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Modern pollen assemblage of surface samples and its relationship to vegetation and climate in south-western Madhya Pradesh, India: A review

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The present study reviews the pattern of modern pollen-rain carried out from south-western Madhya Pradesh, India, which largely revealed that *Tectona grandis* (teak), despite being an enormous pollen producer (7500 average number of absolute pollen/flower) (Bhattacharya et al., 1999) and the dominant forest constituent (80 to 95% of the total forest constituents), is recorded mostly in low frequencies, attributable to its low pollen dispersal efficiency as well as poor pollen preservation in the sediments. However, *Madhuca indica* (Mahua) and other dominant members of Sapotaceae (cf. *Manilkara hexandra* and *Mimusops elangi*) have always shown their typical behaviour in the pollen spectra and representing in high frequencies, which is assigned to its local abundance around the provenance of the samples, coupled with high dispersal efficiency as well as good pollen preservation in the sediments. Meanwhile, the other usual and characteristic associates of teak (*Tectona grandis*) in the tropical deciduous forests, despite being the common elements of the forests, are under-represented, sporadically represented or not represented at all, which could be ascribed to their low pollen productivity owing to entomogamy. Various factors that affect the deposition pattern of the diverse constituents of the tropical deciduous forests dominated by teak (*Tectona grandis*) have been discussed and suggestions were also given while interpreting the pollen sequences generated from the sedimentary beds in terms of past vegetation and climate in a chronological order in the region during the Late Quaternary Period.

Biography

M F Quamar has earned his PhD degree in Botany from the University of Lucknow, Lucknow, Uttar Pradesh (India) in 2011 while carrying out research as Birbal Sahni Research Scholar (BSRS) at Birbal Sahni Institute of Palaeobotany (BSIP), Lucknow (U.P., India) and postdoctoral studies/Birbal Sahni Research Associateship from the same institute (BSIP). He has recently joined the institute (BSIP) as Scientist "B" and carrying out research on palaeoclimatology with the use of pollen as proxy during the Late Quaternary Period. He has published 18 papers in reputed journals, reviewed papers for the international peer reviewed journal and presented work in international conferences (WCPS, Thailand, IPC/IOPC, Japan, PAGES, Goa).

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