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CONFERENCE ON 'MESOZOIC MAGMATISM OF THE EASTERN MARGIN OF INDIA'

28-29 February, 1992, Department of Geology, Patna University, Patna.

The Conference was convened by the Patna University and was co-sponsored by Geological Survey of India, Indian National Science Academy and Arunachal Pradesh Mineral Development Corporation.

The Mesozoic era, spanning the period ca 250 to 65 Ma. witnessed great crustal upheaval leading to the fragmentation of the Gondwanaland. Widespread volcanism was also a characteristic feature. The extensive Deccan flood basalts have been studied in detail. In Eastern India the Rajmahal-Sylhet basalts together with those met with in the Bengal basin occupy an area of 2×10^5 km² which is approximately 20% of that of the Deccan Volcanic Province. The aseismic Ninety east Ridge and the Kerguelen hotspot have been linked on the basis of geophysical and geochemical data. A systematic lowering of ages from Rajmahal through the DSDP sites along Ninety east Ridge to the Kerguelen Plateau is well-known. Studies of the volcanic rocks from the Indian Ocean have brought out significant geochemical and isotopic contrasts to those of ridge basalts from other ocean basins. Existence of sub-oceanic mantle with DUPAL characteristics have profound geodynamic implications. The Mesozoic era also witnessed changes in life forms, climatic conditions, disappearance of dinosaurs and accumulation of fossil fuel.

The Conference provided an opportunity for the Indian geoscientists to discuss on-going research on various aspects of Mesozoic magmatism in Eastern India. The Conference was divided into six sessions, viz., Flood basalt (Geology, Petrology, Geochemistry and Isotope Geology), Carbonatite-Alkaline Complex, Ophiolite, Tectonics and Geophysics, and Mineral Resources. A total of thirty-five papers was received from 123 participants representing 15 Universities, Professional and Research Organisations from India and abroad.

A. De gave an overview of the volcanic history of Eastern India. S. K. Biswas emphasized bipolarity of Mesozoic volcanism in India—in Early Cretaceous (120-110 Ma, Rajmahal) and during Maastrichtian-Danian (67 Ma, Deccan basalts). He was of the opinion that the extinction of the Dinosaurs was not sudden but gradual. He also drew attention to the possibility that the Rajmahal volcanic rocks may really be related to the 85° East Ridge. N. C. Ghose discussed the petrology and geochemistry of the Rajmahal basalts. P. C. Rao discussed palaeomagnetic data on Rajmahal basalts in relation to the drift history of the Indian sub-continent. Alkaline and Carbonatite magmatism with possible implications for rifting was discussed by D. Kumar, R. Srivastava and A. K. Sen while accounts of lamprophyre-lamproite were given by A. Ghosh Roy. S. G. Karkare discussed the economic potential of the ophiolite of South Andaman. D. K. Paul highlighted the petrogenetic aspects of the coeval Rajmahal basalt and the Gondwana Lamprophyres. An interesting account (along with an audio-visual presentation) of the recent (May, 1991) volcanic eruption in the Barren Islands was given by D. Haldar.

Some new geochemical and Sr-Nd isotopic data were presented in the Abstract volume. Similarly new isotopic age data on Rajmahal (Ar-Ar), Rajahmundry and Deccan Traps were also included in the abstracts.

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