

## ***ALPINIA SMITHIAE* (ZINGIBERACEAE): A NEW SPECIES FROM SOUTH INDIA**

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A new species of *Alpinia* (Zingiberaceae). *A. smithiae* Sabu & Mangaly is described from Western Ghats of India. It is a member of section *Alpinia* subsect. *Catimbium*.

A robust *Alpinia* was collected from Attappady, in Palghat District and was transplanted to the Botanical garden of Calicut University. When it flowered it was noted that the anther connective was prolonged into a well formed crest and so differed from other species of *Alpinia* in this region. *A. smithiae* belongs to sect. *Alpinia* subsect. *Catimbium* which is characterized by the showy labellum and usually large bracteoles which protect the buds and are later pushed off by the opening flower. However, the species deviates in the presence of a prominent anther-crest, which, as far as is known, is unique in subsect. *Catimbium*. Also, at the base and apex of the inflorescence, the cincinni are subtended by conspicuous bracts. Bracts are rarely seen in this subsection, but Holtum (*Gard. Bull. Sing.* 13: 154, 1950) reports that in the Malaysian *A. latilabris* Ridley elongated bracts may occur near the top of the inflorescence.

The specific epithet is in honour of Miss R. M. Smith, Royal Botanic Garden, Edinburgh, for her valuable contributions to Asian Zingiberaceae.

### ***Alpinia smithiae* Sabu & Mangaly, sp. nov. Fig. 1.**

*A. malaccensi* (Burm.) Rosc. habitu, foliis oblongo-lanceolatis in pagina inferiore tantum pubescentibus, proxime affinis, sed floribus superioribus solitariis bracteis bene evolutis suffultis et antheris crista prominente lutea rotundata praeditis distinguenda.

Rhizome hard, woody, 2-4cm thick, branched, greyish yellow within, creeping just below the soil surface. *Leafy stem* robust, 2-3m tall. *Leaves* petiolate, petioles 3-4cm long, rounded, hairy; lamina 50-60 × 6-11cm, oblong lanceolate to oblanceolate, tip acuminate, base oblique, densely pubescent below, upper surface glabrous, except for the margin; ligule 1cm long, entire, coriaceous, outer surface hairy. *Inflorescence* terminal on the leafy shoot, erect, 15-25cm long, main axis densely hairy, protected when young by one or two large sheaths 15-20 × 3-3.5cm, lower 3 or 4 bracts modified into sheaths, quickly deciduous, outer larger, 15-20 × 2.5-3.5cm, inner smaller 6-7 × 1.5cm, light green, each subtending a cincinnus of two flowers; the middle flowers ebracteate with one or two flowers on each branch; upper flowers solitary bracteate, bracts small 3-4 × 1-1.2cm, light green, hairy along the margin. *Flowers* pedicellate, stalk 0.5-1cm long, densely pubescent. *Bracteoles* white, folded around the bud, 2-2.5 × 3.5cm, outer surface pubescent, inner glabrous, deciduous;

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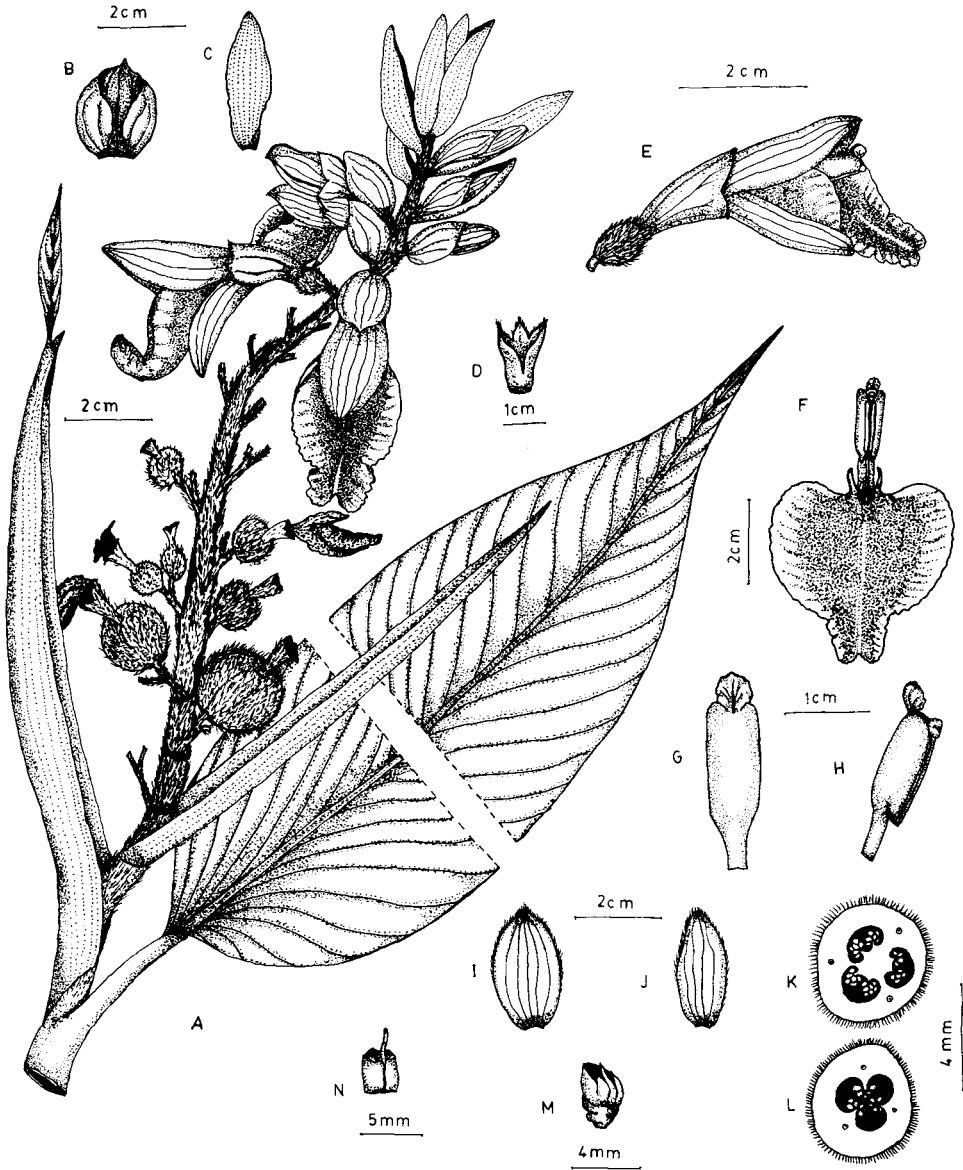


FIG. 1. *Alpinia smithiae*. A. inflorescence with sheaths and uppermost leaf; B. bracteole; C. upper bract; D. calyx; E. flower; F. labellum, lateral staminodes and stamen; G & H, stamen from back and side; I. dorsal corolla lobe; J. lateral corolla lobe; K. ovary in T.S. towards base; L. ovary in T.S. towards the top; M. seed with aril; N. epigynous gland.

calyx white, tubular, 1.8–2cm long, shortly 3-lobed and deeply split unilaterally, minutely pubescent on the outer surface. *Corolla* white, tube 1cm, shorter than the calyx, glabrous; lobes oblong, outer surface sparsely pubescent, margin ciliate, dorsal lobe 2.5cm, laterals 2.5 × 1cm. *Labellum* 3.5–4 × 3.5–4.5cm, yellow heavily lined with purple-red, margin dark yellow, sides incurved narrowing to a slightly emarginate apex, margin dark yellow. *Lateral staminodes* subulate 0.5cm long. *Filament* 1cm long, densely hairy, anther 1.2cm long, thecae parallel, glandular hairs on the back of the anthers, connective prolonged into a well-developed 0.4 × 0.3cm, rounded, yellow crest. *Epigynous glands* two, united on one side, 0.3cm long. *Ovary* 0.7 × 0.5cm long, densely pubescent, green, trilocular below, with many ovules. *Fruit* globose, 2.5 × 2.5cm, yellow-orange when mature. *Seeds* many, with lacerate aril; aril white. Type: India, Kerala State, Palghat Dt., Attappady, dense evergreen forests, c.500m, 6 iii 1989, *Mangaly & Sabu* 17563 (holo. MH; iso. CALI, E, CAL).

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