

his fellow historian James Malin but this does not lessen the worth of what he has written. He leaves unresolved the problem of what needs to be done to attain the desired balance of man in modern scientific civilization and nature. Another historian and student of American literature, Dr. Charles Sanford, commenting on Thoreau's work in his recent book, *The Quest for Paradise*, has said that it is not to advocate a back-to-nature movement which is impossible but rather that an "integrating midpoint" be sought with "wild nature as an instrument of self-discovery . . . preserving the best in each mode of life-simplicity without brutishness, refinement without affectation, learning without depravity."—ROBERT P. McINTOSH, University of Notre Dame, Notre Dame, Indiana.

LE PHYTOPLANKTON DE LA BAIE DES CHALEURS. By Jules Brunel. L'Institut Botanique de l'Université de Montréal, Contribution No. 77. Univ. of Montreal Press, Montreal. 1962. 365 pages, including 66 plates.

This is an account of the phytoplankton species collected during the summers of 1954 and 1955 at 15 shallow and deep-water stations in the Bay of Chaleurs between Quebec and New Brunswick. Net collections contained 74 spp. of diatoms, 14 Dinophyceae, 1 Xanthophyceae, and 1 Silicoflagellatae. There are keys to genera and some spp. Each sp. is considered with reference to detailed anatomy, local and general geographical distribution, and taxonomic relationships to other spp. The literature list is impressive but the most useful feature of this volume are the 66 plates of phase contrast photomicrographs.—R. W. PENNAK, Univ. of Colorado.

THE ANTS OF NORTH DAKOTA. By George C. and Jeanette Wheeler. University of North Dakota Press, Grand Forks. 326 p. 81 maps and numerous figures and tables. 1963. \$4.00, paper.

Until quite recently the ant fauna of North Dakota was almost entirely unknown until the Wheelers, Weber, Kanno and others made it common knowledge. The ant fauna of the state is especially interesting since North Dakota is not only one of our most northern states but it is also the meeting ground for eastern and western species. The state is particularly rich in formicine ants, 54 of the 83 species belonging to that subfamily and the genus *Formica* containing 31 of the 54.

This handbook, which is based on 5,000 collections, deals only with those ants that actually occur in the state. It is printed on such a high quality of paper that all reading matter is very legible and most of the illustrations are reasonably clear. The taxonomic treatment followed is that of Creighton. According to the Wheelers "This handbook is intended for anyone interested in ants of the northern plains, but is especially designed for amateurs. We hope it may be of use in high school biology courses. Myrmecologists and biogeographers will be concerned with the ecological and distributional data." We also learn that the authors had three main objects in mind when preparing it: What species occur in the state, where they occur, and why they occur there and not elsewhere.

This is without doubt the most complete handbook on the ants of a state that has ever been written in the United States. It is difficult to think of a thing pertaining to ants directly or indirectly that has been overlooked. It is impossible to list here briefly all the numerous and diverse topics that have been discussed; only the main ones can be mentioned: I. *Ants in General*—their recognition as ants, polymorphism, seasonal and colony cycles, nests, food, senses, classification, names and economic importance. II. *Methods of Studying Ants*—directions for collecting, studying and preserving including also the care of live ants in artificial nests. III. *North Dakota*

— its physiography, climate, soil and biota. IV. *The North Dakota Ant Fauna* — history, material studied, records of collections, list of species, nests, use of keys and keys to subfamilies, genera and species. V. *Biogeography of the Ants of North Dakota* — paleontological consideration, relation to Nearctic Fauna, geological and ecological distribution, endemic species, general summary. *Appendices* — brood and winged sexual forms in nest, glossary, pronunciation and derivation of technical names of genera and species, literature cited and finally an *Index* to the contents of the entire handbook. One will find the figures to the keys, the glossary and the map of the distribution of each species in the state most helpful in identifying ants. I regret, however, that the authors have employed colors so extensively in describing the various species of ants, since this is a variable character in most species and one cannot also eliminate the human error in deciding upon the "exactness" of a color. Regardless of this one main criticism, this handbook is highly recommended to everyone whether he be primarily or incidentally interested in ants.—MARION R. SMITH, Agr. Res. Serv., Ent. Res. Div., U.S. Department of Agriculture, Washington, D.C.

THE LYING STONES OF DR. JOHANN BARTHOLOMEW ADAM BERINGER BEING HIS LITHOGRAPHIAE WIRCEBURGENSIS. By Melvin E. Jahn and Daniel J. Woolf. Univ. California Press, Berkeley and Los Angeles, Calif. 221 p., 24 (unnumbered) plates. 1963.

A classicist and a graduate student of paleontology have teamed up to give us both the first English translation of one of the great rarities of scientific literature and the documentation behind one of the most famous hoaxes in the history of science.

The typical textbook version of the Johann Beringer story runs somewhat as follows: Beringer, physician, professor at the University of Würzburg, and amateur oryctocist, became so entranced by his study of figured stones that he easily fell victim to the machinations of his students who manufactured and planted in Beringer's favorite collecting spots all sorts of curious *lapides figurati*. In 1726 he published his *Lithographiae Wirceburgensis* containing many illustrations of these spurious objects. Overplaying their hand, the students engraved the professor's name on some of their later manufactures. In a desperate attempt to save his reputation Beringer bought up all available copies of his book (hence its rarity), in the process depleting his fortune and hastening his demise. As a crowning touch, it is usually recounted that the Beringer family had the book reprinted as a curio in order to recoup some of their losses.

As the accompanying documents reveal, the classical Beringer story is itself spurious. These documents show that Beringer was not so successfully duped as the textbook versions would have us believe; that the true perpetrators were not students but jealous fellow professors; and that Beringer, far from being ruined, brought legal proceedings against his detractors which forced one of them to leave town in disgrace while Beringer lived out a useful and not impecunious life.

Aside from details regarding the hoax itself, geologists will find the volume of value as an exhibition of the state of paleontology during the early 18th century. While not a monumental work, in the same sense as that of Agricola, the *Lithographiae* is not without significance. As pointed out by the translators, Beringer's book appeared during an extremely dynamic period in the history of paleontology when previous theories as to the origin of fossils were being sharply questioned. "For many readers," write Jahn and Woolf in their introduction, "the importance of the *Lithographiae Wirceburgensis* will lie in its examination of paleontological theory. Others may see it as a link with the intellectual atmosphere of an era in flux — an era which largely saw the end of the virtuosi and which would see the dawning of the new science."

The twenty-four plates in the book include reproductions of twenty-two