

***Kaempferia parviflora* Wallich ex Baker (Zingiberaceae): a new record for Nagaland, India**

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Abstract

Kaempferia parviflora Wallich ex Baker (Zingiberaceae) has been newly added to the ginger flora of Nagaland. This species is characterized by two involucre bracts with much longer corolla tube having petaloid anther crest. A detailed description along with photograph is provided for ready reference.

Key words: *Kaempferia parviflora*, Zingiberaceae, Nagaland, New record

INTRODUCTION

Zingiberaceae is the largest family of Zingiberales with about 50 genera and over 1,200 species (Kress 1990). Zingiberaceae is pantropically distributed with one genus (*Renealmia* Linnaeus f.) found in the neotropics, four genera (*Aframomum* K. Schumann, *Aulotandra* Gagnepien, *Siphonochilus* J.M. Wood & Franks, and *Renealmia* Linnaeus f.) are found in Africa and the rest of the genera are found in Asia and Pacific islands (Kress & Larsen 2001). The genus *Kaempferia* is established by Linnaeus in honour of German physician Engelbert Kaempfer (1651 – 1716) which comprises of about 60 species throughout the tropical monsoon Asia (Sirirugsa 1992). According to Wu & Larsen (2000) the genus is represented by ca. 50 species. Recent literature reveals that some of the species of *Kaempferia* have been transferred to other genera, viz., *K. pandurata* Roxburgh to *Boesenbergia rotunda* (Linnaeus) Mansfeld (Mansfeld 1985), *K. scaposa* (Nimmo) Benthams to *Curcuma scaposa* (Nimmo) Skornickova & M. Sabu (Skornickova et al 2007), *K. involucrata* King ex Baker to *Stahlianthus involucratus* Craib ex Loesener (Loesener 1930), *K. siphonantha* Baker to *Boesenbergia siphonantha* M. Sabu et al. (Sabu et al 2004), whereas, three species of genus *Kaempferia* Linnaeus have been shifted to the three species of genus *Caulokaempferia*, viz., *K. linearis* Wallich, *K. secunda* Wallich and *K. sikkimensis* King ex Baker has been changed as *C. linearis* (Wallich) K. Larsen, *C. secunda* (Wallich) K. Larsen, *C. sikkimensis* (King) K. Larsen respectively (Larsen 1964). Baker (1890) reported 22 species of genus *Kaempferia* from different parts of British India. So far, from North-east India the genus *Kaempferia* is represented by only four species, viz., *Kaempferia galanga* Linnaeus (Meghalaya), *K. parviflora* Wallich ex Baker, (Assam), *K. rotunda* Linnaeus (Nagaland, Meghalaya, Mizoram and Tripura) and *K. marginata* Carey ex Roscoe (Manipur).

The recent collection of *Kaempferia parviflora* Wallich ex Baker from the Sungratsu village of Mokokchung district in Nagaland state is the new record for the flora of Nagaland.

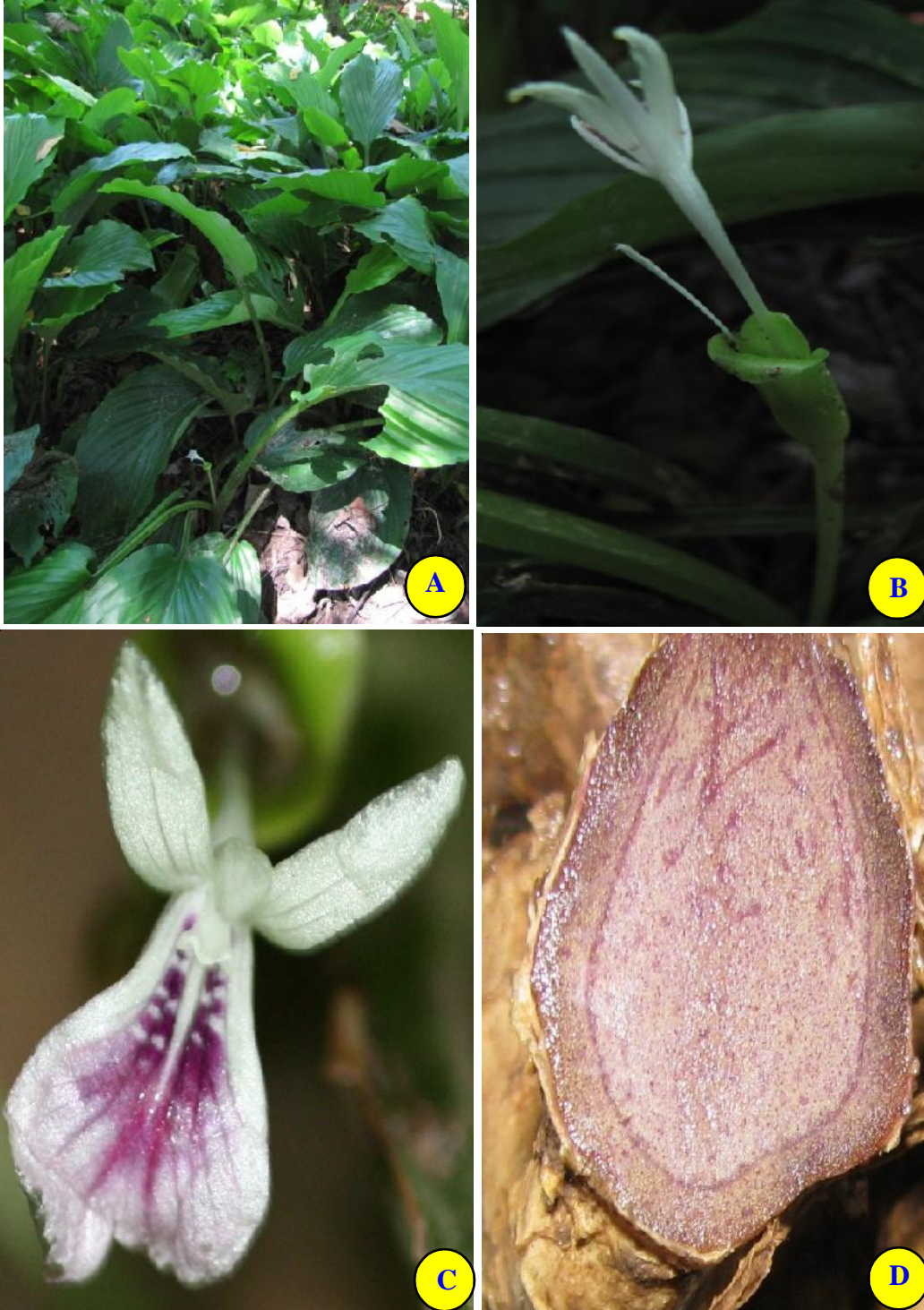


PLATE- I: *Kaempferia parviflora* Wallich *ex* Baker: Figs. A. Habit of the plant; B. Single Flower; C. Single flower magnified; D. Transverse section of rhizome

MATERIALS AND METHODS

During floristic studies in Sungratsu village (at 26°23' 27.7" N; 94°33' 17.7" E) under Mokokchung district, an interesting plant of the genus *Kaempferia* was collected at an altitude of 1046 meters above sea level. After basic identification using literature mainly Baker (1890) and Mao *et al* (2011) and was authenticated by matching at ASSAM herbarium at the Eastern Regional Circle of Botanical Survey of India, Shillong (Meghalaya). The specimens were processed following Jain & Rao (1977) and deposited at the Herbarium of Nagaland University, Lumami.

TAXONOMIC TREATMENT

Kaempferia parviflora Wallich *ex* Baker in Hooker *f.*, Fl. Brit. India 6: 221. 1980; K. Schumann in Engler, Pflanzenr. 20(IV.46): 78. 1904; Mao *et al*, Indian For. 137(11): 1353. 2011. *Stahlianthus rubrimarginatus* S.Q. Tong in Acta Phytotax. Sinica 33(5): 449. 1995. [Plate- 1; Figs. A – D].

Herbs, upto 45 cm tall. Rhizome dark purple inside, with many succulent roots. Leaves radical, 2-3, distichous, blade ovate-oblong, 14.2 – 19 x 8.3 – 9.6 cm, acute, asymmetrically rounded at base, nerves 4 – 8 pairs, upper surface glabrous, lower surface hairy; Petiole 10 – 14 cm long (including sheaths), minutely hairy, channeled; leaf sheaths pale purple at margin. Inflorescence contemporary with leaves, between leaf sheaths; peduncle *ca.* 4.5 cm long, terete, gland dotted. Involucral bracts 2, oblong, greenish, acute, glabrous, base red-tinged, reflex at tip, margins overlapping, free at base only. Flowers 14 – 20 in each bract, one opens at a time. Bracts oblong, *ca.* 2.3 x 0.4 cm, rounded, membranous, hyaline; bracteole linear, *ca.* 1.1 cm long, acute, membranous, hyaline. Calyx tubular, *ca.* 2 cm long, cleft at one side, glabrous, membranous and hyaline. Corolla tube much exceeding the involucral bracts, *ca.* 3.4 cm long, trilobed, lobes oblong-elliptic, 10 – 11 x 2 – 2.7 mm, acute, margins folded, white. Staminodes petaloid, acute. Labellum obovate, emarginated, *ca.* 1.25 x 0.7 cm, nerves 3 – 4 pairs, purplish at centre, base white. Stamens *ca.* 3 mm long; filaments *ca.* 1 mm long, anther 1.8- 2 mm long, crest orbicular, shortly lobed at apex. Stigma exceeding the apex of the anther, apex ciliate. Ovary *ca.* 2 x 1 mm long and pubescent (Plate- 1 ; Figs. A-D).

Flowering & Fruiting: August – September

Habitat: Terrestrial, usually growing in shady moist places on forest floor.

Distribution: India (Assam & Nagaland), Bhutan, Myanmar & Thailand

Specimen examined: Nagaland: Sungratsu village - Mokokchung district; Santanu Dey, SDNU 51, dated 13.10.2012. Assam: Diphu- Karbi anglong; Mao110421, 180m, 10.09.2007 (ASSAM).

DISCUSSION

Through literature consultation and matching with the authenticated specimens at ASSAM Herbarium, the identity of the plant was confirmed as *Kaempferia parviflora* Wallich *ex* Baker. The plant was growing in moist shady places in the Sangratsu village of Mokokchung district of the Nagaland state in North-east India. The plant was known to grow in Myanmar and Thailand. Recently Mao *et al* (2011) recorded it from the Diphu area of Assam. The present record of *Kaempferia parviflora* from the Mokokchung District of the state of Nagaland showed the further extension of distribution of the species within India. The species is known to have much medicinal uses (Sutthanut 2007) and is used extensively in Thailand and Myanmar. With this new addition, the total number of species of *Kaempferia* Linnaeus

in Nagaland state has been increased to two, viz., *Kaempferia parviflora* Wallich ex Baker and *Kaempferia rotunda* Linnaeus.

Local Medicinal uses: Rhizomes are used by local people to treat wounds and joint pain.

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