

chapters, on massif anorthosites (J.-C. Duchesne), although informative, seems out of place in this volume, for there is no obvious mineralogic or crystallographic aspect of the feldspars that can currently be genetically tied to anorthosites. Three papers on feldspathoids (by S. Merlino, C. M. B. Henderson, and A. D. Edgar) provide the best coverage of this subject that is available and round out the volume nicely. The conference organizers, the authors, and the editor have produced a valuable addition to an important field of mineralogy.

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Paleolimnology

Lake Sediments and Environmental History. Studies in Palaeolimnology and Palaeoecology in Honour of Winifred Tutin. ELIZABETH Y. HAWORTH and JOHN W. G. LUND, Eds. University of Minnesota Press, Minneapolis, 1984. xviii, 411 pp., illus. \$55.

Over the last decade the subject of paleolimnology has rapidly gained popularity with the scientific community. Despite this surge of interest, there are surprisingly few volumes of collected papers dealing with the subject. The publication of *Lake Sediments and Environmental History* admirably fills the void.

The book opens with a warm introduction by John W. G. Lund outlining the career of Winifred Tutin, to whom the volume is dedicated. The contributed papers were collected to reflect the research interests of Tutin, which are wide-ranging, and the 14 chapters that make up the volume cover most topics that are of interest to paleolimnologists and palynologists. The contributions include geochemical studies, such as a comprehensive review by D. R. Engstrom and H. E. Wright, Jr., of the applicability of inorganic geochemistry to paleoecological reconstructions and a paper by P. A. Cranwell summarizing his stratigraphic analyses of triterpenoids from lake sediments. The problems associated with establishing a reliable chronostratigraphy are addressed in three chapters. Chapters by F. Oldfield and P. G. Appleby and by J. D. Eakins *et al.* deal with radiometric techniques, and one by R. Thompson provides a global review of paleomagnetism. The remainder of the volume mainly deals with fossil algae and pollen, including considerations of microfossil recruitment and

sediment focusing. These studies are based largely on sites from the United Kingdom, but the data are usually discussed in a more global context. The study of fossil pigments receives only cursory treatment, and the analysis of animal microfossils is not considered.

A chapter by E. S. Deevey, Jr., on stress, strain, and stability in lacustrine ecosystems is especially thought-provoking. Borrowing terms from macroeconomic theory, Deevey examines the structure, function, and holistic nature of lake systems. A careful reading of the chapter should convince most skeptics that paleolimnological studies are not simply historical documentations but also allow for an "explanatory description and prediction of a system's trajectory in time." The chapter will undoubtedly become required reading for many graduate seminars.

Overall, the book represents an important contribution to the study of environmental history, providing an interesting collection of reviews and case studies of use to nonspecialists as well as to practicing paleolimnologists. A detailed table of contents, lists of illustrations and tables, and a subject index enhance the volume's usefulness as a reference.

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Chronology of Eclipses and Comets, AD 1-1000. D. Justin Schöve. Boydell, Dover, N.H., 1985. xxxviii, 356 pp. \$29.50.

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