

# Kaempferia parviflora (Zingiberaceae): A new record in the Flora of Manipur

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**Abstract:** *Kaempferia parviflora* a native of Southeast Asia has been reported for the first time from Manipur. Detailed description and illustrations are provided. The plant was found growing with a small population as undershrub in tropical evergreen forest of Imphal East district, Manipur. Inflorescence pedunculate, flowers minute with purple tinged in the labellum.

**Keywords:** flora, Manipur, new report, *Kaempferia parviflora*.

## I. INTRODUCTION

The genus *Kaempferia* L. (Zingiberaceae) is one of the most important medicinal plant groups in Manipur. Taxonomic studies on this plant group are essential to set up the baseline information for other related research, especially in drug development. The genus *Kaempferia* is a medium sized genus with approximately 50 species mostly distributed from India, South China to Malesia. Fifteen taxa were previously accounted for Thailand<sup>6</sup> and only two taxa were accounted for Manipur<sup>1</sup>. *Kaempferia parviflora* Wall Ex. Baker is used as a tonic for promoting health, relieving body pains and gastrointestinal disorders and rectifying male impotence.<sup>5</sup>

Manipur is situated in the north eastern part of India sharing international boundary with Myanmar. It falls in the Indo-Burma biodiversity hotspot and has its own unique bio-resources of flora and fauna. An extensive survey was conducted in Imphal East District of Manipur, North-east India in the Month of July, 2015. The *Kaempferia* specimen was observed for the first time from Nongdam hill of Imphal East district. The area is located at 24<sup>o</sup>47'54.82"N, 94<sup>o</sup>7'11.80" E at an altitude of 1200msl. Detailed studies were undertaken with the various floras and herbaria and is subsequently identified as *Kaempferia parviflora* Wall. The collection forms a new distributional record in the Zingiberaceae flora of Manipur. *Kaempferia galanga* and *Kaempferia rotunda* has earlier been reported in the state of Manipur and with the recent discovery of *Kaempferia parviflora*, the number of species has been increased to three in Manipur.

Key to species:

1. Leaves 7-13 x 4-9cm, glabrous on both surfaces or sparsely villous abaxially; labellum deeply 2-cleft at apex.....*K. galanga*

2. Leaves erect, oblong, 25-30x7.5-10cm, tinged with purple beneath; flowers fragrant in a crowded radical.....*K. rotunda*
3. Leaves subsessile, ovate, corolla segment short, linear- oblong, staminodes narrow, lip lilac obovate-cuneate emarginated, anther crest orbicular entire.....*K. parviflora*

### TAXONOMIC TREATMENT

*Kaempferia parviflora* Wall. ex Baker in Hook; Fl.Br.Ind.6: 221.1894; Schum.in.Engl., Pflanzenr 4(46), 20 Heft: 78. 1904; Sirirugsa in Nord. J. Bot.9: 259.1989; Thai. For. Bull. (Bot.) 19: 6-7. 1992.

#### Description:

Perennial herb; rhizomes black, strongly branched, root fibres slender; leaves thin, ovate, light shiny green, 13.5-23.2cmx 9.3-13.5cm, apex acute, glabrous; petiole long, 9cm-10cm; inflorescence pedunculate, 5.1-5.4cm, flowers white with purple tinged darker in the middle of lip; 8 flowered, only one flower flowered in a day; sweet scented ; bracts lanceolate, slightly greenish, 1.4-1.7x3-3.5 cm; calyx white 2.4x0.7cm, corolla lobes linear white 1.5 cm; lateral staminodes linear, 1.1x0.3cm, white; labellum white with purple tinged at the base, lip lilac obovate, cuneate, bifid, upto 1/4<sup>th</sup> its length, 1.2x0.8cm; anther sessile, 0.4x0.1cm, crested; stigma 4.2cm; ovary velutinous, trilocular, elliptic.

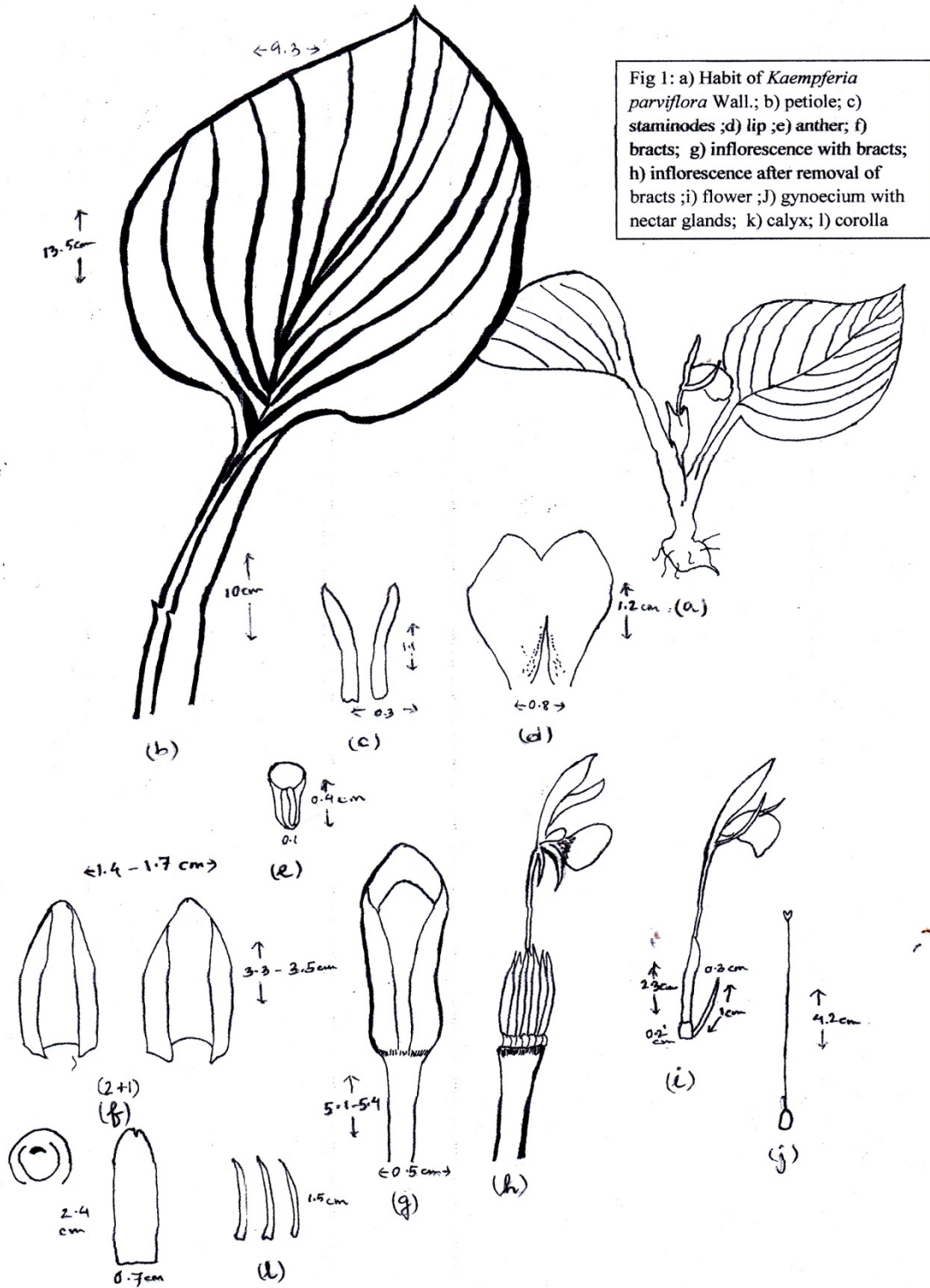
Flowering and fruiting: April- September.

Distribution: Southeast Asia, India, South China, Malesia, Thailand and Laos.



Fig 1: *Kaempferia parviflora* habit.





REFERENCES

[1] Deb, D.B. Monocot and Dicot plants of Manipur .Territory Bull. Bot. Surv. India. 3: 115-138, 1961.

- [2] Deb, D.B. The flora of Tripura state. Today and Tomorrow Publication, New Delhi. 2: 366-380, 1983.
- [3] Linnaeus C. Species Plantarum (first edition). 2, 1753.
- [4] Linnaeus C. Genera Plantarum (fifth edition) 3, 1754.
- [5] Rujjanawate C, Kanjanapothi D, Amornlerdpison D, Pojanagaroon S. Anti-gastric ulcer effect of *Kaempferia parviflora*. J Ethnopharmacol ; 102: 120-2.2005.
- [6] Siriruga P. Taxonomy of genus *Kaempferia* (Zingiberaceae) in Thailand. Thai For Bull; 19:1-15,1992.
- [7] Tewtrakul S, Subhadhirasakul S, Kummee S. Anti-allergic activity of compounds from *Kaempferia parviflora*. J. Ethnopharmacol : 116: 191-3, 2008.
- [8] Trisomboon H. *Kaempferia parviflora*, a Thai herbal plant, neither promote reproductive function nor increase libido via male hormone . Thai J Physiol Sci ; 21: 83-6. 2008-2009.
- [9] Yenjai C, Prasenphen K, Daodee S, Wongpanich V, Kittakoop P. Bioactive flavonoids from *Kaempferia parviflora*. Fitoterapia ; 75:89-92.2004.