

# BOOK REVIEWS

Leake, B. E. and Tanner, P. W. G. *The Geology of the Dalradian and Associated Rocks of Connemara, Western Ireland: a Report to accompany the 1:63 360 geological map and cross-sections Connemara*. Dublin (Royal Irish Academy), 1994. 76 pp; 12 maps, 4 coloured geological maps (1:10 560 & 1:63 360). Price £15.00.

Those who have long known Bernard Leake will be aware of his abiding love of Connemara, on the Irish west coast, and his interest in its geology. In this volume he, together with Geoff Tanner, summarises the field based research that he has carried out, together with numerous research students (of which this reviewer was one) and other colleagues, over a period of more than 40 years. Given the quote at the beginning of the book from Geikie's 'A long life's work', Leake may well see this as being a memorial to his life long work. My personal view is that, while understandable, if this is indeed so, then he belittles the major contributions that he has made to the wider fields of mineralogy, petrology and geochemistry.

The book is divided into ten chapters. These include a brief introduction to the geology and history of research in Connemara; a description of the Dalradian stratigraphy; a description of the orthogneisses and metagabbros intrusive into the southern part of the Dalradian inlier; a description of the structure of the metamorphic complex; a description of the metamorphism; and then a description of the younger rocks that border the complex. Then follows a series of largely structural descriptions, of complex and/or misunderstood subareas within the complex. The book concludes with what may best be termed as two extended abstracts dealing with the geochronology of the complex and with its structural setting within the overall Caledonide framework, followed by a summary chapter.

I found this a delightful book to read. There is obviously a deep understanding, not only of the geology, but of the way that our knowledge of the geology has evolved. I still enjoy the story that the Delaney Dome was named, and mis-spelt, after Miss Francis Delany who first identified its structure.

A few reservations. In some ways the book is a throwback. Yes, in the 1960s and 1970s structural geologists did count deformation phases (D numbers) as is done here. Those days have largely gone. From

amongst all the geochemical data that Leake and his co-workers have generated over the years I see no spidergrams, trace element plots or tectonic discrimination diagrams. The data are there, and it would have been nice to have seen them included and discussed in connection with the origins of the gabbros and granites. The metamorphic chapter is possibly over-brief. An attempt to plot pressures and temperatures on a map would have been of interest. The thermal history is still poorly defined, relying as it does on a large number of K–Ar dates. There is obviously still work to be done here with an obvious need for  $T-t$  plots based on a wider range of more valid thermochronometers.

For anybody who already knows Connemara, who wishes to begin to work there, or who is just interested, this is a very valuable and readable synthesis. It comes complete with a marvellous collection of coloured geological maps and sections including geological and structural maps of the whole province at a scale of 1:63 360. At the price, these maps make the synthesis astoundingly valuable and a must for all libraries and anyone interested in the geology of Ireland or of the Caledonides.

P. J. TRELOAR

Holland, G. and Eaton, A. N., Eds. *Application of plasma source Mass Spectrometry*. London (Royal Society of Chemistry), 1991. viii + 222 pp. Price £39.50. ISBN 0 85186 5666.

This book contains a collection of selected papers from the Second International Conference on Plasma Source Mass Spectrometry held at the University of Durham in 1990. The subject areas covered in the 21 papers are very broad and include applications using both inductively coupled plasma and glow discharge sources. Although most of the articles are applications oriented, a few deal specifically with fundamental instrument studies. Sample types covered by applications papers, include environmental, geological, nuclear, medical, biomedical and industrial examples. Three contributions are specifically concerned with alternative methods of sample introduction — hydride generation, laser ablation and electrothermal vaporisation. The applications papers illustrate the versatility of the technique and its now