

MOAAKUM¹, Santanu DEY¹ and Nobuyuki TANAKA^{2,*}: **Two New Distributional Records of *Zingiberaceae* from India**

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Summary: *Zingiber callianthum* Triboun & K.Larsen and *Z. mekongense* Gagnep. (*Zingiberaceae*) are recorded from India for the first time. Their localities in Nagaland, North East India are the westernmost range of distribution for these species.

The genus *Zingiber* Mill. is the second largest genus in *Zingiberaceae* with about 150 species (Wu and Larsen 2000, Kishor and Leong-Škorničková 2013) and occurs from S and SE Asia to China and Japan and to northern Australia, with its center of diversity in monsoonal continental Asia (Larsen 2005). *Zingiber* is divided into four sections based on the position of the inflorescence: *Zingiber* sect. *Zingiber*, sect. *Dymczewiczia* Horan., sect. *Pleuranthesis* Benth. & Hook. and sect. *Cryptanthium* Horan. Section *Cryptanthium*, characterized by inflorescences on procumbent peduncles arising from the rhizome, is the most complicated section of the genus with high diversity of species particularly in Thailand and China (Leong-Škorničková et al. 2015).

Fieldwork in Kohima and Peren Districts, Nagaland, North East India by the authors revealed the occurrence of two species of *Zingiber*, namely *Z. callianthum* Triboun & K.Larsen and *Z. mekongense* Gagnep., both of which belong to sect. *Cryptanthium*. So far, they have not been recorded from India.

It is considered to be the westernmost range of the distribution for both species. The photographic data, voucher specimens, distribution, and taxonomic notes are provided

as follows.

Newly Recorded Taxa in India

Zingiber callianthum, ut “*callianthus*” Triboun & K.Larsen in Triboun & al. in Thai J. Bot. 6: 59 (2014); Piyakaset & Triboun in Prabhukumar & al. (eds.), Asian Zingiber.: 201 (2019); Tanaka & al. in Thai J. Bot. 13: 55 (2021). [Fig. 1A, B]

Type: THAILAND. Tak, Mae Ramad, montane forest, alt. 800–1,200 m, 15 Jul. 2002; P.Triboun 3344 (BK–holo; AAU!, K KU–iso).

Specimen examined: **INDIA.** Zubza, Kohima District., Nagaland, 1026 m elev., 25°71'19.6"N, 94°03'68.3"E, 4 July 2015, Moaakum MOAZ 024 (ASSAM).

Distribution: India, Myanmar and Thailand.

Habitat and ecology: In wet moist place along the stream of degraded secondary moist deciduous forest associated with *Elatostemma* sp. (*Urticaceae*), *Begonia* sp. (*Begoniaceae*), *Strobilanthes* sp. (*Acanthaceae*), etc.

Note: *Zingiber callianthum* was described from Mae Ramad, Mae Sot District, western Thailand, and characterized by having inflorescences with open bracts and visible inflorescence rachis. It was considered endemic to Thailand in the original protologue (Triboun et al. 2014). Recently, fieldwork to Myanmar recorded this species from eastern Myanmar, located ca. 200 km northwest of the type locality of *Z. callianthum* in Thailand (Tanaka et al. 2021). The species is characterized by having inflorescences with open bracts and visible inflorescence. In the Indian plant, inflorescence bracts are more

Type: LAOS. De Stung Streng à Kong, Luang-prabang, Thorel 2198 (P, digital image!–holo).

Specimen examined: **INDIA**. Intangki Reserve Forest, Peren District, Nagaland, 550 m elev., 25°31'80.0"N, 93°25'36.2"E, 8 June 2016, Moaakum & Santanu Dey MOAZ 074 (ASSAM).

Distribution: Cambodia, India, Myanmar, Laos, Thailand and Vietnam.

Habitat and ecology: In dry open space under the tree canopy of secondary mixed bamboo forest. Plants were found growing in a population of about 20–30 individuals in a patch with a distance of about 150–200 m apart between the patches.

Note: *Zingiber mekongense* was described from Laos by Gagnepain (1907), and was recently recognized from Thailand, Myanmar and Vietnam (Triboun et al. 2014, Aung and Tanaka 2019, Huong et al. 2020). Chou et al. (2016) reported this species from Cambodia. *Zingiber mekongense* is similar to *Z. flavomaculosum* S.Q. Tong, but differs from it in having densely imbricate inflorescence bracts with convex, acute, brown hairy apex (Aung and Tanaka 2019). Bracts range from red to green and were green in Indian plants.

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Moaakum¹, S.Dey¹, 田中伸幸²: インドから新たに記録された2種のショウガ科植物

インド東部のナガランド州の調査の結果、コヒマ県およびペレン県にそれぞれショウガ科の *Zingiber callianthum* および *Zingiber mekongense* が分布することが明らかになったのでここに報告する。両種はインド新産であり、今回の記録はともに両種の分布西限に当たる。 *Zingiber callianthum* は、当初タイ固有種として記載されたが、最近ミャンマーからも記録された。一方、 *Zingiber mekongense*

は、ベトナム、ラオス、カンボジア、タイ、ミャンマーで知られていたが、今回、さらにインドまで広く分布することが明らかになった。

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