

BOOK REVIEWS

DIXON, T. H. & MOORE, J. C. (eds) 2007. *The Seismogenic Zone of Subduction Thrust Faults*. ix + 680 pp. New York: Columbia University Press. Price US \$125.00, £73.50 (hard covers). ISBN 9780 231 13866 6. doi:10.1017/S0016756808004834

This is the second volume in the ‘Margins Theoretical and Experimental Earth Science Series’, published by Columbia University Press. ‘MARGINS’ is a multi-themed NSF-funded research programme concerned with the origin, development and deformation of continental margins. This volume contains 20 papers, representing contributions to a workshop meeting on ‘The Seismogenic Zone Revisited’ held in March 2003.

The volume is arranged into five main sections, concerned with: (1) ‘The incoming plate’, which looks at the influence of sediments, thermal structure and subducting topography on the subduction process (3 papers); (2) ‘Convergent margin structure, fluids and subduction thrust evolution’, with particular studies of Barbados, Nankai and Nicaragua (5 papers); (3) ‘Laboratory studies’, concerned mostly with friction (3 papers); (4) ‘Seismic and geodetic studies’, with a mixture of observational and modelling contributions (5 papers); and (5) ‘Regional scale deformation’, with two contributions, one contrasting continental collision and subduction, and the other a review of the Andes.

The book is lavishly produced, in colour, and many of the papers are substantial (30–70 pages long), with the character of reviews. All are thoughtful, authoritative and were written with some care. The authors are, on the whole, people who are leaders in their fields and certainly worth listening to. None the less, I found the whole assemblage disappointing, for two reasons.

The first is that the book appeared four-and-a-half years (*sic*) after the meeting. Even by the usual standards of conference proceedings, this is a long delay. As a result, there is (with one exception, discussed below) no reference to any work published after 2004, even though the book was published in September 2007. Thus, although the book performs a function, by publishing review papers that are considerably longer than would appear in normal journals, these papers, especially in some areas, are considerably out of date already. This is a shame, given the quality of thought and preparation the authors must have put in to them: their use is now severely limited. This delay in publication was also a feature of the first ‘MARGINS’ volume in this series (*Rheology and Deformation of the Lithosphere at Continental Margins*) which also appeared more than four years after its generative meeting. Is such a delay inevitable? I don’t think so: the Royal Society, in London, always produces its conference volumes within nine months of the meeting and, as a consequence, they are always topical, authoritative and up-to-date. So it is possible to publish in reasonable time, and both the ‘MARGINS’ leaders and Columbia University Press should think about this.

The second reason for disappointment, hanging over this volume like a black cloud, is the unfolding drama of the large earthquake sequence in Sumatra, beginning with the first and biggest of December 2004. With the exception of a passing reference in the Editors’ Introduction and a single modelling

paper that refers to some of the earliest publications, there is no mention of these events, which include three with moment-magnitude greater than 8.4, and two of the ten largest earthquakes anywhere in the last 100 years. Because they occurred in the modern instrumental era and in an area which, with great foresight, had been studied and partially instrumented beforehand, these earthquakes have told us an enormous amount about the subject that is the title of this volume: yet they contribute nothing to the volume itself. This, of course, is mostly bad luck; but the meeting was 21 months before the 2004 earthquake, and for a book to come out nearly three years after this seminal, almost iconic, subduction zone thrust event and hardly mention it at all, looks rather odd. One feels sorry for the contributor who stated of the Java region that ‘in general this subduction zone does not produce many large underthrusting events’, and they must be embarrassed that this remark was published in 2007.

So would I pay £73.50 (US\$125) for this book? I have to say I would not. Review papers have their place if they are timely. But if the subject is moving quickly, in this case partly because of natural events, they are of little use, except as a matter of record in libraries, if they are published four years after they are written.

James Jackson

NUDDS, J. R. & SELDEN, P. A. 2008. *Fossil Ecosystems of North America. A Guide to the Sites and Their Extraordinary Biotas*. 288 pp. London: Manson Publishing (published in the USA by University of Chicago Press). £24.95 (paperback). ISBN 9781 84076 088 0. doi:10.1017/S0016756808004718

Building on the success of their *Evolution of Fossil Systems*, published in 2004, which covered 14 choice fossil-lagerstätten from around the world, John Nudds and Paul Selden have produced a new selection of 14 North American fossil-lagerstätten. Chronologically, these range from the Proterozoic age Gunflint Chert up to the Quaternary age Rancho La Brea tarpit biota. Co-published with the University of Chicago Press in the US, this volume is, like its predecessor, very well illustrated (over 300 pictures) including colour photos of the sites, rocks and fossils plus drawn fossil reconstructions and maps locating the sites and their geology.

For each site, the general context and importance is described along with the history of discovery, stratigraphic setting, palaeontology, palaeoecology, comparison with contemporary sites elsewhere in the world and finally a bibliography. At the end of the book, an appendix lists museums associated with each site and its fossils plus detailed and practical information about visiting the sites, including contacts, telephone numbers, etc. Altogether, *Fossil Ecosystems of North America* is a mine of information, well researched, and will fulfil several quite different functions.

These range from being a very useful student information resource on some of the world’s most important fossil-lagerstätten to being a useful guide to amateur palaeontologists who want a very well informed, accurate and up-to-date introduction to these famous sites, perhaps with a view to visiting them. And the new B5 size for this volume makes it