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Pollen analysis of spider web samples from Korba district, Chhattisgarh (Central India): An aerobiological aspect

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Pollen analyses of spider web samples, collected from the recently planted *Tectona granids* (teak)-dominated tropical deciduous forest at Bhulsidih village of Korba district (Chhattisgarh, Central India), shed light on the relationship between the extant vegetation and pollen rain. The study revealed the dominance of pollen of herbs and trees, whereas shrubs, fern spores and algal remains are meagre. Amongst the tree taxa, Sapotaceae, *Syzygium*, *Holoptelea*, *Lannea coromandelica*, *Shorea robusta* and *Grewia* are dominating with moderate to low values and intermittent presence of *Madhuca indica*, *Terminalia*, *Mitragyna*, *Schleichera*, *Anacardiaceae*, *Diospyros*, *Emblica officinalis* and *Flacourtia*. However, rest of the forest constituents are either not represented at all despite their presence in the floristic, which could be attributed to their low pollen productivity owing to entomophilies as well as their poor pollen preservation pattern. On the other hand, the ground vegetation is represented by very high frequency of grasses (Poaceae) along with Tubuliflorae, Chenopodiaceae/Amaranthaceae and Cerealia, nonetheless, *Artemisia*, *Xanthium*, *Malvaceae*, *Caryophyllaceae* and *Justicia* in moderate to lower values. Ferns which occur abundantly along the adjoining stream banks are marked by the sporadic retrieval of trilete spores that could be ascribed to the prevailing damp condition around the sampling provenance. The study, in addition to understanding the pollen-vegetation relationship could also be helpful in aerobiological study, especially in assessing the allergenicity of various pollen grains/spores in the area of investigation, causing bronchial asthma, hay fever (allergic rhinitis/pollinosis), naso-bronchial allergy and other respiratory disorders along with conjunctivitis, contact dermatitis, eczema, food allergies and other health disorders.

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Identifying, managing, and monitoring high conservation value forests in peninsular Malaysia for biodiversity conservation and sustainable forest management

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Tropical forests in Malaysia safeguard enormous biological diversity while providing crucial benefits and services for the sustainable development of human communities. They are highly significant globally, both for their diverse and threatened species and as representative unique ecosystems. In order to promote the conservation and sustainable management of forest in this country, the Forestry Department (FD) is using ITTO guidelines on managing the forest under the Sustainable Forest Management practices (SFM). The fundamental principles of SFM are the sustained provision of products, goods and services; economic viability, social acceptability and the minimization of environmental/ecological impacts. With increased awareness and recognition of the importance of tropical forests and biodiversity in the global environment, efforts have been made to classify forests and natural areas with unique values or properties in a universally accepted scale. In line with that the concept of High Conservation Value Forest (HCVF) first used by the Forest Stewardship Council (FSC) in 1999, has been adopted and included as Principle '9' in the Malaysia Criteria and indicators for Forest Management Certification (MC&I 2002). The MC&I 2002 is a standard used for assessing forest management practices of the Forest Management Unit (FMU) level for purpose of certification. The key to the concept of HCVF is identification of HCVs of the forest. This paper highlighted initiative taken by the Forestry Department Peninsular Malaysia in establishing and managing HCVF areas within the Permanent Forest Reserves (PFE). To date, almost all states forestry department in Peninsular Malaysia have established HCVFs in their respective states under different categories. Among others, the establishments of HCVF in this country are related to the importance of conserving biological diversity of the flora in the natural forest in particular endemic and threatened species such as *Shorea bentongensis*. As such it is anticipated that by taking this important initiatives, it will promote the conservation of biological diversity in the PFE of Peninsular Malaysia in line with the Sustainable Forest Management practice.

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