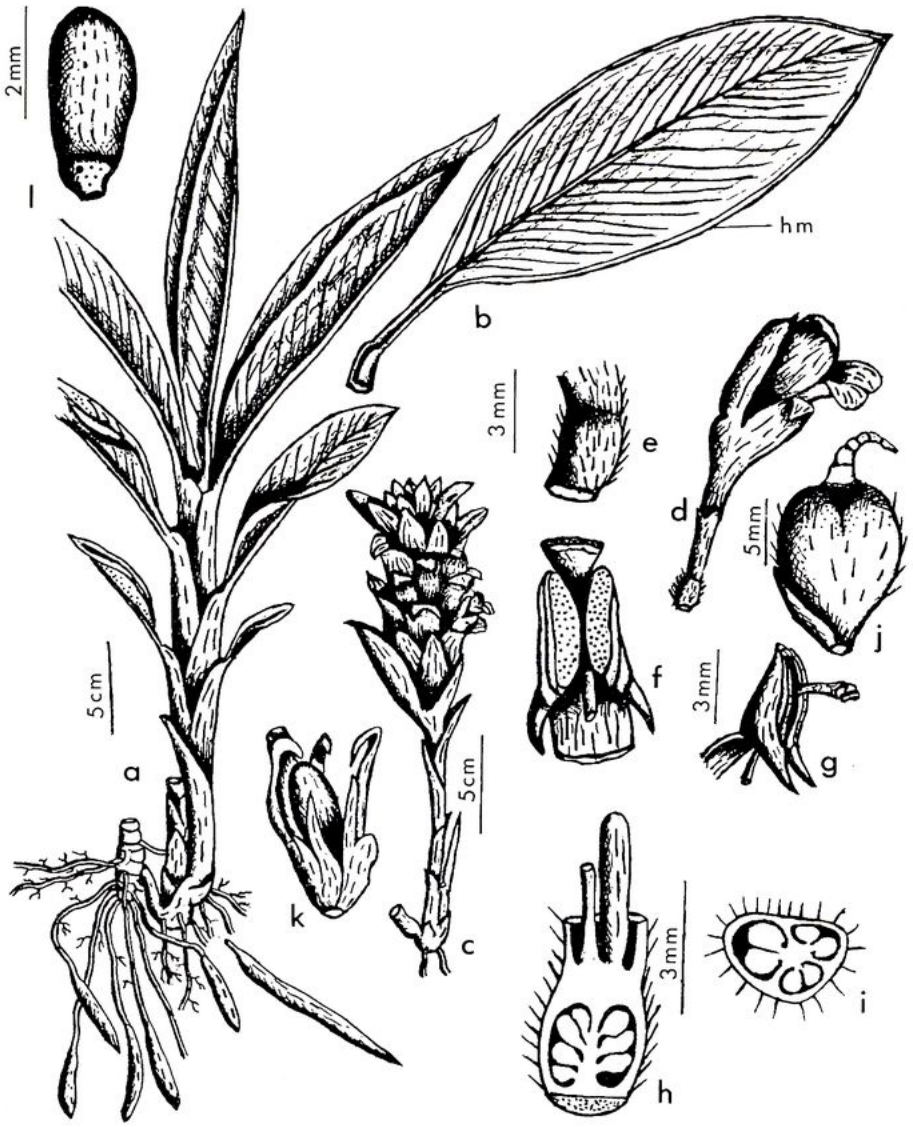

FIG. 1. *Curcuma coriacea*: a, plant with rhizome and root-tubers; b, leaf; c, spike; d, flower; e, ovary; f, anther front view; g, anther lateral view; h, ovary L.S.; i, ovary T.S.; j, fruit; k, seed with aril; l, seed, aril removed.

Type: India, Kerala, Idukki District, Painavu, open grasslands, 700m, 25 v 1983, *Mangaly & Sabu* CU 10337 (holo. MH; iso. CALI [CU 10336], E [CU 10338]).

This species is similar to *C. plicata* Wall., but is distinct in having coriaceous leaves with dense pubescence on both surfaces, lateral inflorescences, and bright yellow corollas. During the course of six years of observation both in the field and in the Botanic Garden at Calicut to where some plants have been transplanted, no occurrence of a terminal inflorescence has ever been noticed.

Curcuma coriacea occupies open grasslands at higher elevations of c.700m. During the summer, the grass often dries up or is destroyed by forest fires soon after the pre-monsoon rains (April–May), the inflorescence of *C. coriacea* and subsequently the vegetative shoot appear in quick succession. As generally occurs in many *Curcuma* species, soon after the first rains a fresh primordium develops from the lower part of the persistent rhizome of the previous season, grows obliquely upwards and then vertically to produce either the inflorescence, or a vegetative shoot. If an inflorescence is produced, soon after it emerges from the soil a vegetative bud develops from the axil of one of its basal bracts in the soil and it develops into a vegetative shoot alongside the inflorescence.

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