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Endemic rainforest and its geological past in the Indian Peninsula

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The Indian sub-continent as of today holds two hotspot areas of Biodiversity. Out of these the south-western ghats flora is an endemic assemblage and most of the species are listed as threatened flora. Therefore, it is commonly known as fossil flora, the reason being its long existence in the area since Tertiary period. Palynological analysis of onland Tertiary sedimentary sequences, Quaternary sediments and the offshore Quaternary sediment cores reveal a continuous existence of the rainforest flora in the peninsular India. Results reveal a trend in species extinction and displacement due to drastic cyclic climatic changes during the Quaternary period from glacial to interglacial periods. The vegetational reconstruction through the study of pollen/spores and other non-pollen supporting forms show equilibrium with the changing climate and sea level changes. The Last Glacial Maximum (LGM) was most vulnerable for the plant diversity. During this period the species took refuge either as riparian forest or in pockets around the remains of water body as 'refugia' which rejuvenated and expanded during the warmer and humid conditions of Middle Holocene period. The present day vegetation is therefore, rightly said to be as 'fossil flora'. However, a declining trend in species diversity is evident through palynology since the latter part of Late Holocene which is enhanced due to varied anthropogenic activities.

Biography

Anjum Farooqui is a Scientist working in Birbal Sahni Institute of Palaeobotany (affiliated to Department of Science & Technology, Government of India) at Lucknow, India. She did her Masters and PhD in Botany and Environmental Sciences. She has twenty years of Research Experience in coastal ecology, sea level changes, plant diversity and its evolution in the Indian peninsula during the Quaternary Period. She has published more than 72 research papers in journals of national and international reputation.

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