or not your subscription covers them—they may be the only up-to-date surveys of mineralogically significant regions.

M. J. O'DONOGHUE

Cruse, B. and Hentschel, G. (Eds.). *Zur Mineralogie und Geologie des Rheinischen Schiefergebirges.* Sonderband nr 33 of Aufschluss, 1990. 224 pp., illustrated in black-and-white and in colour.

The Rheinisches Schiefgebirge includes the volcanic area of the Eifel and papers in this volume describe the geology, palaeontology and mineralogy of the area as well as of the Ems and Westerwald districts. Short bibliographies are included in each paper and some accounts of mining are given. Trilobites from the Devonian in the Eifel region are major fossil features of this area west of the Rhine.

M. J. O'DONOGHUE

Rock, N. M. S. *Lamprophyres.* Glasgow (Blackie and Son Ltd.), 1990. viii + +285 pp., 13 maps. Price £49.00.

This book will be both loved and hated. It is packed with 'science' but is written in Rockese, i.e. a language which incorporates non-standard abbreviations, mostly mnemonic, created by Rock. For instance, 'CAL are most typical of convergent, AL/UML of divergent or passive, and LL/KIL of intra-plate settings.' By the time I had worked out what LL and KIL are (having turned to appendix A on pp. 214–16 for the code). I had forgotten what the others were, let alone thought out the deeper meaning of it all. This is compounded by the type unfortunately used by the printers, which does not distinguish between l (the letter) and 1 (the number). Thus M1, which includes melilitic rocks, is magma type number one, as I discovered on getting to p. 138 (it is not in appendix A). This is not to be confused with Ml, which is a common abbreviation for melilite (Rock's is Me). I nearly exploded on picking my way through this minefield of codings when I encountered TNT. That is Rockese for Ti-Nb-Ta (p. 215) or Ta-Nb-Ti (p. 134), and is used in describing -ve anomalies in spidergrams. I really fear that this potentially most informative book, on a subject of vital interest, may not be readable by ordinary geologists. Nor do I think there is an up-and-coming generation of petrologists who will happily talk about 'OL being an LL with oliv', to use three Rockese terms.

Rock includes lamproite and kimberlite within the lamprophyres. This is unfortunate, and clouds the discussions about 'true' lamprophyres. IUGS did, in 1989, temporarily classify lamproite and kimberlite within 'lamprophyric rocks' but Rock adjusts this to 'lamprophyres'. Lamproites and kimberlites are not lamprophyres. Rock's 1977 definition of lamprophyre in Earth-Science Review is better.

Nine chapters on 153 pages build half the book. Chapters 1–6 cover the history, classification, distribution, rock associations, petrography, mineralogy, geochemistry and xenolithic inclusions. The well-chosen data presented in these chapters are relentlessly methodical and easily accessed via the detailed list of contents (pp. v–viii) or the index. The tight text is relieved by invaluable maps, tables, binary and ternary diagrams illustrating the geochemistry of the major, trace and rare earth elements, and of the stable and radiogenic isotopes. Chapter 7, which includes a contribution by A. E. Wright and D. R. Bowes, is a novel in-depth analysis of the plutonic and volcanic equivalents of the lamprophyres. Chapter 8, on petrogenesis, cogently argues a mantle origin for most lamprophyres. Chapter 9 dwells on the association with gold and diamonds. The 'selected bibliography' at >1500 coded references on 57 pages is comprehensive. Appendix A interprets the ~200 Rockese terms; appendix B is an 8-page invaluable glossary of lamprophyric terminology; appendix C comprises 8 well compiled tables covering 40 pages based on distribution and type; and appendix D gives the rationale of his computerized lamprophyre database LAMPDA. The 11 page index is thorough.

'Lamprophyres' is a real break-through in a previously intractable subject and, despite its pitfalls, must be consulted by all petrologists.

M. J. LEBAS

Glasson, K. R. and Rattigan, J. H. (Eds.). *Geological Aspects of the Discovery of some Important Mineral Deposits in Australia.* Parkville, Victoria (Australasian Institute of Mining and Metallurgy: Monograph 17), 1990. x + 503 pp., 70 sketch-maps.

This monograph is a collection of 55 papers which overview the histories and geological aspects of exploration of the major mineral deposits in Australia. These include gold, copper, lead–zinc–silver, tin and tungsten, iron, coal, heavy mineral sands, aluminium, nickel, diamonds and uranium. Although published in 1990, most papers appear to have been written in 1986 although some contain references to 1989 (e.g. diamonds). Nevertheless this volume contains a wealth of

historical and geological data that will prove of great use to the student of exploration geology and as a ready source of literature on many major Australian ore deposits. The volume is well produced with most diagrams of high quality. The book is grouped into 'chapters' with each consisting of a collection of papers—usually an overview followed by detailed by concise reviews of individual occurrences in the relevant states. References are generally combined at the end of each 'chapter'.

The first 'chapter' or group of papers concerns the development of gold exploration. Individual papers concisely review the Kambalda, Telfer, Olympic Dam, Enterprise, Stawell, Kidston, Boddington and Mount Gibson deposits (areas). An overview of massive sulphide-hosted gold in Tasmania is given by Quick *et al.* A comprehensive account of the history and exploration for copper is given in the papers on the Gossan Hill, Cloncurry–Mount Isa, Cattlegrid, Olympic Dam and Mount Lyell deposits as well as overviews of copper in South Australia and New South Wales. Lead–zinc–silver exploration covers the regional aspects of the Archaean, Proterozoic and Palaeozoic deposits as well as detailed synopses of the exploration of the Elura, Dugald River, Scuddles, Que River and Hellyer, Sorby Hills, Blendevale and Woodlawn deposits. T. Kwak's review of tin–tungsten deposits in Tasmania contains a good summary of the geology of the major occurrences. Other reviews include the tin–tungsten deposits in New South Wales and Queensland.

A detailed overview of the history of iron ore exploration is given by Blockley *et al.* This gives insight into the politics and exploration of the relatively late developed large-scale iron ore mining industry in Australia (post 1960). Reviews of prospecting techniques, geophysical techniques and geological models are briefly included. A concise review of the Savage River deposit is given by Duncan and Weatherstone. Seventy pages of the monograph are devoted to coal in Australia. These accounts however are factual and historical, dealing primarily with the history of exploration and mining and only brief accounts of the geology of coal. Two short papers by Rattigan and Stitt and by Rattigan deal with heavy mineral sands and aluminium.

Hudson gives a detailed review of the evolution of geological concepts for the formation of komatiite hosted and other Ni sulphide deposits. Exploration methodology is briefly reviewed. A comprehensive and historical account of the exploration for diamonds is given by Smith *et al.* This gives a good account of exploration strategies and methods. The occurrence of uranium in Australia is discussed by Dunn *et al.* The major deposit types are described and brief reviews of major deposits and prospects are given in the accompanying papers in this section.

The economic geologist might be disappointed in the lack of detail on individual deposits but will find a comprehensive and reasonably up-to-date list of references that will permit detailed follow up of particular deposits. The overall approach of the monograph is dominantly factual, dealing with exploration histories and some of the geological thought behind the exploration. Metallogenetic and deposit models are only briefly addressed. However the reviewer found much of the monograph extremely interesting and a ready source of information on Australian ore deposits. The historical aspects of one of the principal industries that built Australia are of particular interest. This monograph is recommended to those who want a ready access to information on Australian ore deposits and to students and professional economic geologists alike.

K. R. McCLAY