BOOK REVIEW

CRUSTAL EVOLUTION AND METALLOGENY IN INDIA by Sanjib Chandra Sarkar and Anupendu Gupta. Cambridge University Press, New Delhi. **840** pages. **Price:** Rs. 1950 / USD 140

This comprehensive volume comprises 8 chapters amongst which 7 deal with different geographic / geologic domains in India, their crustal evolution and metallogeny and the last chapter provides a synoptic view of crustal evolution and metallogeny in India in the backdrop of the world scenario. Each of the first seven chapters is divided into two parts: the first covers the geology and crustal evolution trend in that domain while the second part deals with metallogeny therein. The final chapter summarises Earth history, supercontinent cycles and regional metallogeny and also deals with an overview of ages of host strata and ore deposits in India.

In recent years some volumes have been published on the geology of India and its crustal evolution; but they either overlook metallogenesis or give a scanty treatment. As any picture of crustal evolution remains incomplete without metallogeny, the present volume under review fills up this gap in our geo-scientific literature. This is the main attraction for this voluminous book, which can be used as a reference volume as well as for post graduate studies.

The main highlights of this book include:

1. An excellent treatment of classification and genesis of BIF in the context of western Dharwar schist belts (p.12-15) and Sandur schist belt (p.111-113).
2. Similarities, contrasts and relationship between western and eastern Dharwar blocks have been treated in a masterly fashion. Three different models have been discussed in detail to examine how the two blocks juxtaposed.
3. The discussion on gold mineralization in the Dharwar province (p.97-102).
4. The discussion on granulite facies metamorphism in Southern Granulite Province and the sparse mineralization in it (p.128-129).
5. The treatment of tectonic evolution of the Central Indian Precambrian crust (p.210).
6. A superb account of the Malanjkhand Cu-Mo-(Au) mineralization with excellent figures and maps. It is followed by an in-depth discussion on the origin of the deposit (p.278) in the perspective of the genesis of porphyry copper systems worldwide (p.280-288).
7. A detailed and critical discussion of the Fe and Mn mineralization in the central Indian region forms a conspicuous feature of this book.
8. A lucid description of the evolutionary history of Eastern Ghat Mobile Belt and its relationship with the East Gondwana super-continent.
9. A thorough treatment of the BIFs in eastern India (p.357-363).
10. A very useful section on 'stratigraphic/geochronologic sequences in eastern India and their regional correlation' (p.414-417) and a summary of crustal evolution in eastern

India (p.417-423).

11. Genesis and evolution of ores along the Singhbhum shear zone. Excellent discussion of the IOCG hypothesis and its applicability, as proposed by some workers recently for the Singhbhum Cu-U belt.
12. Similarly, discussion of the characteristics, ore genetic classification and genesis of the chromite deposits of South Jharkhand-Orissa region.
13. Metallogeny in NE India about which no comprehensive scientific literature exists.
14. In depth analyses of the tectonic models for the evolution of the Aravalli-Delhi orogenic belt, northwestern India.
15. A thorough treatment of Himalayan Geology along with an outline of metallogeny in this youngest Indian terrain.

As seen in most such voluminous publications, some omissions and commissions are also observed in the book. Some of these are mentioned below, so that they can be taken care of whenever the next edition of this volume is brought out.

(i) The treatment of the 'Gangpur Group' is rather short. (ii) Gem minerals are known in the Eastern Ghats belt but they don't find a mention in the relevant section. (iii) Amjhore pyrite is covered under eastern Indian craton? Being part of the Vindhya, it could have been treated under central India. (iv) The discussion on U deposits of Meghalaya could have been in more detail. There is no mention of Wakhyn deposit. (v) Similarly, there is no mention of W mineralization in central India. True, they are sub-economic, but so are all other W occurrences in the country. They should be discussed keeping in mind the strategic importance of the metal. (vi) Some important references have been missed. For example: on Ghattihosahalli barite in western Dharwar craton; granulite metamorphism and nickeliferous rocks in the Balaram-Mawal area of western India and Tosham Sn polymetallic ores of western Indian craton. Besides, in some of the generalized discussions in the book, more updated references should find a place. (vii) Finally, some corrections are required in several figures, such as at p.5, 8, 163, 242, and 433.

The mention of the above gaps and lapses in the book, though pertinent, in no way undermines the importance of this book. It is expected that not only academic and research institutions but also anybody interested in metallogeny in India in the context of its crustal evolution, will find it a useful addition to his/her collection. The price of the book is acceptable in view of its coverage, number of pages and figures, including coloured plates at the back.

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