

Book Reviews

Pollen et spores d'Europe et d'Afrique du Nord, by M. Reille. Laboratoire de Botanique Historique et Palynologie, Marseille, 1992, 520 Opp. ISBN 2-9507175-0-0.

This volume represents a photomicrographic atlas of the spores and pollen grains from plants endemic to North Africa and Europe, as well as those of several commonly cultivated trees/shrubs and "a few unusual plants" including *Cycas*, *Encephalartos* and *Welwitschia*. 2,276 taxa, with affinities among 900 genera and 186 families, are represented in over 13,000 micrographs. Taxa are illustrated by multiple micrographs, each of which has been imaged at a different focal plane through the pollen grain or spore ("LO-analysis"). To better facilitate comparisons, all micrographs, with the exception of those of one family, are presented at magnifications of either $\times 500$ or $\times 1,000$ and grouped together in full-page plates. Each of the 446 plates includes at least one scale bar, and the plates/micrographs are arranged according to pollen type (e.g. "spore trilète", "spore monolète", "monocolpé"). In addition to the micrographs, the volume includes a seven page introduction, with an English translation, and three indices keyed to genus, family, and pollen type.

The primary objective of this volume is to provide palynologists with a photomicrographic database that is based on LO analysis of the exine. To this end, the volume meets the author's goal. It is well illustrated with good quality micrographs, and these are nicely presented in large format plates. As a reference, however, I initially found the volume somewhat cumbersome to use, principally due to several formatting issues. Most importantly, the volume lacks a table of contents. Although the plates are arranged by pollen type, the user is relegated to search the pollen type index for a sought-after form. Once in this index, the user will find that pollen types are arranged alphabetically by type, with representative families and subordinate taxa successively alphabetized as

well. Consequently, the volume lacks any listing of the sequential order of plates/pollen types. Furthermore, the plates for several taxa categorized within particular pollen types appear to be out of order. In "monocolpé" for example, the Cycadaceae, Ginkgoaceae, and Magnoliaceae are separated from all other monocolpate grains and situated between "spore monolète" and some "inaperturé". Another noteworthy point concerns the brief list of references that follows the introductory section. Although this list is clearly not intended to be comprehensive, I found it perplexing that the six volumes of *The Northwest European Pollen Flora* (Punt et al. [Editors], 1976–1991, Elsevier) were not cited.

All reservations aside, this volume is a potentially useful resource for many palynologists, certainly those working in North Africa and Europe. Despite the aforementioned formatting problems, in practice I would either prepare my own table of contents or adhere page tabs to all, or the most frequently used, pollen type sections.

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Quaternary Environments, by M.A.J. Williams, D.L. Dunkerley, P. De Deckker, A.A. Kershaw and T. Stokes. Edward Arnold, Hodder & Stoughton Publishers. 1993, 329 pp. Price £16.95. ISBN 07131-6590-1.

The field of environmental history is interdisciplinary, dynamic and highly relevant to the topic of global change. All these ingredients combine to make this a popular offering for university students eager to learn about the natural world. However, the very advantages of this topic make it difficult to present to students. For one thing, the study of the Quaternary is highly interdisciplinary, making it necessary to introduce widely divergent subjects and scientific techniques. Students must be introduced to biology, geology, climatology, and archaeology, to name a few. The dynamic nature of global environmental research forces rapid turn-