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Oxford Dictionary of Earth Sciences (3rd ed.), edited by Michael Allaby, 2008. Oxford University Press, Great Clarendon Street, Oxford OX2 6DP, England. Paperback, 654 pages. Price GBP 11.99; USD 18.95. ISBN 978-0-19-921194-4.



The ongoing specialization in science, including the earth sciences, poses great terminological problems. The number of terms grows with the same speed as the number of publications, and hardly any earth scientist is still capable of keeping pace with the developments in his own, narrow specialism. On the other hand, innovative research requires combination of data from various disciplines. It is therefore not surprising that there is a constant need of encyclopedias, ranging in coverage from (in principle) the entire earth sciences (Selley et al, 2005) to specific earth-scientific disciplines such as sedimentology (Middleton, 2003). Such encyclopedias are expensive, however, and commonly out of reach of the average researcher, and certainly of students. For this reason, somewhat less extended works are published. Well known, particularly in the U.S.A., is the Glossary of Geology (Neuendorf et al., 2005), whereas the Oxford dictionary of Earth Sciences is more commonly used in Europe.

The latter work has now been updated, resulting in a third edition. It contains now over 6250 entries, many of which are new, particularly in the fields of physical geography and geomorphology. It also includes some 130 line drawings, 50 of which are new. The previous, second edition, published in 1999, was already an excellent work. A review in *Nature* stated: "I marvel at how the editors have compressed so much so clearly."

What should then be the judgement about this third edition? Of course, one can only agree that this is again a marvellous piece of work. Not only are the over 6250 entries written in a clear, concise style that is useful for specialists and well understandable for non-specialists, but this new edition has also a number of most useful appendices, some of which are new. They include an updated bibliography, a revised geological time scale, lunar and Martian time scales, stratigraphic units, wind-strength scales, and SI units. Particularly useful is a newly added appendix of recommended web links on the dictionary's companion website (www.oup.com/uk/reference/resources/earthsciences).

In spite of all these advantages, a critical reader (and I am one of them) will easily find that much can still be improved. Part of this may be due to the personal interests (and hobby horses?) of the editor, who selected 30-40 contributors who, however, come for a large part from the same universities. Contributors from more universities might have had different (additional) inputs. It is in this respect also remarkable that Oxford University Press mentions that the entries are "on geology, oceanography, volcanology, mineralogy, palaeontology, and planetary science, as well as climatology, geochemistry, and petrology." Are, for instance, mineralogy and palaeontology not an integral part of geology? Moreover, the above statement shows a clear bias towards physical geography and to geological disciplines that are related to endogenic processes.

Why is sedimentology not mentioned? The reason is easy to find: relatively little attention is paid to this "exogenic" discipline of the earth sciences. Sedimentological topics that currently receive much attention are neglected (as an example, the term "seismite" is lacking), and

sedimentological topics such as heavy minerals that now undergo a strong revival (Mange & Wright, 2007) are not mentioned either. For the readers of the *Journal of Sedimentary Research*, this book may therefore be somewhat disappointing. The same holds for one of the other fundamental “exogenic” earth-science disciplines: stratigraphy. Most influential with respect to, particularly, chronostratigraphic terminology, have been the Elsevier wall charts, of which a sixth edition has been published in the meantime (Haq, 2007). The bibliography of the book refers, however, only to the 3rd edition (Van Eysinga, 1975). It is interesting in this context that Appendix A (Stratigraphic units as defined in the North American Stratigraphic Code, 1983) uses the terms “Early” and “Late” for both epochs and series, whereas the terms “Lower” and “Upper” should be used for series, because these are lithostratigraphic units, not chronostratigraphic units.

Several more of such shortcomings can be noticed. I mention the above ones because they could have been avoided so easily, if the text for this new edition would have been read critically by somebody with a “fresh” view. Let's hope that the fourth edition will overcome such shortcomings. It is already a very good dictionary, for a price that makes it easily reachable for each individual earth scientists, professionals and students alike, but it could have been even better.

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