

## BOOK REVIEW

**ATLAS OF EARLY PALAEOGENE INVERTEBRATE FOSSILS OF THE HIMALAYAN FOOTHILLS BELT** by N.S. Mathur and K.P. Juyal, Wadia Institute of Himalayan Geology, Monograph Series, No.1, M/s Bishen Singh Mahendra Pal Singh, 23-A, New Connaught Place, Dehra Dun -248001, India, 2000, xxi + 257 pages including 27 figures, 16 tables and 45 plates. Rs. 1450/- (50 US \$).

Shallow marine-brackishwater sediments, commonly designated as the Kakara and Subathu Formations and ranging in age from Maastrichtian to early Lutetian, are extensively developed in the Lesser and the Outer Himalayas of Jammu, Shimla and Garhwal regions. These have been known to the earth scientists for the past over one and a half century. During these years, considerable work has been done on their stratigraphy and palaeontology, mainly dealing with molluscs, foraminifers and ostracodes. Literature pertaining to these faunal groups is widely scattered in innumerable publications, which are often not available to researchers. The present atlas on the invertebrate fossils of the Kakara and Subathu Formations brought out by the Wadia Institute of Himalayan Geology is therefore welcome.

The atlas embodies the results of significant contributions of the authors made during the last three and a half decades. The authors have dealt with the systematics of 168 species in a lucid way giving their original citation, type level and locality, selected reference(s), and descriptions. The fauna is represented by 32 species of larger foraminifers, 36 of ostracodes, 4 of bryozoans, 58 of bivalves, 33 of gastropods, 2 each of scaphopods and nautiloids, and one of anthozoan. These are illustrated in 40 impressive plates, in addition to 3 plates containing photomicrographs of the Kakara-Subathu-Dagshai succession and 2 plates of coloured field photographs. The atlas also gives a comprehensive picture of biostratigraphy of the Kakara-Subathu succession in these three regions. The authors have dated the succession in terms of Schaub's zonal scheme of 1981, based on Tethyan benthic larger foraminifers and have correlated them with standard zones established by other workers based on planktonic foraminifers and alveolinids.

The authors have established several faunal communities occurring in the Kakara-Subathu succession in different blocks traced from Jammu region in the west, through Shimla region, to Garhwal region in the east. These communities have been referred to different benthic assemblages and brackishwater assemblages of Boucot. Biostratigraphic investigations carried out by the authors in various blocks of the three regions reveal that similar environmental conditions are repeated in the Kakara-Subathu succession, as evidenced by the recurrence of fauna and lithology reflected by various faunal communities. Besides this, the authors have compiled paleoecological data of various taxa, mainly of larger foraminifers, ostracodes, and molluscs, after a thorough survey of vast literature published to date in Indian and foreign journals.

In Kakara-Subathu succession, the authors have recognised faunal variations which have been related to various geological events. They have also attempted biostratigraphic correlation of the succession with equivalent formations in the Zaskar Tethyan and Indus zones of the Ladakh region.

The atlas has only a few shortcomings. These are as follows:

- (i) The atlas is by and large based on authors' own works. It would have been better if they had located collections of other workers and incorporated them in their study.

- (ii) The authors have completely dropped the synonymies in the systematics of the fauna. At least the type references where taxonomic changes have occurred should have been incorporated.
- (iii) Instead of descriptions, it would have been better if the authors had given important diagnosis of the species.

These are subjective comments and do not detract from the value of the work. The atlas will certainly prove to be very useful to those who are working on the Early Tertiary formations in India and neighbouring countries. Dr. N. S. Mathur and Dr. K. P. Juyal deserve to be congratulated for their nice piece of work. The geological community looks to the Wadia Institute for publication of more monographs devoted to other significant geological topics of the Himalaya.

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## ANNOUNCEMENT

**NATIONAL SEMINAR ON ENVIRONMENTAL GEOLOGY WITH SPECIAL REFERENCE TO WASTE MANAGEMENT, 12-13 AUGUST, 2000.** The National Seminar on Waste Management is being organised by Geology Department, Andhra University, Visakhapatnam - 530 003. **Themes:** Red mud characterisation. Mining and ore dressing. Metallurgical waste. Waste water management etc. For details contact Dr. K. Viswanath, Convener and Organising Secretary, Seminar on Waste Management, Department of Geology, Andhra University, Visakhapatnam - 530 003. **Fax:** 0891-555547; **Phone:** 0891-550814 (R); **Email:** drviswanath@satyamonline.com

**REFRESHER COURSE ON LANDSCAPES AND PROCESSES, 13 November - 5 December 2000:** Department of Geology, Faculty of Science will organise the Refresher Course on "Landscapes and Processes" for college and university teachers from 13 November to 5 December 2000, sponsored by the University Grants Commission. Teachers who are interested in this course should contact Dr. N. Sharma / Dr. D.A. Sant, Course Co-ordinators, on or before 15 October, 2000. **Address:** The Course Co-ordinators, Refresher Course in Landscapes and Processes, Department of Geology, Faculty of Science, M.S. University of Baroda, Vadodara - 390 002. **Phone:** 0265-785560 (O).