



BOOK REVIEW

RECENT DEVELOPMENTS IN INDIAN MICROPALAEONTOLOGY

Edited by Pradeep Kundal, Gondwana Geological Magazine. Special Volume 6, August 2003, published by Gondwana Geological Society C/o P. G. Department of Geology, Nagpur University, Law college Square, Amravati Road, Nagpur 440 001, Maharashtra, India. G. G. S. Special Publication Series, 312 pages, 2003, ISSN No. 0970-261X, Paperback, Rs. 650/= (Inland); US\$ 70.00 (Foreign).

This book is the proceedings of the XVIII Indian Colloquium on Micropalaeontology and Stratigraphy held in Nagpur (January 14-16, 2002). This excellent collection of papers contains 27 cream presentations indicating the worth and success of 3-day conference very well organised by Dr. Kundal and his colleagues and students. The book is organised into six sections: Foraminifera; Bryozoa; Ostracoda; Palynoflora; Calcareous Algae and Fungi; and Pteropods and Fish Teeth. The sections on Foraminifera and Palynoflora cover the bulk of the papers, including respectively 8 and 7, followed by 4 papers in Calcareous algae and Fungi, 3 papers in Ostracoda and 2 each in Bryozoa and Pteropods and Fish Teeth.

The book opens with a small note on "Problems of Global Warming and Role of Micropalaeontologists", the presidential address delivered by Dr. Rajiv Nigam, a protagonist of foraminiferal studies which are now becoming quite relevant in India. Fortunately, wherever he goes he finds that there is a scope for further development in foraminiferal techniques and a definite role to be played by foraminifera, be it the area of palaeomonsoon studies or discovery of ancient naval dockyard at Lothal. Some of the papers in the book are reviews presenting state of the art in respective areas of research. One interesting paper that caught my eye is by P. K. Saraswati who argues in a lucid style for the relevance of morphometrics and theoretical morphology in foraminiferal studies. The morphometric approaches certainly hold considerable promise for development in taxonomy and biostratigraphy; what will, however, encourage

Indian micropalaeontologists to pursue work in terms of quantification of their data, is the availability of right methodology. It will be a great service to micropalaeontology if specialists publish simplified versions of methodologies in morphometrics.

Other review articles providing useful coverage of stratigraphic aspects are in the fields of foraminifera (by Govindan on Tertiary larger foraminifera in the Indian basins and by Singh on stratigraphic evaluation of Rajasthan Shelf), Bryozoa (by Guha on Cretaceous bryozoa of Indian peninsula) and Ostracoda (by Bhandari on the Tertiary bioevents in the West Coast of India).

One of the highlights of this volume is the coverage of some aspects of foraminiferal research not explored earlier. Three papers devoted to these areas are on foraminifera in Oxygen Minima Zone (OMZ) by Saraswat *et al.*, on role of 12 S mitochondrial gene on morphologic variations in foraminifera by Saraswat *et al.*, and on planktic foraminiferal biogeography and oceanic circulation in Southwest Pacific by Srinivasan and Sinha. The attempts of Saraswat *et al.* pave way for future work on foraminifera for making predictions about climate changes during the late Quaternary and for using molecular analysis in taxonomic determinations. The paper by Srinivasan and Sinha leads the way for better understanding of global distribution of planktic foraminifera and oceanic circulation in the last 3.3 my.

Among the seven useful papers on Palynoflora, the paper dealing with plant-bearing coprolites from the Lameta Formation of the Pisdura Area, Maharashtra (by Mohabey and Samant) stands out as a very significant contribution pointing to a possible relationship between titanosaurid herbivorous dinosaurs and plants and implications as to diet and habitats of such dinosaurs. Another fascinating contribution in the volume is one devoted to evaluation of pteropod assemblages with respect to pteropod peak zone (by Bhattacharjee) reflecting chemostratigraphic signatures of value in correlation with deglaciation phase during the late Quaternary Period.

Being editor, P. Kundal's contribution (in association with his colleagues) on geniculate coralline and dasyclad algae is seen thrice in the volume, and in the light of poor taxonomic database of algal flora from the Indian Cenozoic successions, it is quite significant and fills this gap to some extent.

Overall, the book is well presented. The format, quality of paper, reproduction of plates, and illustrations are good. The Gondwana Geological Society deserves appreciation for bringing out such a useful publication for earth scientists at a modest price.

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