

This Memoir provides a comprehensive review of the Precambrian basins of the four Archaean nuclei of India (Dharwar, Bastar, Singhbhum and Aravalli-Bundelkhand), encompassing descriptions of the time–space distribution of sedimentary–volcanic successions, the inter-relationship between tectonics and sedimentation, and basin histories. Studies of 22 basins within the framework of an international basin classification scheme deepen an understanding of the basin architecture especially for cratonic basins. Most Indian sedimentary successions formed as cratonic to extensional-margin rift and thermal-sag basins, some reflecting mantle plume movement, subcrustal heating or far-field stress. This Memoir shows that Phanerozoic plate-tectonic and sequence stratigraphic principles can be applied to the Precambrian basins of large Archaean provinces. The differences between the stratigraphic architecture of the Indian Precambrian and examples of Phanerozoic basin-fill successions elsewhere are ascribed to variable rates and intensities of the controls on accommodation and sediment supply, and changes inherent in the evolution of the hydrosphere–atmosphere and biosphere systems.