

RESEARCH PAPER

# Morphology of flower, pollen and orbicules of Meghalayan *Dioscorea* L. (Dioscoreaceae), North-East India: A pivotal taxon in the evolution of monocot

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Flowers, pollen and orbicules morphology is an important source of information for systematic and evolutionary studies among different species, genera and families level. In the present study the floral, pollen and orbicules morphology of 80 samples of the genus *Dioscorea* L. representing 8 species native to Meghalaya were studied. *Trichopus* and *Tacca*, the allied genera with *Burmannia* of Burmanniaceae, nearest family of Dioscoreaceae were selected as an outgroup for the present study. Variation in floral, pollen and orbicules characters were observed and 62 descriptors or traits were selected for morphometric analysis. Pollen of *Dioscorea* is monosulcate or bisulcate with perporate or microreticulate sexine sculptures. Orbicules were mostly spherical with smooth surface.

**Key words** : Floral morphology, Pollen aperture, Sexine ornamentation, Orbicule morphology, Morphometric analysis

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