BOOK REVIEWS

SEILACHER, A. 2007. *Trace Fossil Analysis*. xiii + 226 pp. Berlin, Heidelberg, New York: Springer-Verlag. Price Euros 53.45, SFr 87.00, US $69.95, £38.50 (hard covers). ISBN 9783 540 47225 4.
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Many books on trace fossils have been published in this decade. But Adolf Seilacher's book is like none of them. In this remarkable book, at least as much space is occupied by illustrations as by text. And most of the illustrations are the renowned art-work of Dolf himself. Some of these figures have been published before, but most of these are improved and updated. Many new figures are here, and the 75 plates are enjoyable to look at, detailed and precise, their accuracy deriving from Dolf's mastery of the old-fashioned *camera lucida*. The plates convey an immense amount of information. A picture is worth a thousand words.

The text is closely tied to the plates. It is intense and detailed and clearly written. Ichnotaxonomy is bypassed, which greatly eases the flow of the text. Likewise, references to the literature also are omitted from the text, making reading much easier.

The book is divided into chapters, each dealing with a group of tracemakers, or a behavioural set of trace fossils, starting with trace fossils produced by vertebrates. Dolf emphasizes the basic concepts and interpretative pitfalls of tracks and track preservation through a series of case studies. This chapter includes swimming trails of fish. It is followed by chapters on trilobite burrows, arthrophycid burrows, deep-sea farmers, etc. Each chapter contains a number of plates, and begins with lists of references to the literature. To each reference is attached a brief statement of contents with respect to the chapter. These literature lists have been compiled with the help of Gabriela Mángano, Luis Buatois, Andrew Rindsberg and the late Roland Goldring. The fullness of these lists is an enormous help to the reader, the lists being placed within the chapter, close to the plates they refer to. Except in these lists, nowhere is an author or date of authorship used to interrupt the flow (well, almost nowhere).

It is relieving and relaxing to see trace fossil names used as labels and not dealt with as nomenclatorial phenomena. These names are bent as completely informal family names to describe groups, such as teichichnids, lophocteniids, daedaloids and ophiomorphids. The use of some ichnogenera is confusing. *Granularia* was synonymized with *Ophiomorpha annulata* Ksiazkiewicz by Uchman (1995); *Muensteria* is used instead of the generally accepted *Taenidium* (but D'Alessandro & Bromley (1987) is listed in the references); and *Isopodichnus* is used instead of *Rusophycus* (while Bromley & Asgaard (1972) is listed). (Well, to mention a few more quibbles, I do not like to see spatangoid echinoids likened to bulldozers, and *Daimonelix* was made by beavers, not prairie dogs, and *Chirotherium* tracks were made by pseudosuchian reptiles, not sauropod dinosaurs (Tresise & Sarjeant, 1997)).

Make no mistake, this book is made for serious students of ichnology of all ages and stages. It is superbly organized, superbly illustrated, a treasure trove of knowledge and understanding – understanding of how trace fossils work and what they can tell us. The complex and detailed artwork is beautifully presented and printed, not too small for old eyes, black-and-white with an elegant emphasis on details in blue. Photographs of outstanding specimens are scattered at key positions through the book. €53.45 is somewhat expensive, but this hardbound book is well, well worth it.

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References

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ONCKEN, O., CHONG, G., FRANZ, G., GIESE, P., GÖTZE, H.-J., RAMOS, V. A., STRECKER, M. R. & WIGGER, P. (eds) 2006. *The Andes. Active Subduction Orogeny*. Frontiers in Earth Sciences Series. xxii + 569 pp. + CD-ROM. Berlin, Heidelberg, Dordrecht: Springer-Verlag. Price Euros 149.95, US $189.00, £115.50 (hard covers). ISBN 9783 540 24329 8.
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In the past 15 years a major research programme has been carried out in the central Andes, funded principally by the Deutsche Forschungsgemeinschaft (DFG) leadership by prominent German geoscientists and involving the collaboration of universities and geological surveys in Chile, Bolivia and Argentina: Collaborative Research Centre SFB 267 'Deformation processes in the Andes' 1993–2005. Multidisciplinary research, which has included an important element on the collection and interpretation of new geophysical data, began in a broad transect through the Altiplano–Puna region (~16–28° S) and continued for the final six years in the south-central Andes (~35–42° S). Many of the results of the project have appeared in theses, conference proceedings and published papers, but this beautifully produced book is a comprehensive summary of the main findings and their implications in an easily accessible format. It consists of 30 chapters, with an accompanying DVD (auto start with very clear instructions). The book is dedicated to Peter Geise (1931–2005), a principal instigator of the programme. The contents are divided into five Parts corresponding to identified themes, each with a one-page explanatory introduction. Each chapter also has its own ~300 word abstract.

Part I ('The Big Picture') has contributions on the large-scale aspects (although the first two deal only with the northern transect): deformation and crustal shortening through time; the space–time evolution of volcanic activity and its relationship to deformation; geochemical and isotopic evidence for the recycling and re-working of the basement rocks; seismic analysis of subduction-related deformation,