

HANDBOOK OF PLACER MINERAL DEPOSITS, G. Victor Rajamanickam (Ed.). New Academic Publishers, F-22B/3, Laxmi Nagar, Delhi - 110 092, 2001, 327p., Price: Rs.900/-

With the opening up of the exploitation of heavy minerals in coastal and inland sands by the national and multinational companies, the Indian shoreline deposits are getting increased attention for their constituent placer heavy minerals having many industrial applications. It is appropriate that at this juncture an International Seminar to assess the status of placer mineral deposits was held during January, 2000 at the Department of Earth Sciences, Tamil University, Thanjavur, Tamil Nadu, organized by Ocean Science and Technology Cell of the Department of Ocean Development. The present volume contains 32 papers including the inaugural address by T.K. Mukherjee and the presidential address by S. Krishnan and foreword by A.V. Muthunayagam.

The papers of the volume are grouped under seven sections, viz., Distribution (7 papers), Mineralogy (5), Geochemistry (4), Environment (5), Legislation (3), Economics (6) and Provenance (2). These papers are authored by active workers from the Universities and National Earth Science Institutions, besides a few from the Mineral Sand Industry. Thus, information and data on the placer deposits along coastal tracts of Maharashtra, Andhra Pradesh, Tamil Nadu and Kerala, besides a review on the Indian beach placers, are included in the section on 'distribution'. The papers in the next two sections deal with the 'mineralogy' and major, minor and trace elements, including REE, 'geochemistry' of the placer minerals that include ilmenite, garnet, sillimanite, zircon, monazite, rutile and leucoxene. Some papers dealing with statistical treatment of the geochemical data are also included. The papers in the section on 'environment' deal with eco-friendly mining in coastal areas, vegetation, environmental geomorphology and mining of gold placers. The papers under the section, 'legislation' highlight some of the

problems faced by the industry and desired legislative amendments for a sustainable and profitable sand-mining for heavy minerals. The section on 'economics' include a case study, an alternate chemical method for estimation of placer minerals of the sands (excluding pyriboles), and economics of exploitation of garnet and placer-gold in parts of Tamil Nadu. The last section on the 'provenance' deals with the Penner delta and a rethinking on the application of mineral assemblage to provenance.

Although the section wise classification is appropriate, it appears that inclusion of the papers under different sections has not been done with due care. Some of the data in line drawings is illegible. Captions for photomicrographs do not include the desired information like locality, transmitted or incident light, one or crossed nicols and bar scale, with photos of some textures showing less than the desired contrast. Degree of purity and quality of chemical analyses of a few minerals like ilmenite do not appear to be of satisfactory level as the data suggest some impurities in the analysed minerals, with omission of precision and accuracy of the analytical technique like ICP-MS. There are many grammatical mistakes which could have been taken care of during editorial processing.

The volume contains a wealth of new data and information on many placer mineral deposits and occurrences in India and hence of great interest to geoscientists, especially those working on the placer minerals, and sand-mining industry in India.

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