

APPLICATION OF MODERN POLLEN-CLIMATE RELATIONSHIPS FROM SOUTHEASTERN INDIA TO THE INTERPRETATION OF PAST CLIMATES

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The distribution of vegetation over the globe playing a key role in the carbon cycle, it is pertinent that the recent development of global biome models, enable both translation of simulated climate variables into biomes and the inference of biomes from pollen data. While the biome model design does overcome some complexity and bias inherent in the pollen signal, the extraneous heterogeneity in the modern data set has to be minimal. India being one focus of the current global pollen data synthesis, we present homogeneous modern and fossil data sets compatible for biomization, from southeastern India, a region characterized at present by a climatic heterogeneity that suggests the possibility of a palaeoclimatic picture different from those already reconstructed for southwest or Northeast India. The fifty modern soil surface samples were collected between 11°N 76°45'E and 13°N 79°15'E in the altitude range, 200m to 1500m from different forests in distinct rainfall regimes in the Eastern Ghats, South India. The fossil data comes from a well-log conducted at a natural tank in Sinnababu Samuthram (11°55'N 79°41'E), upto a depth of 130cm from the surface. The litho-log was consistent with the carbon curve. Modern pollen-climate relationships were calibrated to reveal the presence of several climatic and physiognomic markers. First investigations of the profile suggests a wetland in the recent past.