

Significance of Palynology in Understanding Age, Palaeoclimate and Correlation of Indian Gondwana Sediments



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Abstract The Gondwana sedimentary deposits are spread across the Indian Peninsula. The Gondwana sequences in Peninsular India are mostly non-marine. Based on morphological features of palynoflora and megaf flora, palynomorphs from different biostratigraphic sediments (Talchir to Supra Panchet) of Gondwana show a high degree of variation. Based on the microstructures of exine among spores, the primitive and younger states of the sediments are confirmed with time. The morphological characteristics of pollen spores help in their evolutionary sequence through different time scales, hence playing a vital role in biohorizon stratigraphy. Apart from this, palynomorphs also help in delineating the biostratigraphic age, First Appearance Datum (FAD), LAD (Last Appearance Datum), DOD (Dominance of Datum), assemblage zones, and palaeoclimate. The current paper provides an overview of the role of palynology in determining the biostratigraphic ages, palaeoclimatic conditions, and correlation of Indian Gondwana sediments. The data presented here is the basic framework for further refinement of chronology based on palynology. It is a compilation of published data from peninsular India.

Keywords Palynology · Indian Gondwana · Correlation · Palynostratigraphy · Palaeoclimate

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