

CORNUKAEMPFERIA, A NEW GENUS OF ZINGIBERACEAE FROM THAILAND

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ABSTRACT

Cornukaempferia aurantiflora gen. et sp. nov. from Thailand is described and illustrated.

INTRODUCTION

The study of the Zingiberaceae of SE Asia has been intensified during recent years as more collectors have been taking part in the exploration of hitherto unexplored regions of Malaysia, Indonesia and Brunei. It is therefore not surprising that several new taxa have been described recently. Most astonishing, however, is the discovery of this unusual plant from Thailand, a rather well-collected country where the second author has worked and collected Zingiberaceae for more than 40 years (LARSEN, 1996). It has not been possible to place this collection in any of the known genera without stretching the circumscription beyond the acceptable. We therefore propose the following new genus of Zingiberaceae belonging to the Hedychieae.

***Cornukaempferia* J. Mood & K. Larsen gen. nov.**

Diagnosis: *Genus Hedychioidearum, a Kaempferia differt labello integro, a Boesenbergia differt crista anthera grande angusta curvata, et evolutione florale acropetale inflorescentiarum.*

This genus, belonging to the Hedychioideae, deviates from *Kaempferia* in the entire labellum and from *Boesenbergia* in the large, narrow, curved anther crest and the acropetal floral development.

An acaulescent herb. Leaves few, distichous. Inflorescence terminal, developing acroscopically; bracts spirally arranged, supporting one flower each; bracteoles absent. Calyx tubular, 3-dentate; corolla tube short, lobes subequal, the dorsal one larger; lateral staminodes conspicuous, free; labellum broad, undivided; stamen with short filament, anther with connective produced into a long, narrow, curved crest, no basal spurs. Ovary 3-loculed with 2 apical, epigynous glands. Fruit unknown.

The genus is monotypic.

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Type species: *C. aurantiflora* J. Mood & K. Larsen.

Distribution: Thailand.

Cornukaempferia aurantiflora J. Mood & K. Larsen

Type: Mood 96P24 (holotype AAU). Cultivated plant from Bangkok Market.

Low rhizomatous herb. Rhizome c. 15–20 mm diam., white with a yellow core; tubers c. 1 x 8 cm, yellow with a light brown core, slightly aromatic and bitter. Leaves 2–3, initially developing vertically, later becoming more horizontal to the soil, but elevated. Leaf sheath c. 3–10 cm; ligule short, 2–4 mm, emarginate; petiole 5–11 cm, green with a medium purple band; lamina broadly ovate to suborbicular, 20–25 x 14–15 cm; upper surface green with silvery markings between the veins, glabrous with raised veins, lower surface dark purple with long, white hairs; margin undulating. Inflorescence few-flowered; bracts lanceolate, acuminate, greenish with pink apex, lower one c. 5 cm diminishing upwards; calyx tube c. 13 mm, teeth 7–9 mm; corolla tube 25–30 mm; lobes dark reddish-orange; lateral lobes 40 x 7 mm, dorsal one c. 50 mm long, 10 mm at base gradually tapering to the cucullate apex, margin incurved; lateral staminodes orange, oblanceolate with undulating margin, 30 x 13 mm; labellum orange with red lines at base, broadly deltoid, saccate, with undulating margin; stamen with very short filament, anther c. 15 mm long, opening longitudinally, connective produced into a long, narrow, forwards curved crest, 10–13 mm long similar to the crest found in *Zingiber*. Ovary ellipsoid, shortly hairy, c. 10 mm long. Ripe fruits not seen.

The name *Cornukaempferia* was chosen as the large, “horn-shaped” anther crest shows a striking resemblance with the anther appendage characterizing *Zingiber*.

Relationship: *Cornukaempferia* is undoubtedly related to *Kaempferia*, a genus that has also a more or less produced anther crest that however always is flat and often 2-dentate, never “*Zingiber*”-like. After the separation of the genus *Caulokaempferia*, the remaining members of *Kaempferia* have a labellum that is typically deeply bilobed. The flowers are also white to violet. In spite of the very special anther structure, there seems to be no relationship with the genus *Zingiber*. The genus *Kaempferia* is also characterized by an usually bifid bracteole, while bracteoles are absent in *Cornukaempferia*.

Remarks: This remarkable species was first found for sale at a Bangkok market. Due to its qualities as an ornamental plant, it has spread rapidly among *Zingiberaceae* enthusiasts and is now in cultivation in Thailand, the U.S.A. and Australia. Recently the first wild collection of this new taxon was documented by M. Sizemore & J. Banta coll. no. 96-810. Their material was collected from NE Thailand: Petchabun Province: S. of Route 12 between Lom Sak and Khon San, 16° 41.90 N, 101° 37.28 E, alt. 765 m, growing in medium-heavy shade in black, organic soil in secondary forest. This collection is in culture with the first author in Hawaii, herbarium material is deposited at AAU.

Cornukaempferia aurantiflora is undoubtedly a rare species and measures should be taken to conserve any wild population.

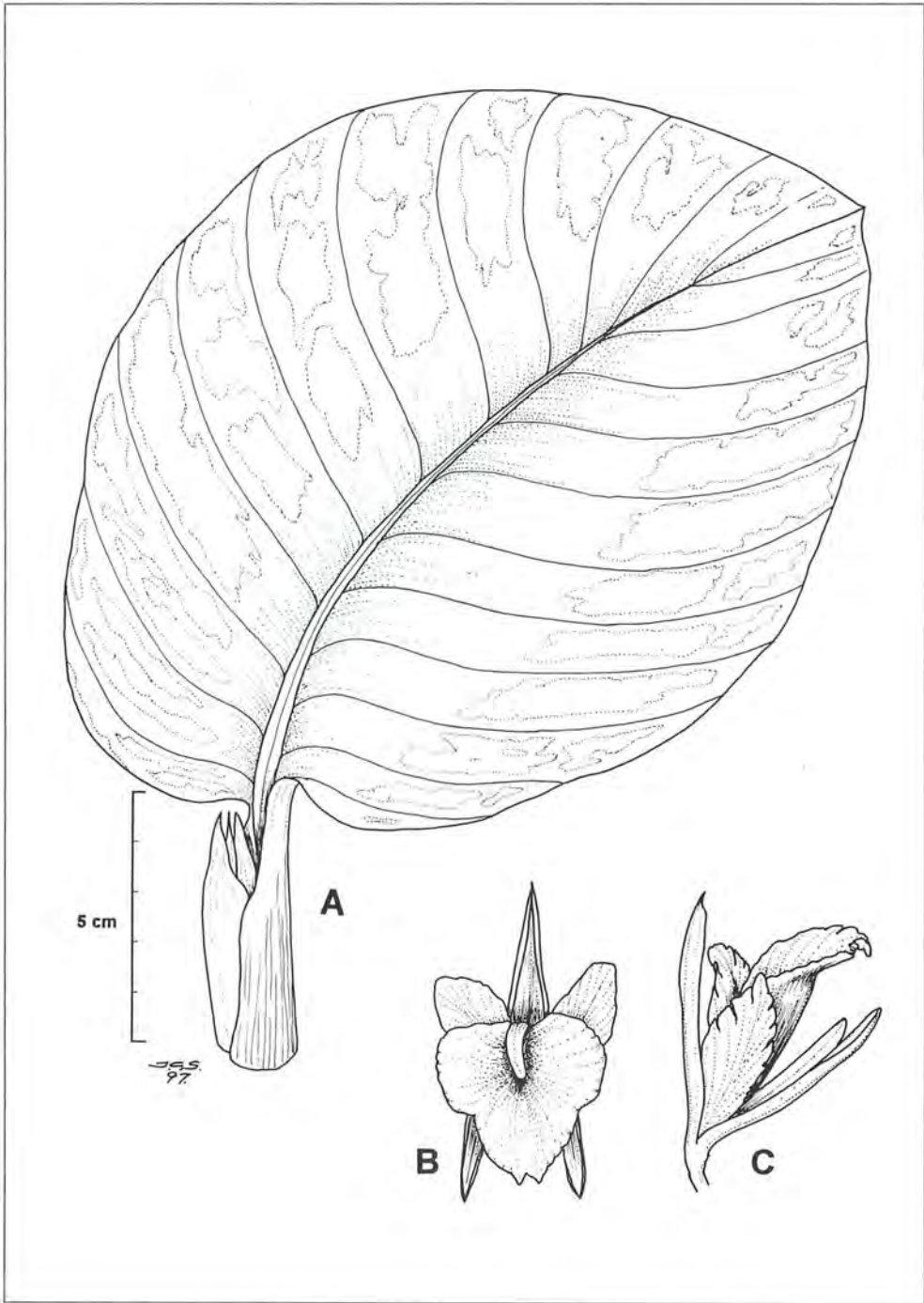


Figure 1. *Cornukaempferia aurantiflora*. A. Plant with one leaf removed. B. Flower seen in front view. C. Flower in side view.



Figure 2. *Cornukaempferia aurantiflora*. Plant grown in Hawaii. Photos J. Mood.

Horticultural note: The following notes on growth habit have been taken from pot cultures of plants grown in Hawaii, U.S.A. by the first author. After a dormant period of 4–5 months, new growth commences in April. Soon after the first stems mature, flowering begins from the terminal inflorescence which is sunken between the leaf petioles. Normally 1–2 of the flowers open in the morning and wither later in the day. Flowering lasts approximately 7 days based on the 4–6 or more flowers per inflorescence. After the flowering of the first shoot a renewed period of growth begins with many new shoots from the rhizome. Only a few of these will develop an inflorescence and flower. A 10 cm rhizome will often produce 8–10 pseudostems during a growing season, forming a robust clump 30 cm or more tall and 30 cm wide.

ACKNOWLEDGMENTS

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REFERENCE

LARSEN, K. 1996. A preliminary checklist of the Zingiberaceae of Thailand. *Thai Forest Bull.* 24: 35–49.

