

BOOK REVIEWS

TWISS, R. J. & MOORES, E. M. 2007. *Structural Geology*, 2nd ed. xvi + 736 pp. New York: W. H. Freeman. Price £43.99 (hard covers). ISBN 9780 7167 4951 6. doi:10.1017/S0016756808004627

The first edition of this book, published in 1992, has deservedly become one of the standard texts for university courses in structural geology. The second edition involves considerable additions and amendments, and an increase in size of about 40%. What persists from the first edition, and what has changed?

One of the aims of *Structural Geology* remains to cover basic topics in the subject whilst linking these to more advanced research in the field. The book's approach is therefore more comprehensive than most comparable texts, and it is more suitable for intermediate to advanced undergraduate courses than for beginners. A second aim of the book is still to reflect scientific method by proceeding from observation and description, through kinematic and mechanical modelling, to interpretation and explanation. This approach is followed in each of the book's two central parts, on brittle and ductile deformation respectively. The description of joints and faults is therefore covered before stress and brittle failure theory, and the description of folds, foliations and lineations before strain. This order is the reverse of some taught courses, and its successful deployment in the book is a credit to a carefully written text and to clearly drafted illustrations. The third part of the book then covers rheology and its application to microscopic deformation fabrics and to scale modelling. Part four covers regional structural associations, and provides a link with a chapter on global tectonics. In the new edition, this chapter comes at the beginning rather than near the end of the book.

Many of the other organizational changes in the new edition involve moving more detailed material into topic boxes or appendices, either at the end of the chapters or at the end of the book. Strain measurement, geophysical techniques, and orientation data analysis are examples of such displaced material. The increased length of the book is due to the addition of a wealth of new material. Notable are the new topic boxes on scientific method, fractal geometry, and the pitfalls of confusing stress and strain terminology. There is a whole new chapter on development of deformation structures at plate boundaries. Overall, the revisions have succeeded in bringing the book up to date with recent research developments in structural geology and tectonics. However, it is a pity that there is still relatively little emphasis on methods of drawing cross-sections or on stereonet analysis. These practical methods are routes into structural geology from field mapping and remain important research tools.

The second edition of *Structural Geology* will undoubtedly ensure that its prominent position in the textbook market is maintained. A bonus for teachers is that all the excellent diagrams for the book are available online. The book is also a reliable reference source for professional geologists needing a clear, well illustrated link between undergraduate knowledge and a range of structural research fields. Introductory courses on structural

geology will probably still need to use simpler, if older, texts.

Nigel Woodcock

CARPENTER, K. (ed.) 2007. *Horns and Beaks. Ceratopsian and Ornithomimid Dinosaurs*. xi + 369 pp. Bloomington, Indianapolis: Indiana University Press. Price US \$49.95 (hard covers). ISBN 9780 253 34817 3. doi:10.1017/S0016756808004731

The preface to this book informs readers that this is the last of a number of edited volumes, focused specifically upon dinosaurs, to be produced by Indiana University Press; these books have emerged under the general umbrella of the 'Life of the Past' series that was the brainchild of the general editor James Farlow.

I have watched the emergence of these volumes with some concern. On the one hand it is perhaps of value to draw together scientific papers summarizing new discoveries and developments thematically in this way (armoured dinosaurs, carnivorous dinosaurs, etc.), but it is unclear to me quite what is the intended audience of such volumes. The books are adorned by (comparatively) artistic reconstructions of dinosaurs alive, and have the general 'air' of the coffee table volume (which they are not), yet they are structured as if they are compilations of serious articles that have been submitted to the editorial rigour of a scientific journal (which they are not).

What emerges is therefore a bit of a hotchpotch of articles written at various levels, with contrasting degrees of competence and not much evidence of critical review or editorial control. There are always a few tidbits of interest – that is inevitably the case for those that have specific interests in the groups in question – but are they worth the investment? Personally, I would say not (but that is a purely personal opinion, with which anyone may disagree at their leisure). The 'Life of the Past' series has been (and no doubt will continue to be) an interesting experiment in publishing conducted by IUP. The dinosaur series, for example, would never have been viable either conceptually or structurally had it not been for the marketing value of the word 'dinosaur'. Other books in this general series have lain more in the rather unusual territory of what I might call 'monographs with flashy dust covers'. These have certainly served the purpose of allowing genuine experts to write comprehensive personal texts that might not otherwise have been published by the better-recognized publishing houses (this is a valuable service without doubt).

I am sure that the editors will have been delighted with the products of their heavy labours, over the past few years, on these books. I trust, for IUP's sake, that they will have covered their production costs (but given that they are getting 'free' copy in the case of these edited volumes I imagine that their profit margins are actually pretty robust) – I just cannot imagine who will be buying such works out there in the real world (but equally that might well be a failure of my limited imagination). Equally the authors are adding to their CVs, so everyone wins – or so it would seem. I just wonder how posterity will judge such mini-series as the one on the dinosaurs.

David Norman