PASSCHIER, C. W. & TROUW, R. A. J. 2006. *Microtectonics*, 2nd ed. xvi + 366 pp. + CD-ROM. Berlin, Heidelberg, New York: Springer-Verlag. Price Euros 59.95 (+ VAT at local rate), SFr 106.00, £46.00, US $79.95 (hard covers). ISBN 3 540 64003 7.
doi:10.1017/S0016756806002792

Microtectonics is a book that I have come to value highly since its publication in 1996. I like the excellent photographs of deformed rocks under the microscope, with their precise descriptive captions. I like the lucid qualitative descriptions of deformation processes in rocks, complemented by simple effective line drawings. Perhaps, subconsciously, I like the poetic vocabulary of microtectonics – snowball garnets and unswept cores, ghost structures and fabric skeletons, winged objects and mica fish, comminution and corrosion, transposition and dislocation – like the stuff of a fantasy novel. Whatever, this book has proved a reliable and informative reference on microscopic-scale deformation fabrics and the processes that form them.

Now we are treated to an expanded second edition, retaining all the strengths of the first. There are two new chapters: a short one on primary structures in igneous and sedimentary rocks and a longer one dealing with techniques other than conventional optical microscopy. Existing chapters have been updated and augmented, and the reference list has more than doubled in size. The generous half-page photographs have been retained and the line drawings have been redrafted with a clearer font. The number of figures has increased by 20 % and the number of pages by 28 %, despite a more compact text font. The book now comes with a CD containing colour versions of most of the book's illustrations, animations of some of the figures, videos of deformation experiments and other useful material. Although the book cover makes a selling point of the use of these images for teaching, their extraction from the CD is not as easy as it might be. However, the animations and videos are particularly helpful in understanding the development of microtextures, and are a valuable new resource.

Microtectonics is an excellent book for researchers and advanced students of structural geology, and Cees Passchier and Rudolf Trouw have done this community a service in producing the updated edition with such care.

Nigel Woodcock

BLUNDELL, D., ARNDT, N., COBBOLD, P. R. & HEINRICH, C. (eds) 2005. *Geodynamics and Ore Deposit Evolution in Europe*. Special Issue of *Ore Geology Reviews* **27** (2005), parts 1–3. ix + 349 pp. Amsterdam: Elsevier B.V. Price £85.00, US $135.00, Euros 120.00 (hard covers). ISBN 0 444 52233 6.
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The volume, originally published as a special issue of *Ore Geology Reviews*, details the results of a project to investigate the links between metallic mineral deposits and tectonic evolution in Europe. Understanding this linkage is vital in predicting the location of favourable areas for the discovery of new mineral deposits, in the few countries in which new mining is encouraged. The project ran from 1998 to 2003, was funded by the European Science Foundation and involved a number of universities and geological surveys.

The book is divided into a series of reviews of mineral deposit geology and the underlying tectonic development arranged by age and region. The first three chapters deal with SE Europe: the Neogene development of the Apuseni Mountains in Romania as well as Central Slovakia, the Rhodope Massif in Bulgaria and the Srednogori belt, also in Bulgaria. Two chapters discuss some Variscan areas of Europe: the Ossa Morena zone in Spain and Portugal and the Massif Central in France. The next chapter covers the massive sulphide deposits in the Urals followed by a chapter on the Pb–Zn and Cu deposits hosted in upper Palaeozoic–Mesozoic sediments, mainly in Ireland and Poland. The following chapter encompasses the mineral deposits of the Proterozoic–Archaean Fennoscandian Shield and there is a short final chapter synthesizing all the regions investigated. Each of the regional chapters is complemented by a brief two-page description of major deposits.

The coverage of the different regions is very variable in scope and strongly biased towards commodities of topical interest in the late 1990s: gold, lead–zinc and copper. A major omission for geologists exploring in 2006 is the general lack of discussion of iron, manganese, nickel, uranium and tungsten deposits. The geographical coverage omits any detail on Ukraine and there is little mention of deposits of the countries of former Yugoslavia or Greece.

The chapters dealing with SE Europe and the Urals are by far the most interesting as they provide a host of information not easily available in English and many new data, including age dates and petrochemistry. Discussion of the Variscan areas is very limited in scope, although covering new material, particularly on southern Spain. The chapter on the Mesozoic basins is much more regional and, although a useful review, contains little new. The review of the Precambrian of Fennoscandia is comprehensive and provides a useful assessment of possible plate tectonic processes which are compared with those that operated in other continents. It would have been extremely informative to contrast those with geological development in the highly prospective areas in Ukraine. In general the volume is well edited and illustrated in colour although captions occasionally get lost. The book would have been made much more useful by the addition of a CD with the electronic deposit models and GIS data developed for the project.

Overall the volume does meet the aim of documenting the relation between mineral deposits and geodyamics, as well as providing robust models for exploration, albeit only in some parts of Europe. The volume is a must for anyone exploring in SE Europe (or the Urals) and would also provide a good starting point for geologists wanting to learn about the mineral deposits and tectonics of Fennoscandia.

Charlie Moon

SCHULZE-MAKUCH, D. & IRWIN, L. N. 2006. *Life in the Universe: Expectations and Constraints*. xiv + 172 pp. Berlin, Heidelberg, New York: Springer-Verlag. Price £27.00, €34.95 (+ VAT at local rate), US $44.95 (paperback). ISBN 3 540 30708 7.
doi:10.1017/S0016756806002809

'In searching for life beyond Earth, we would be well advised to expect the unusual'. Here in a nutshell (p. 119) is the central theme of this timely and interesting book. If the cynical definition of astrobiology is 'The study of things that do not exist', so the counter-point is if they do, they represent one of the most important of scientific questions, not least because if it transpires that on a distant planet there is not only a geology, but geologists. So how different will things really be? Schulze-Makuch & Irwin are broadly sceptical that things will be much like what we see on Earth, literally so because they go so far to doubt that 'eyes [must] inevitably