

Geological Society of India in 1991 and the papers included in it are not listed in this Bibliography. Birbal Sahni who has contributed so much to the Indian Gondwana, has only three entries against his name! Reference to V J Gupta are included giving official approval to the reports of questionable authenticity. Author index is superfluous since entries are arranged alphabetically. More important would have been a subject index which is missing. Obviously not much care has been taken in making the Bibliography more useful.

B.P.R.

RIFTED BASINS & AULACOGENS, GEOLOGICAL AND GEOPHYSICAL APPROACH. (1993), S.M. Casshyap (Editor), Gyanodaya Prakashan, Naini Tal, 315p. Rs.350.

The book under review is the result of a symposium held at Aligarh in January 1990 on "Rifted Basins, Aulacogens in Sedimentation, Crustal Evolution and Mineralization", as part of an Indo-Soviet Collaboration Programme.

The papers are grouped in three sections, (A) Evolution and Structure, (B) Sedimentation, Magnetism, Volcanism and Geophysical signatures, and (C) Case Histories. The coverage is not uniform. More number of contributions are from Rajasthan and Western India. Archaean and Proterozoic sedimentary basins of South India and the Gondwana basins of Eastern and Central India are poorly represented.

The book starts with a lucid review of 'Riftogenesis' and its role in the evolution of the earth's crust by the Soviet scientist Khain. The subject is very interesting. It would be good if a genetic classification of rift basins of India is attempted tracing their development from the Archaean (greenstone belts), through Early Proterozoic (Aravalli) to the more recent Gondwana and Tertiary rift basins.

S.K. Biswas provides a tectonic framework for the intra-cratonic basins of late Palaeozoic to early Mesozoic age. Environment of deposition varies progressively from glacio-marine to fluvial and deltaic. He makes a passing reference to the Palghat gap as a shallow intracratonic rift with a brief incursion of sea during one of the Pleistocene interglacials. There is a good discussion of the Narmada-Son shear zone. Several instructive figures illustrate the dynamics of Indian plate motion.

U. Raval makes an interesting correlation between heat-flow patterns and intercratonic mobile belts of India and speculates on the causes of mobility. A.B.Roy and others argue that Aravalli of lower Proterozoic age represents a package of volcano-sedimentary rocks deposited in a proto rift basin. Stages in the evolution of the basin are discussed.

There are a few papers dealing with geochemistry and volcanism but these appear out of place and do not add much to the information about the basins.

Two contributions on the evolution of the Gondwana basins are important. These basins appear to have developed over reactivated Proterozoic rifts. Palaeogeographic reactivation of the Gondwana basins, south of Narmada-Son lineament, and their possible extension in the Bundelkhand block is interesting but requires to be supported by further intensive sedimentological studies.

India has nearly 26 sedimentary basins ranging in age from Proterozoic to the present. Our information on the tectonic features of these basins and the character of their sedimentary fill

is inadequate. Detailed geological maps of individual sedimentary basins with cross sections and detailed lithostratigraphy are badly needed.

The present attempt can be considered as a beginning in the major task of building up of a convincing geological history of the sedimentary basins of India. We feel a time has come for drawing up a programme for a detailed geological, geophysical and structural study of the sedimentary basins of peninsular India as a whole. It is a challenging task.

The volume will be a welcome addition to Earth Science libraries. It is well bound and profusely illustrated. Price is reasonable.

B.P.R.

**A PICTORIAL ATLAS OF GONDWANA LITHIC FILL IN INDIAN PEN-
INSULA.** 1993. By A.B.Dutt and Abhijit Mukhopadhyay. Geological Survey
of India, Special Pub. No.33, 80p. Rs.175.00; \$65.00

This atlas contains 53 colour pictures of important features in the Gondwana Formations in Peninsular India mainly dealing with lithological variations and sedimentary structures. These indirectly enable inferences of environments of deposition of the sediments in different periods during the Gondwana era. Illustrations cover examples from each of the major basins in Damodar, Satpura, Mahanadi and Godavari.

It would have been better if the exact locations of the illustrations were also given to enable those interested to visit the outcrops/sections. Some of the photographs are poor reproductions - too light or too dark. Greenish Shales of Talcirs is a conspicuous omission.

It is hoped that the Geological Survey of India would now try to bring out similar atlases on Deccan Traps, Proterozoics, Siwaliks etc. in the near future.

R.V.

PERSPECTIVES ON THE THAR AND THE KARAKUM. (1992) Amal Kar,
R.K. Abichandani, K. Anantharam and D.C. Joshi (Eds.) CAZRI, Jodhpur.
Published by Department of Science and Technology, New Delhi, 329p.

In pursuance of the policy of the Department of Science and Technology, New Delhi, to encourage cooperation between the Soviet and Indian scientists in different fields of mutual interest, a number of seminars were held. This volume is the publication arising out of a discussion meeting organised in the Central Arid Zone Research Institute, Jodhpur in March 1991.

The regions chosen for discussion are the Karakum desert in Soviet Central Asia and Thar desert in India. The former occupies about 360,000 sq.km and the latter 259,000 sq.km. There are 16 papers by the Soviets and 15 by their Indian counterparts. An attempt has been made to cover all the possible aspects of the studies made so far and compare and benefit by them. The topics covered include climatology, geomorphology, soils, vegetation, wild life, water resources, agriculture, livestock, energy resources, population and the processes of desertification and the measures to control the same.

Whereas a substantial part of the data on the Thar desert might have been published earlier by the Indian scientists, the information on the Karakum must be new to the Indian readers. The papers on Karakum however do not contain as many illustrations as one would like to