

The authors could have endeavoured to avoid spelling mistakes (eg., p.1 - discription; p.10 - pelletiodes) and other mistakes (eg. p.4 - southwestern tip of India; p.5 - few smal l pockets; p.7 - Higher concentration of points out to; p.11 as far as eventual exploration is concerned) and

Figure numbers are missing on elemental distribution maps.

In spite of these deficiencies, I must emphasise that the authors have done a commendable job of the report, in content as well as get-up. It should serve as a ready reference to all those interested in the geology/geochemistry of continental margins.

*Department of Marine Geology
Mangalore University
Mangalagangothri - 574 199*

R SHANKAR

GEOCHRONOLOGY OF THE PRECAMBRIAN ROCKS FROM RAJASTHAN AND NORTHEASTERN GUJARAT, (1992), By C. Anjaneya Sastry, Special Publication No. 25, Geol. Surv. India., pp. 96; Price Rs. 82.00; \$. 30

The Aravalli-Delhi belt of Rajasthan and NE Gujarat is one of the important Precambrian belts of India. The stratigraphic position of this important belt and its major components has remained in doubt for a considerable time. The present publication of the Geological Survey of India presents a generalised stratigraphy based on isotopic data which could form the basis of future studies.

The recognition of (1) an older Bhilwara Supergroup (3000-2500 m.y.), (2) migmatites of the Sarda Dome as part of the basement, (3) fixing the age of the Berach granite at 2500 m.y. marking the Archaean-Proterozoic boundary are some of the Archaean events. The rest succeeding Aravalli Supergroup is assigned an age of 2000-1900 m.y. based on the syntectonic Darwal granite. Delhi Supergroup rocks fall within the age group of 1700-850 m.y. Two distinct events are recognised within the Delhi's, an older, between 1700-1500 m.y. restricted to NE Rajasthan and the other forming the Aravalli range at 850 m.y. This 850 m.y. event appears to be widespread. The Vindhyan and Marwar Supergroup rocks form the youngest Proterozoic cover. Their age relation however, are not clear.

A useful discussion of the present status of the geology of the region, with special emphasis on stratigraphic problems awaiting solution is furnished. A fuller discussion of the geochronological data is presented later. Table. 6 summarizes the Rb-Sr age of the granite from the belt. Appendix I tabulates all the available age data from Rajasthan and NE Gujarat, and Appendix II furnishes field data, analytical procedures, petrography and geochemistry of the analysed samples.

Review papers of this kind summarizing the information upto the time of review, are of distinct service, focusing attention on key areas for further research. Review of existing data, outlining of the problems awaiting solution with suggestions for future work are all presented with clarity. The author of the special publication has to be complemented

on presenting a fair and convincing account of an admittedly complicated geological terrain affected by several orogenies.

All students of the Indian Precambrian will be benefitted by this useful publication.

B.P. RADHAKRISHNA

LAND RESOURCES AND THEIR MANAGEMENT FOR SUSTAINABILITY IN ARID REGION, (1996), *Eds.* A.S. Kolarkar, D.G. Joshi and Amal Kar. Scientific Publishers, 5A New Pali Road, P.O. Box. 91, Jodhpur - 342 003. pp.316.

Central Arid Zone Research Institute (CAZRI) at Jodhpur, since almost from the time of its inception in 1959, has been in the forefront in studies connected with conservation and utilization of the fragile resources of the arid zones in the country, particularly in Rajasthan. This has enabled it to be recognised as an institution capable of imparting training to scientists in other neighbouring countries subjected to partly or wholly arid conditions. It is this recognition by UNESCO that enabled its funding a course of 3 weeks duration in CAZRI, Jodhpur in 1993. The present publication under review is the proceedings of this course.

Many efforts have been made, off and on, in the earlier decades to tackle individual problems faced in the arid regions by *ad hoc* solutions. Some of them were indeed successful, but had some adverse repercussions in some other related fields. It is this realization that has brought in the concept of sustainable development, even if the quantum of growth or development may not turn out to be as much as that achieved in earlier solo efforts in specific fields.

The concepts and criteria are briefly enumerated (J. Venkateswarlu; M.S. Rathore). Land is the primary source (A.S. Kolarkar) and the processes in it are described (Amal Kar), with emphasis on one of the tools of study (Surendra Singh). Needless to say, climate is a very important basic factor controlling many processes in this environment (Y.S. Ramakrishna), followed by limited water resources (H.P. Singh; D.C. Sharma and Paliwal; M.S. Khan), which have to be very carefully harnessed. The relatively less fertile soil has to be improved or at least preserved from further degradation (D.C. Joshi; B.L. Jain), keeping natural vegetation intact to the extent possible (S.K. Saxena). It is well known that pasture land is an important constituent in these regions to be preserved for the increasing livestock population and this aspect is also dealt with (Vinodsharma; H.C. Bohra).

Though agriculture cannot be said to be a major occupation, it yet needs to be sustained as much as possible (A.L. Cogle *et al*; N.L. Joshi; S. Kathju; R.K. Aggarwal) using varying combinations of resources and techniques. Anthropogenic effects on land cannot be ignored (R.P. Dhir), besides social constraints (L.P. Bharara) and related aspects (K.N.K. Chauhan; R.N. Singh). Where a particular plan of action is not found to be sustainable, an alternate land use systems or a combination of systems are to be evolved (T.K. Bhati; L.N. Harsh; B.B. Vashishtha; M.S. Yadav).