



# Dendrochronological Potential of *Tectona grandis*, *Pinus kesiya* and *Quercus serrata* from Mizoram, Northeast India for Growth

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**Abstract:** The dendrochronological study of teak (*Tectona grandis*), Khasi pine (*Pinus kesiya*) and oak (*Quercus serrata*) was carried out in two forest divisions of Mizoram, Northeast India. Three tree-ring chronologies were developed of which, *T. grandis* is 31 year (1987- 2017 C.E.), *P. kesiya* is 40 year (1978-2017 C.E.) and *Q. serrata* is 47 year (1971-2017) long. The tree-ring chronology statistics showed significant dendrochronological potential of these trees from the region. However, the taxa *Q. serrata* had some limitations in the present record and needs further investigation. Further collection of samples from these forests is required to strengthen the chronology statistics and to extend the chronology time span. Common event year with lower growth has been observed in both *T. grandis* and *P. kesiya*. The negative event year identified in the individual trees of *T. grandis* and *P. kesiya* are mostly related to drought records of the Mizoram. The tree-ring based past drought database can provide a scientific basis for the management of drought mitigation strategies towards hydrology and agriculture in this region.

**Keywords:** Drought, Event year, Khasi pine, Oak, Teak, Tree-rings

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