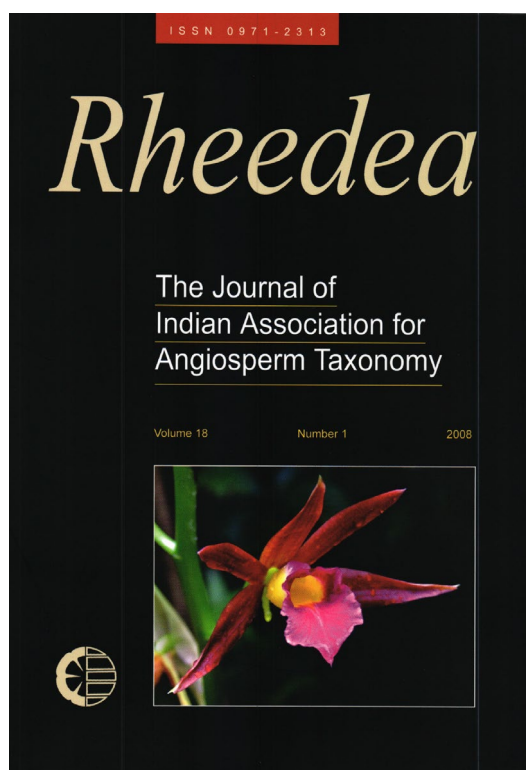




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A New *Costus* (Costaceae) from Sarawak Borneo, Malaysia

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Abstract

A new species of *Costus* L. (Costaceae) from Tutoh in Miri Division of Sarawak is described and illustrated. It is similar to *Costus speciosus* (Koenig) Sm. but differs by having the inflorescence on the terminal of separate leafless shoot and reddish band on the tip of stamens. Its distribution is restricted to a small area at altitudes between 500 and 800 m. and so far is collected only from the type locality.

Keywords: *Costus*, New Species, Borneo

Introduction

The family Costaceae is notably pantropical. It is represented in the Neotropics by 60 species and tropical Africa by 25 species. There are only 5 species in Asia (Maas, 1979). Previously treated under the Zingiberaceae (Schumann, 1904), it is now recognized as a separate family distinguished by the absence of aromatic oils, branched aerial stems and spiral monostichous phyllotaxy (Kress *et al.*, 2002). The *Costus* flowers are very fragile and last only a few hours after opening. This is one of the challenges in describing the species. Observations of fresh specimens in the field enabled us to study the taxonomic characters well and provide better descriptions, particularly morphology of the fragile flowers and other parts (Meekiong *et al.*, 2006).

Costus mulus* Meekiong, Ipor *et* Tawan, *sp. nov.
Fig. 1

Costo speciosa similis, inflorescentia distaliter in surculo aphylo, staminum apice vitta rubella, ovario glabro 4.5-5.2 cm longo 2.8-3 mm lato differt.

Type: MALAYSIA, Sarawak, Sungai Pangeh, Tutoh, Miri, 21 May 2005, Meekiong, K. & I. B. Ipor, MK1406, (Holotype, SAR; Isotypes, HUMS).

Shrubs, clumping up to 20 stems, up to 2 m. in height, branched and bushy. *Stem* semi-woody, slender, 2.0-2.5 cm. in diameter; internode 1.5-10.0 cm. long,

greenish brown, sheaths papery and lasting at the node base. *Leaves* one-side in spiral arrangement, blade elliptic, 13.0-21.0 x 6.5-9.5 cm, base semi-cordate or rounded, apex acute, margin entire, upper surface smooth, greenish; lower surface medium green, petiole short or almost sessile, if present not more than 1.5 cm long with canal along, light green. *Inflorescence* from the rootstock, 25 cm. long terminal on leafless shoots, consisting of a dense head of flowers and bracts; peduncle 35.5-45 cm long, erect, slender, 1.5-1.7 cm in diameter, reddish brown and light green towards the end of node; bracts conspicuous, stiff, spiny, each with 1 smaller inner bract and 1 flower; corolla tubular, whitish, tube 20-21 mm long, glabrous, lobes 15.5-16.5 mm long with rounded apex, upper part covered with wool-like structure; labellum whitish, yellowish spotted on the tip, tubular, 25.5-28.5 mm long, 16.5-18.5 mm wide; stamens 3, whitish, each with reddish band on the tip, dorsal 17.5-18.5 x 3.4-3.8 mm, ventral 16.5-17.3 x 3.0-3.5 mm, obtuse at apex; basal part of labellum and stamens joined into a slender tube; style 15-16.5 mm long; ovary glabrous; capsule subglobose, 4.5-5.2 mm long and 2.8-3.0 mm in diameter, trilocular, creamy.

Distribution: Malaysia, Sarawak; collected from Tutoh in Miri Division at altitudes between 500 and 800 m.

Habitat: Open space along road side near to river.

Flowering & Fruiting: May.

Etymology: From the Malay word "*mulus*", referring to the flower colour.

Note: *C. mulus* is similar to *C. speciosus* but differs by having the inflorescence on the terminal of a separate leafless shoot and reddish band on the tip of stamens.

With the discovery of *Costus mulus*, the number of *Costus* species in Sarawak is increased to seven.

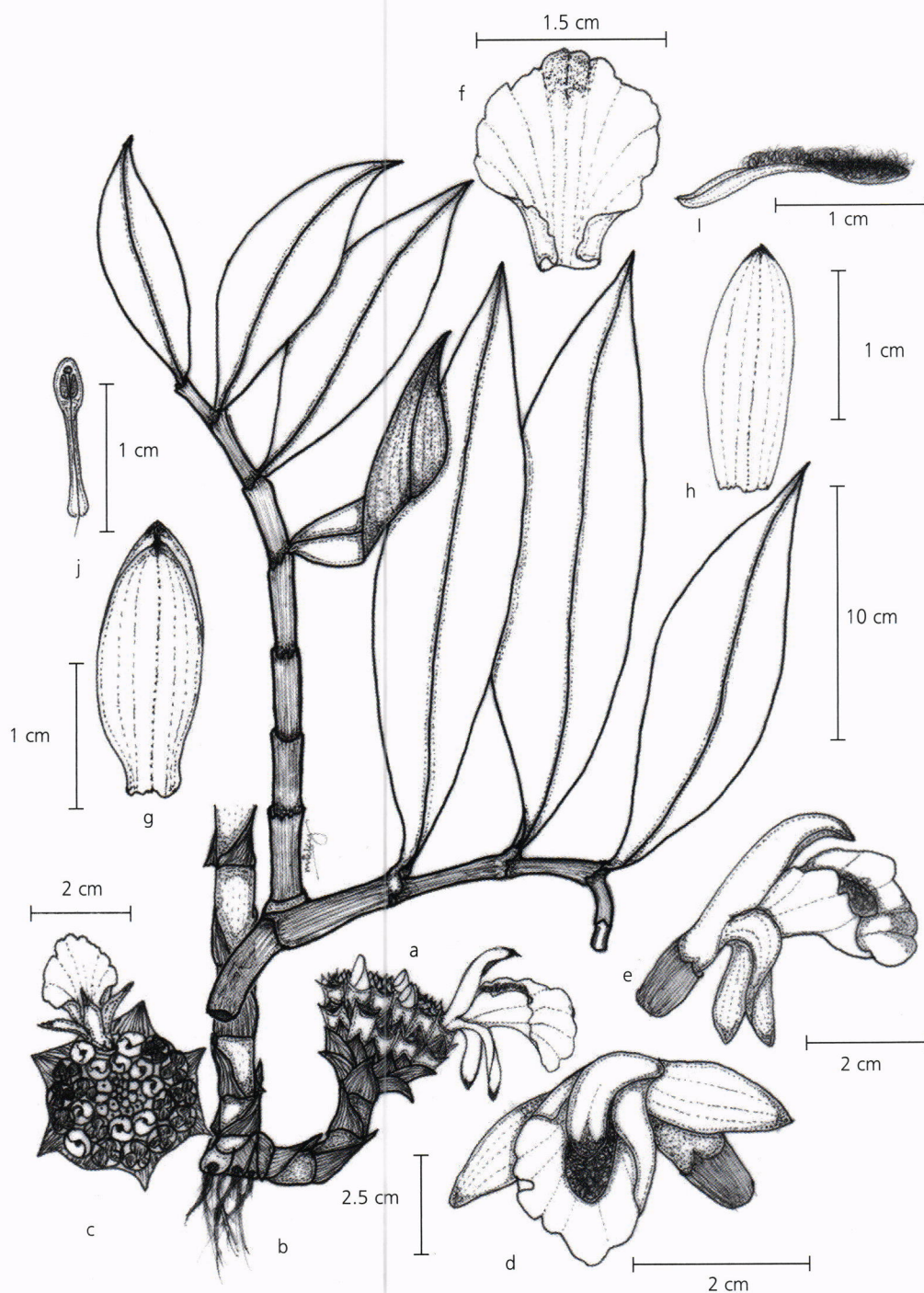


Figure 1. *Costus mulus* Meekiong et al. – a. Habit; b. Inflorescence; c. Inflorescence (top view); d. Flower (front view); e. Flower (side view); f. Labellum; g. Dorsal petal; h. Ventral petal; i. Corolla lobe; j. Stamen and stigmas

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