



Shift in Phenology of Some Dominant Tree species due to Climate Change in Mizoram, North-East India

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Abstract: Phenology (leaf fall, leaf emergence, flowering and fruiting) of six dominant tree species in semi-evergreen forest of Mizoram University Campus in Aizawl district of Mizoram, Northeast India were observed. The selected deciduous and evergreen tree species have exhibited marked phenological variations. Evergreen trees shed old leaves throughout the year and flush new leaves multiple times with peak period towards the end of dry season. However, the deciduous trees flush new shoots in the wet season after rain. Evergreen species observed flowering mostly after leaf flushing except for *Schima wallichii* where new shoots emerge simultaneously during flowering, while the deciduous species exhibited flowering soon after the leaf flushing. Most of the species exhibited a lengthy fruit maturation period extending up to five months except for *Callicarpa arborea* with brief and rapid fruit maturation. The flowering and fruiting time of the selected species were observed either advanced or delayed as compared to phenological status recorded in the flora of Lushai Hills in 1938. Hence, tree phenological observations with response to climate change are important to predict future impacts. Phenological observations from the present study would be significant towards *in-situ* and *ex-situ* conservation of the studied tree species.

Keywords: Phenology, Climate change, Deciduous, Evergreen, Northeast India
