BOOK REVIEWS

Jones, A.P., Wall, F. and Williams, C.T. Eds. *Rare Earth Minerals. Chemistry, Origin and Ore Deposits*. London (Chapman & Hall), 1996. xvi + 372 pp (with 12 pictures in colour). Price £29.99 (paperback). ISBN 0-412-61030-2.

This book is number seven in the Mineralogical Society Series. It brings together selected papers and some additional contributions based on a successful conference held at the Natural History Museum (London) in April 1993. It contains 13 chapters and an appendix, each with separate reference lists, plus index.

The initial chapter (P. Henderson) provides a brief review of the *REE*. Chapter 2 (R. Miyawaki and I. Nakai) discusses the crystal chemical aspects of *RE* minerals and summarizes their structure types. This is followed by a review and classification (R.H. Mitchell) of perovskite minerals, which are important *RE* hosts in alkaline rocks. The next chapter (P.J. Wyllie, A.P. Jones and J. Deng) explains the concentration of *REE* in the Mountain Pass carbonatite on the basis of experimental work, much of which is yet to be published in detail. Chapter 5 (R. Gieré) explores the formation of *RE* minerals in hydrothermal systems, using carbonate-hosted veins from northern Italy as a case study. A review of *RE* minerals from the classic syenite pegmatites at Langesundsfjord, Norway, is presented next (A.O. Larsen). Chapter 7 (R.P. Taylor and P.J. Pollard) treats the *REE* mineralization at Thor Lake, Canada, and Chapter 8 (F. Wall and A.N. Mariano) presents data on *RE* minerals in the Kangankunde carbonatite, Malawi. The next two chapters are somewhat related, discussing *RE* mineral distribution in laterites formed on alkaline complexes in Brazil (G. Morteani and C. Preinfalk) and authigenic *RE* minerals associated with karst and bauxite development (Z.J. Maksimović and Gy. Pantó). Chapter 11 (C. Wu, Z. Yuan and G. Bai) gives an overview of the *RE* deposits of China, which probably has the most important economic *RE* deposits in the world. This is followed by a chapter (A.P. Belolipetskii and A.V. Voloshin) on the classic Kola peninsula. These two contributions contain much new information in English for the first time. The final chapter (C.T. Williams) is a very useful review of analytical methods for *REE*, with special emphasis on EPMA. A glossary of *RE* minerals, arranged alphabetically according to their anions, concludes the book.

Obviously, this book presents a wide range of information and topics. The editors state in their preface that they have tried to include a tutorial component by adding a mixture of contributions, some of a review nature, to illustrate the variety of current work on *RE* minerals. To this end they have certainly succeeded well. The special feature of this book, in contrast to e.g. the sort of competitor volume *Geochemistry and Mineralogy of Rare Earth Elements* (Reviews in Mineralogy, Vol. 21, 1989, by MSA), is the emphasis that is placed on the *RE* ore deposits, their mineralogy and origin.

The book is well written and produced and contains a large number of figures and tables. Typographical errors are few (but what about La_2O and $LaCHCO_3$ on Fig. 4.1?). I have only a few adverse remarks, above all that I would have preferred an extended treatment of the Kola *REE* mineralizations. The chapter on perovskites contains recommendations of mineralogical nomenclature that have not been endorsed by the IMA Commission on New Minerals and Mineral Names. The construction of mineral names like 'Yb-xenotime-(Y)' is a nuisance. I miss the mineral kamphaugite-(Y) in the glossary (not because I described it in 1993, but it is actually mentioned in the Kola paper). Again, the recent revision of the formula of tengerite has not been taken into account.

I can strongly recommend this book to anyone interested in *RE* minerals in general and their deposits in particular; in fact, it can be regarded as essential reading. It is good value for money.

G. RAADE

Robinson, G.W. *Minerals: an Illustrated Exploration of the Dynamic World of Minerals and their Properties*. London (Weidenfeld and Nicholson), 1994. 208 pp, 140 colour photographs. Price £19.99. ISBN 297-83329-4.

This beautifully illustrated book presents many of the most photogenic minerals in the Canadian Museum of Nature, via more than 140 full-colour photographs and a carefully interwoven text. In the introduction,