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Sporadic flowering of *Bambusa tulda* in Mizoram: A preliminary report

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Bambusa tulda Roxb. is a semi-deciduous caespitose bamboo endemic to Indo-Burma. It is known as 'rawṭhing' in Mizoram, India, and its mass gregarious flowering is called *ṭhingtâm*. 'Ṭhingtâm' has a cycle of about 45-50 years. The first *ṭhingtâm,* recorded in the region was in 1880, which was preceded by *mautâm* (gregarious flowering of *Melocanna baccifera*) in 1862; i.e., the *ṭhingtâm* phenomenon occurred ~20 years after the *Mautâm*. The last *ṭhingtâm* was recorded in 1981. However, there has been a localised *ṭhingtâm* at Zawlnuam, a village at the northwestern Mizoram. The first flowering was recorded in 2015. This unusual phenomenon needs to be investigated.

Key words: *Bambusa tulda*; flowering; *ṭhingtâm*, Zawlnuam.

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'Ṭhingtâm' is a phenomenon given to the gregarious flowering of *Bambusa tulda*, locally called as 'rawṭhing' in Mizoram, Northeast India. As documented by numbers of native authors, the phenomenon occurs every 45-50 years. The first *ṭhingtâm,* recorded in the region was in 1880, which was preceded by *mautâm* (gregarious flowering of *Melocanna baccifera*) in 1862; i.e., the *ṭhingtâm* phenomenon occurred ~20 years after the *Mautâm*.

Bambusa tulda Roxb., a semi-deciduous caespitose bamboo, endemic to Indo-Burma is widely distributed in India, Bangladesh, Myanmar and Thailand.[1,2] In India it is commonly found in the northeastern states - Assam, Bihar, Meghalaya, Mizoram, Nagaland and Tripura, it is also abundantly found in West Bengal. It is a multiple used bamboo; throughout the northeast India, it is chiefly used for constructional purposes, prickles, toys, mats, food grain containers, baskets and other traditional items.[3] Young shoots are consumed and shared a high market value.

Flowering of *B. tulda* was first documented in the years 1880–1884 and 1928–1929 in its native habitat; sporadic flowering since 1976, followed by mass flowering until 1979 were reported.[4] Sporadic flowering of *B. tulda* in 1997 followed by gregarious flowering in 2003 was reported from Dhemaji and Lakhimpur, Assam.[5] In 2003, sporadic flowering was noticed and reported from Dighra, West Bengal.[6]

In recent years, Mizoram, known for its rich bamboo resources has been experiencing flower-

Fig. 1. Sequence of events in bamboo flowering. **(a)** Pre-flower clumps of *B. tulda.* **(b)** Culm of flowering *B. tulda.* **(c)** *B. tulda* flower.

Fig. 2. (a) Inflorescence of *B. tulda.* **(b)** Close up of *B. tulda* flower.

ing of bamboo (*Mellocana baccifera*) during 2006-2009 and sporadic flowering of *Dendrocalamus longispathus* since 2011 continuing till date.[7] Since 1981,there has been no report or observance of flowering of B. *tulda* in the state.[4]

A survey conducted by the authors observed sporadic flowering of B. *tulda* at several locations at Zawlnuam and its surrounding villages. Zawlnuam village is located at 24°08'05.01" N and 92° 20'05.60"E at an elevation of 78 m msl. Flower initiation of B. *tulda* was first observed in the month of February, 2015 and continued through the year (Fig. 1 & 2). However, a recent survey indicated that the flowering is confined only to specific locations around the Zawlnuam village and no sign of flowering have been observed elsewhere, till date.

Earlier report[4] suggested that the flowering cycle of the species is 48 years; the observance of sporadic flowering in an unusual timing is a matter of concern and required further study. It would also be appropriate to strengthen research to determine the impact of the post-flowering die-off of the species on the associated floral and faunal diversities, including the soil micro-biota.

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