BOOK REVIEWS

HIGGINS, M. D. 2006. *Quantitative Textural Measurements in Igneous and Metamorphic Petrology*. ix + 265 pp. Cambridge, New York, Melbourne: Cambridge University Press. Price £60.00, US $110.00 (hard covers). ISBN 0 521 84782 6.
doi:10.1017/S0016756807003172

Petrography – the study of rocks in thin section, or polished section – used to be the first port of call for geologists seeking to understand rock history and to build up a detailed picture of regional development. It is cheap, requiring only a microscope, and for a long while was remarkably effective as a research tool. In recent years there has been a huge development in geochemical analysis, much of which involves rock powders. Coupled with a decrease in the extent to which optical microscopy is taught to undergraduates, this has resulted in a widespread move away from basic microscope observation. However, petrography does seem to be making a comeback, driven by the realization that geochemistry is complemented by the spatial information recorded in rocks, and facilitated by the development of novel ways of quantifying texture.

One of the main drivers of the resurgence of petrography is Michael Higgins. He has developed a range of methods of quantifying textures, with wide application to Earth Science. He has now written what I consider a definitive guide to quantification of textures in igneous and metamorphic rocks. The book is weighted towards crystal size distributions, as this is where most recent developments (including Higgins' own) are concentrated. However, it also covers shape (of both solid grains and liquid-filled pores), grain and lattice preferred alignments and the spatial distribution of grains. The book is divided into chapters considering each of these factors in turn, with each chapter including a detailed explanation of the theory and techniques, together with abundant examples from the literature demonstrating the kinds of information that can be extracted. It is encyclopaedic (leading to an occasional dryness of the text), with an extensive bibliography. The diagrams are clear and well drawn. The index is exemplary.

At £60 (hardback only) it is not cheap, but it represents an excellent investment for anyone (including sedimentologists) using thin sections as a research resource. It should be in all departmental libraries.

Marian Holness

COMIN-CHIARAMONTI, P. & GOMES, C. B. (eds) 2005. *Mesozoic to Cenozoic Alkaline Magmatism in the Brazilian Platform*. 750 pp. São Paulo: Editora da Universidade São Paulo. Price US $60.00 (hard covers). ISBN 85 314 0903 9.
doi:10.1017/S0016756807003111

This volume presents a wealth of data on the somewhat exotic alkaline and carbonatitic igneous rocks in and around the Brazilian Platform that developed prior to, during, and after the break-up of the supercontinent of Gondwanaland. These rocks are part of the Paraná–Angola–Etendeka Igneous Province. The magmatism was widely dispersed, long-lived and, apparently, pulsed, lasting from the Permo-Triassic through to the Palaeocene (250–50 Ma). Links between these rocks and the important Paraná and Etendeka flood basalt sequences that developed as Gondwanaland started to fragment are discussed. The association of these rocks with various structural features, arches, rifts and lineaments, is also examined and explanatory models are presented.

In this volume the editors have brought together a huge body of data amassed from studies over the past 20 years or so. The various authors are predominantly from Brazil and Italy and the standard of English is generally very good.

Introductory chapters set the scene with respect to the magmatism (Gomes & Comin-Chiaramonti) and structural controls (Riccomini *et al.*) within the context of the Paraná Basin and the Brazilian Craton. Subsequent chapters are, essentially, case studies of the many somewhat dispersed outcrops of these rocks throughout Brazil, Paraguay, Bolivia, Argentina and Uruguay. These range from large intrusive complexes covering hundreds of square kilometres and forming significant features, through to much less obvious and volumetrically small dykes and veins. Extrusive rocks, mainly lavas, are also represented. All aspects are covered: mineralogy, major- and trace-element compositions, and isotope (radiogenic and stable) geochemistry.

The wider context of these rocks is explored with a chapter on the geochemistry of Brazilian carbonatites and how they compare with other examples from the Paraná–Angola–Namibia Province (Comin-Chiaramonti *et al.*). Economic aspects of these rocks are outlined (as an important source of Nb and the REE, together with phosphate and vermiculite) in a chapter on Brazilian occurrences (Biondi).

Production quality is high, with colour illustrations throughout. Each chapter has an extensive reference list, most useful to workers new to the area as many publications occur in somewhat obscure sources. The price of US $60 appears to be anomalously low and this should entice workers on these rocks, worldwide, to invest in a copy. The editors are to be congratulated on producing an excellent volume that will act as a reference document for many years to come.

Brian Bell

THANH, T.-D. & KHUC, V. (eds) 2006. *Stratigraphic Units of Vietnam*. 526 pp. Hanoi: Vietnam National University Publishing House. Price US $40.00 plus postage (hard covers). No ISBN; publisher's serial number 1K-22DH 2006.
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For those geologists and biostratigraphers concerned with Southeast Asia this volume it a must. It covers the complete stratigraphic column for the country, Precambrian through Pliocene, and includes all of the offshore units based on numerous boreholes. For each of the many stratigraphic units a type locality is designated with its latitude and longitude, and a type section where the latter had been selected. Measured sections are provided for just about every unit, sometimes several. Stratigraphic thicknesses and their