

cipline, in this case, geology, and this will make it also useful as a reference for possible project ideas. The small size makes it also a useful field guide.

P. K.

FOSSILS: PREHISTORIC ANIMALS IN HOOSIER ROCKS, T. G. Perry, 83 pp., \$4.00, Indiana Department of Conservation, Geological Survey, Bloomington, Indiana, 1959.

Another useful publication for the biology and earth science teacher. There are detailed instructions on fossil collecting, description of fossils in terms of their geological history, location sites in Indiana, and a useful glossary of terms. The illustrations are carefully done. Indiana and its teachers, with its excellent collecting sites, can be proud of this useful pamphlet. Useful also for classroom use, especially on a field trip.

P. K.

TEXAS FOSSILS: AN AMATEUR COLLECTOR'S HANDBOOK, William H. Matthews, III, 123 pp., \$1.00, Bureau of Economic Geology, The University of Texas, Austin 12, Texas, 1960.

TEXAS FOSSILS is a very concise, comprehensive, highly organized, and fully illustrated presentation of fossils and their role in geologic history. Although this work uses Texas localities and specimens for examples, the contents will be of interest to biology teachers and students worldwide. A definition of "fossil" is given, and activities in the various fields of paleontology are described. Methods and kinds of fossil preservation are thoroughly discussed. Included are sections on the collecting, cleaning, preparing, naming, and identification of fossils. An identification key and a graphic presentation of symmetry types will aid the student in naming unknown specimens. A brief summary of geologic history is provided.

A major portion of the booklet is devoted to the "Main Types of Fossils (p. 44-107)." This section is illustrated with a large number of excellent drawings (39 full-page plates and 18 figures). Plants, invertebrates, and vertebrates are described. The inclusion of plant (p. 44-48, plates 12 and 13) and vertebrate (p. 86-107, plates 37-49) fossil descriptions helps create a proper perspective of the fossil record for the reader. "Books about Fossils" facilitates the search for more detailed paleontological information and the "Glossary" presents clear-cut definitions for most of the

unfamiliar morphological and descriptive terms used in the text. **TEXAS FOSSILS** will encourage the interested student to attempt fossil identifications for himself and will stimulate interest in further study of both past and present life.

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Health and Physical Education

SCHOOL HEALTH AND HEALTH EDUCATION, C. E. Turner, C. Morley Sellery, and Sara Louise Simth, 481 pp., \$5.00, The C. V. Mosby Co., St. Louis, Missouri, 1961.

An excellent text for college students preparing for any teaching position is one concerned with the over-all school health program and its individual parts. This one should be in the teachers' library of all local school systems. School health committees could profitably use the book as a guide for an in-service program with valuable information for the entire staff, from the superintendent down to the part-time custodial force.

The presentation is directed at developing proper attitudes relative to the total school health program and makes health the problem of everyone. Emphasis is given to the need of cooperation on the part of the entire staff along with those outside agencies willing to work with the school and the parents. Professional school health services are set up as preventive, or protective, advisory, and educational. They do not recommend that they take over the responsibility of the family for medical care.

A good section is given for evaluation of the entire health program including a bibliography of additional guides. The appendix gives specific health education objectives.

Virgil Heniser
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FOUNDATIONS OF PHYSICAL EDUCATION, Charles A. Bucher, 501 pp., \$6.00, C. V. Mosby Co., St. Louis, Missouri, 1960.

The third edition of this book has been revised and re-organized in an effort to incorporate the most recent thinking in health, physical education, and recreation. The author has retained his primary goal of providing the reader with information on the nature, scope, and interrelationships of the three fields.

The book is divided into eight basic parts dealing with such aspects as scientific foundations, terminology, philosophy, and objectives. One chapter is devoted to professional

organizations, giving a brief history, purposes, service, and publications of each, followed by chapters on state certification teaching requirements and employment opportunities in physical education. This provides excellent background for prospective teachers. Part one of the book is a new and welcome addition titled "Education for Fitness." Part three discusses various philosophies of education, compiling the thinking of national leaders in the field, objectives and functions of physical education. Part four is devoted to health and other related areas of recreation, camping and outdoor education. Each chapter concludes with questions, activities, and pertinent references. The author has attempted to present the necessary specialization and contributions of each of the three fields to fitness for living as well as total fitness. In so doing, he provides students, teachers, and administrators with challenging and action provoking ideas which they must recognize and evaluate.

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HEALTH PRINCIPLES AND PRACTICE, 3rd Edition, C. L. Anderson and C. V. Langton, 430 pp., \$5.75, The C. V. Mosby Co., St. Louis, Missouri, 1961.

An excellent textbook for the academically well disciplined college student. It gives health education the dignity of a scholarly academic subject that it deserves. It is based on principles and practices and not the usual physiology and anatomy.

The three general areas of 1. personal health protection; 2. mental, and emotional, and social health; and 3. planning for health protection were developed after extensive surveys on the needs of the students. The subject is presented as a means to the end that enables one to live effectively and enjoyably.

The section on mental health properly begins with the normal personality and proceeds to a classification of mental disorders. However, the authors might have profitably included causes and symptoms of disorders, leading to the elimination of causes and the need for correction of symptoms in the early stages.

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History and Philosophy of Science

THE RISE OF SCIENTIFIC PHILOSOPHY, Hans Reichenbach, 333 pp., \$1.50, University of California Press, Berkeley and Los Angeles, California,

1959.

The philosophy of science is one of the interesting related areas of the study of science which its most extreme enthusiasts demand as the initial study in scientific training. This well known work by one of the most popular of such philosophers does not seem to agree with the extremists' point of view. Of course, the philosophy of Reichenbach, commonly called logical empiricism, is one of widely followed philosophies of modern scientists whether by design or accident. It has held a popular place among practicing scientists, and although he is not in much favor of history of philosophies, his book is an excellent summary of this history. Biologists will be interested in his chapter on evolution. The University of California Press is to be congratulated on publishing this inexpensive paper-back edition of a classic.

P. K.

GIANTS OF GEOLOGY, Carroll Lane Fenton and Mildred Adams Fenton, 318 pp., 95c, Dolphin Books, Doubleday & Company, Inc., Garden City, New York, 1952.

This is an information packed book written in an easy, chatty style. Essentially it is a series of biographical sketches of men important in the history of geology, beginning with the Greeks. Most of the book is devoted to the giants of Nineteenth Century geological research. There is a great deal of information about the person himself, but the authors never overlook the substantial contributions of each. There are illustrations. Much information is included on paleontology, and this should make this inexpensive paperback reprint interesting to the biologist.

P.K.

ANTONY VAN LEEUWENHOEK AND HIS "LITTLE ANIMALS." Clifford Dobell, 435 pp., \$2.25, Dover Publications, Inc., New York, 1960.

Another attractive paperback which is packed with information, authoritative, well illustrated, and interesting to read. This reviewer does not care for the use of italics in the long and interesting preface. But this is small complaint for these accounts of Leeuwenhoek's fascination and curiosity in a great variety of objects. Some of his work is only referred to, but there is an extensive review of his work, with liberal use of Leeuwenhoek's own writing, in protozoa and bacteria. There is abundant information about his life, contemporaries, house, etc. A really useful and interesting book for those who wish a good account of a famous biologist, his life, and work.

P. K.