

Short communication

Sporadic flowering of *Dendrocalamus longispathus* (Kurz) Kurz in Mizoram, India

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The flowering in bamboos is an exceptionally interesting event because most of the species flower either gregariously or sporadically only once every 60 to 120 years and this is not all, bamboos are monocarpic, *i.e.* they flower only once, set seeds and then die. Death in large populations is a cause of concern due to ecological, social and economic crises that set forth (John & Nadgauda 2002).

In the past, bamboo flowering was reported to be positively correlated with inflation in rodent population and incidence of famines in the state of Mizoram. Therefore, whenever bamboo flowering is observed in state, scientists and foresters become anxious.

There are several theories on the unusual flowering habits of bamboo, though scientists have not yet found any conclusive cause for the behaviour. Although environmental factors influence the growth of plants, and in the majority of plants they trigger flowering, factors that trigger flowering in bamboo still remain a mystery (Ramanayake 2006).

Dendrocalamus longispathus (Kurz) Kurz is a large caespitose bamboo; culms 20 m tall, up to 10 cm in diameter; nodes swollen; internode swollen, 25–60 cm long. It occurs in moist hill slopes and along streams in



Figure 1. Flowering in *Dendrocalamus longispathus* clump in forest of Mizoram.



Figure 2. Individual flowering culm of *Dendrocalamus longispathus*.

the moist fertile loamy soil and particularly shaded fringes of the forest cover. It is distributed in India (Assam, Manipur, Mizoram and Tripura), Bangladesh and Myanmar.

Dendrocalamus longispatus is an edible bamboo species and is also used for thatching, basket making, fuel, chinks for doors, house posts and mat making, floats for timber and rafts. Culm sheaths are used for irrigation and musical instruments and also suitable for the manufacture of craft paper (Wealth of India 1952).

According to Gamble (1896), *Dendrocalamus longispatus* flowered during 1876, 1879–80 in Chittagong (Bangladesh) and during 1871 & 1891 in Myanmar. Gupta (1972) reported it in flowering from Assam in 1968 and in Mizoram during 1966–67. Bahadur (1979) stated that it was flowering in Forest Research Institute, Dehradun in 1979.

A survey was conducted by the authors from Advance Research Centre for Bamboo and Rattan (ARCBR), Bethlehem Vengthlang, Aizawl, Mizoram in the different districts of the state in month of January and February 2014 (Fig. 1,2). They observed sporadic flowering of *Dendrocalamus longispatus* in Kolasib and Maimit districts of Mizoram. The seed setting can be expected by the month of April–May.

Observations also revealed that flowering in *Dendrocalamus longispatus* (Kurz) Kurz is more on the southern aspect where the localised area is drier as compared to the northern aspect and wet areas. This revealed that the flowering in the *Dendrocalamus longispatus* (Kurz) Kurz is brought out by the environmental factors rather than the genetic factor.

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