

BOOK REVIEWS

Carbonate Rocks, by *Lucian Cayeux*, translated and updated by *Albert V. Carozzi*, Hafner Publishing Co., Darien, Conn., 1970. 506 p., 26 pl. \$37.50.

Of the several monographs on sedimentary petrography by Professor Cayeux, this one on carbonate rocks is perhaps the best known, and, with interest in modern carbonates so strong, its availability now in English is most timely. The work is divided into two parts: one on limestones, including those formed in freshwater, and the other on dolomites. In his discussion of each rock type, Cayeux includes its analysis, petrography (with particular emphasis on textures and structures), occurrences (both modern and ancient), and genesis, reviewing past ideas as well as presenting his own. Certain emphases—for example, on chalk and oolites—reflect the author's special interests, but the coverage is comprehensive. Cayeux offers a masterful description and a carefully reasoned presentation of the genesis of each rock type or structure, including many observations with a very modern viewpoint.

Carozzi's translation is the product of a uniquely fitting combination of talents: as a scholar who has translated a number of contributions to the history of geology, and as a scientist whose specialty is sedimentary petrography. He has used this knowledge to include with the translation annotations both updating the use of terms and referring the reader unfamiliar with this subject to pertinent modern works. Another writer might choose different references, but those which are included suffice to offer an unusual opportunity for tracing the development of ideas. In addition, Carozzi has included a subject index which greatly facilitates the use of the volume and enhances its continuing value for both the professional and the student.

Carbonate Rocks deserves reading both as a classic in the history of geology and as an outstanding contribution to the knowledge of the field with a surprising relevance to modern ideas. The fact that the meticulous descriptions and discussions raise questions is perhaps the greatest value of the book, for such questions may provide the inspiration to start the reader on a new path of investigation.

The book, a quarto with twenty-six plates has well-done printing and reproductions. Although the price is considerable, it is not unreasonable for the size of the book, and its contents will have continuing value for any geologist whose interest is in the interpretation of sedimentary rocks.

CHARLES H. SUMMERSON

Modern Chemistry: selected readings. *J. G. Stark*, Editor. Penguin Books, Middlesex, England, and Baltimore, Maryland. 1970. 317 p. \$2.45.

In one sense it is a little sad to realize that our chemical knowledge has reached such a state that no textbook for college freshmen or sophomores can hold all that we want students to learn. Like their mentors, the students must increasingly look to specialized journals for guidance—albeit *their* reasons for searching the literature are somewhat different than are those of their research professors. The journals they study are different, too, in that they are not primarily concerned with the presentation of new data, but with articles written with clear pedagogical intent. Stark here has assembled, from five such journals, a collection of articles designed to help the beginning professional chemistry student understand what he has read and heard elsewhere. Selections from the serial runs of *Chemistry Today* (3 articles), the *Journal of Chemical Education* (1 article), the *Chemistry Student* (7 articles), *Education in Chemistry* (2 articles), and *Chemistry* (1 article) guarantee that the student reader will encounter prose designed for him and he will not be frustrated by the kind of elegant shorthand that the pages of the *J. Am. Chem. Soc.* or the *J. Chem. Phys.* provide.

Stark grouped his selections under six major headings: atomic and molecular structure (3); stereo chemistry (2); energetics and kinetics (4); acids and bases (2); the chemical elements (3); and organic-reaction mechanisms (1). In all of the papers the units are SI units (a very worthwhile reform), and Stark has provided a brief comment about the use of the SI system. While all the selections are potentially useful and interesting, those on energetics and kinetics and on acid-base theory are exceptionally helpful. Illuminati's paper on organic-reaction mechanisms perhaps assumes more knowledge than the average freshman in the United States has, but careful readers of standard organic texts should find much here to beguile them.

Charges about omissions or inclusions can easily be levelled against any compilation. Such quarrels are often of little merit and of even less profit. There is no doubt in my mind that Stark's compilation is of considerable use; the student and his teacher must decide in each case which selections are most helpful. I hope that many will find the selections here useful.

J. Z. FULLER

Science in France in the Revolutionary Era. Described by *Thomas Bugge*, Danish Astronomer Royal and member of the International Commission on the Metric System (1798–1799). With extracts from other contemporary works. *Maurice P. Crosland*, Editor. Published jointly by the Society for the History of Technology and the M.I.T. Press, Cambridge, Mass., 1969. xvi+239 p. \$10.00.

Thomas Bugge, the Danish Astronomer Royal, arrived in Paris on 18 August 1798, invited, along with others, to inspect the French accomplishments in establishing the metric system. Nearly a month passed before Bugge's official duties began, and he improved each day by visiting the chief French educational and scientific establishments, as well as the major industrial plants. Crosland has edited the English (1801) edition of Bugge's reports, adding important sections from the German edition (1801), which has been omitted from the English work. Bugge's comments are interesting and informed about much of what he saw, since he himself was a practicing scientist. Even Bugge's anti-Jacobin bias has filtered into the text.

There is more to the text than Bugge's account. In an imaginative way, Crosland has inserted reports by other observers at the points where they are *a propos*. Most of them are from works that are now hard to come by, or have been relegated to obscurity. The net result of Crosland's treatment is that French science in the revolutionary period is given a new kind of immediacy. Real people are active in their scientific pursuits, and further, real people were reacting to what they saw.

The book is marred only by the circus of type faces used for printing; while each face is clear, the juxtaposition of sizes and type density keep the reader readjusting on every page. Fractions and numerals leap from the text (see, for example, p. 207) in a way that is particularly disconcerting. It is regrettable that the letter press could not have been presented in a more aesthetic way.

J. Z. FULLMER

Steno as a geologist. *Gustav Scherz*, editor. Odense University Press, Acta Historica scientiarum naturalium et medicinalium, edidit Bibliotheca Universitatis Hauniensis, vol. 23, 319 p., frontisp., 124 text figs.

This book is a monument both to Steno (1638–1686) and to Gustav Scherz (1895–1971). Scherz was correcting the proofs of this book when he was killed in a street accident in Copenhagen, but fortunately, the work was far enough advanced so that it could be completed and published in 1971. It is a monument to Scherz because his reputation as a scholar brought willing response from his colleagues all over the world to prepare the articles for this book. It is of course also a monument to Steno, whose main geologic work was published in 1669 and whose stature as a founder of geology has grown through the three centuries since then. The reader will find here much new information on Steno and his works and a measure of the interest which still attaches to this many-sided Danish expatriate in Italy and Germany.

One useful feature is the inclusion of a portrait and biographic sketch of the author of each article. An index would have been a convenient addition and abstracts of each article would have helped also, although some of the articles do have a "summary" or "conclusions" which may serve the same purpose. These are minor faults, amply balanced by the abundance of illustrations and the new information presented. Anyone who teaches geology at any level should be familiar with the contents of this book or, better still, own a copy for ready reference.

AURÈLE LA ROCQUE

Mushrooms of the Great Lakes Region. *Verne Ovid Graham*. Dover Publications, Inc., New York (paperback reprint of 1944 edition). 1970. vii+489 p. \$4.50.

This reprint, originally published in 1944, describes approximately 1200 species of mushrooms, including the fleshy Ascomycetes and fleshy and woody Basidiomycetes. More than one half of these are illustrated by drawings which are very helpful in depicting the form and certain morphological features of the species. The nomenclature and taxonomy follows that of the acknowledged specialists of the 1930's, such as Kauffman, Seaver, Coker, and Overholts. The works of these and other specialists of the period were closely followed in compiling the descriptions. In the descriptions, macroscopic characters are emphasized, although size, shape, and color of spores are given for some species. There is a key to the genera, and keys to species are included where necessary. A dictionary of technical terms is also included.

Taxonomic concepts today, especially as they relate to such genera as *Clavaria*, *Boletus*, *Hydnum*, and *Polyporus*, are quite different from those of the period when this reprint was originally published. Recent taxonomic publications would need to be consulted for the currently accepted names for many of the species treated. Most of the species included are found in Ohio. This paperback is well printed and adequately bound.

C. WAYNE ELLETT