Book Reviews

The Birds of Greenland, Part I. Finn Salomonsen; illustrated by Gitz-Johansen. Copenhagen, Denmark: Einar Munksgaard, 1950. 157 pp. and 17 plates. $9.00.

This beautifully printed and illustrated volume is a welcome addition to the literature of Greenland ornithology. The text is in parallel columns of Danish and English. Common names of birds are given in Danish, English, and Eskimo. The introduction gives brief historical data and a short account of climate and life zones. Since it is planned to deal in detail with breeding species and regular visitants only (casuals are to be listed in an appendix later), the present volume includes 2 loons, 2 petrels, 1 swan, 6 geese, 8 ducks, 1 merganser, and 1 cormorant. Seventeen of these 21 are illustrated with a full-page color plate, each usually depicting a single bird, more artistically drawn than scientifically accurate and showing the bird in characteristic habitat.

The text gives much historical data on changes in status, also distribution, reproduction, ecology, food habits, uses of the birds to Greenlanders, and some taxonomic comments. These matters are treated in simple and direct fashion. The bibliography for all volumes will appear in the last of the series.

RALPH S. PALMER

New York State Museum

Ionization Chambers and Counters. D. H. Wilkinson. New York: Cambridge Univ. Press, 1950. 266 pp. $4.50.

This book, like others in the new group of *Cambridge Monographs on Physics,* will be eagerly awaited by nuclear physicists here and abroad. The publishers are to be congratulated on the content and appearance of their growing list in this series.

Several books devoted to the detection of nuclear particles by gas-filled ionization devices have appeared in the postwar years—none shows a greater unity than the present volume. From the first the author stresses the fundamental principles of counter action in their modern form. In a subject which has bordered on the occult this unity is refreshing, and one does not miss the older half-explanations too much.

In the main the book treats the theory of counter and ionization pulse formation and rather less constructional practice and application. It is thus truly a monograph, not an encyclopedia, and enjoys both the advantages and defects of limitation. Within the limitations the treatment is largely complete; the many aspects of initial and secondary ionization processes which lead to the observed pulse or current are analyzed and presented for practical cases and in graphs. The sections on proportional counters and ionization chambers are particularly exhaustive and present much new information and interpretation. The chapter on Geiger counters is also well done, but because of their wider use the omission of operational considerations is more evident. The reviewer particularly regretted the omission of gamma-ray counter efficiency, which might have been included, and of the electronics of pulse amplification, which would have overextended the volume. The author does, however, indicate clearly the requirements for good amplifier design.

The book will be most useful to students of counter operation, but its appeal to the numerous workers in tracer and radiation physics is likely to be rather limited. The former group includes many nuclear physicists; here they will find a much-needed comprehensive account of their principal tool of research.

ROBERT BERINGER

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Morphology and Taxonomy of Fungi. Ernst Athearn Bessey. Philadelphia: Blakiston, 1950. 791 pp. $7.00.

The phenomenal growth in the importance of fungi in medicine, genetics, food manufacture, and other fields has forced many people to acquire more than a nodding acquaintance with this form of life. The discovery of many new genera and species, with numerous revisions in their classification, has made it necessary for Dr. Bessey to prepare this comprehensive volume—a completely revised and enlarged edition of an earlier book.

This text and reference book presents a straightforward and systematic outline of the fundamentals of mycology. After a brief introduction in which definitions, history, rules of nomenclature, and general mycology are discussed, Bessey develops the morphology and taxonomy of each class in a uniformly critical and informative manner. In each chapter the characteristics of the class are first given, followed by a key to the orders in that class. The orders are then discussed in detail and amply illustrated by concise line drawings. The chapter concludes with a key to the more important families and genera and a complete listing of the literature cited in the description of the orders. In this manner each chapter covers in detail one or more orders with remarkable industry and thoroughness.

Chapter 17 is outstanding as a critical review of the theories concerning the phylogeny of the fungi.

One may readily forgive Dr. Bessey his conservatism for including the mycetozoa in the text—even though he is of the opinion that they are more closely related to the animal kingdom—and for including with the Fungi Imperfecti a number of forms which he recognizes as perfect fungi.

No attempt was made to delve into medical mycology, the biochemistry, physiology, and genetics of fungi, or the production of antibiotics: ". . . . this book must not be expected to be a complete encyclopedia of fungi, but rather the foundation upon which to lay the various superstructures of the edifice of Mycology."

The book concludes with a guide to the literature for the identification of fungi. We are first given instructions on procedure based on the author's half century of experience in botany. The literature lists which follow are superbly organized and should be easy to use. The book is very well indexed.

One cannot commend this classic handbook too highly. Extremely useful for beginners, it has much to offer the advanced mycologist.

GEORGE P. CHILD

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Albany Medical College

The Private Life of the Protozoa—And of Their Neighbors, the Metazoa and the Insect Larvae. Winifred Duncan. New York: Ronald, 1950. 141 pp. $3.00.

This is an incredible book. That it got written is perhaps not astonishing, because people with an itch to write are likely to perpetrate almost anything. But that it got published passes understanding. I can think of no way of conveying the flavor of the book except by quotation, for which purpose the thrilling account of malaria transmission will serve admirably:

> This final knock of fate started from that quiet spore which had dropped, some time back, into the pool, from the foot of a canyon wren, and had sunk into the mud.
>
> Late in July, when the rains were in full swing, a young mosquito larva found this spore and ate it. The spore remained quiet until the larva climbed up out of the water and became a winged mosquito, very dainty and charming. The spore then woke up, divided itself into a male and female cell, and the male fertilized the female. Out of this was born a tiny, worm-like creature, pointed at one end, which bored its way right through the mosquito's stomach, got into its blood stream and finally landed in its salivary glands. On this journey it had rounded up and burst again into a lot of little spores.

You can guess the rest. One night when the mosquito was flying happily about it happened to run into Mr. Mac, and to plunge its proboscis into Mr. Mac's arm, where it found a lot of nice, red blood. But it also squirted in a lot of baby spores, and the baby spores loved the delicious, round beefsteaks in Mr. Mac's blood, and pretty soon Mr. Mac got chills and fever. Honest!

The author points out in her preface that she is writing "in the narrative form usually reserved for fiction" and making an "experiment in biography" which "required that I take certain liberties." So the book, apparently, is intended for amusement rather than instruction. But I find the purple prose tiring, even aside from its lack of any connection with the workaday world of facts. The book is liberally illustrated with line drawings, which I presume are intended to be "artistic," since the author states that "no attempt has been made to show the actual relation in size between the animals and the plants on which they are found." The drawings may or may not be good art, but they are certainly bad natural history.

MARSTON BATES

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Scientific Book Register

The Life of Vertebrates. J. Z. Young. New York: Oxford Univ. Press, 1950. 767 pp. $8.50.

Color Atlas of Pathology. Prepared under the auspices of the U. S. Naval Medical School. Philadelphia-London: Lippincott, 1950. 546 pp. $20.00.

Fluorine Chemistry, Vol. I. J. H. Simons, Ed. New York: Academic Press, 1950. 615 pp. $12.00.

Pharmacological Basis of Penicillin Therapy. Karl H. Beyer. Springfield, Ill.: Thomas, 1950. 214 pp. $4.50.

Textbook of Modern Pollen Analysis. Knut Faegri and Johs. Iversen. Copenhagen, Denmark: Einar Munksgaard, 1950. 168 pp. Dan. cr. 16.00.

Ion Exchange Resins. Robert Kunin and Robert J. Myers. New York: Wiley; London: Chapman & Hall, 1950. 212 pp. $4.75.

The Burden of Diseases in the United States. Alfred E. Cohn and Claire Lingg. New York: Oxford Univ. Press, 1950. 129 pp. with accompanying charts. $10.00.

Muscular Contraction: A Topic in Molecular Physiology. W. F. H. M. Mommaerts. New York-London: Interscience, 1950. 191 pp. $4.20.

Superfluids: Macroscopic Theory of Superconductivity, Vol. I. Fritz London. New York: Wiley; London: Chapman & Hall, 1950. 161 pp. $5.00.

An Outline of Scientific Criminology. Nigel Morland. New York: Philosophical Library, 1950. 284 pp.

Bacterial Polysaccharides: Their Chemical and Immunological Aspects. Martin Burger. Springfield, Ill.: Thomas, 1950. 272 pp. $6.00.

Textbook of Organic Chemistry. Louis F. Fieser and Mary Fieser. Boston: Heath, 1950. 741 pp. $6.00.

Diseases of Cereals and Grasses in North America. (Fungi, except smuts and rusts.) Roderick Sprague. New York: Ronald, 1950. 538 pp. $7.00.

Methods in Food Analysis Applied to Plant Products. Maynard A. Joslyn. New York: Academic Press, 1950. 525 pp. $8.50.

Sourcebook on Atomic Energy. Samuel Glasstone. New York: Van Nostrand, 1950. 546 pp. $2.90.

The History of Muscle Physiology: From the Natural Philosophers to Albrecht von Haller. Acta Historica Scientiarum Naturalium et Medicinalium, Vol. VII. Eyvind Bastholm. Copenhagen, Denmark: Einar Munksgaard, 1950. 256 pp. Dan. cr. 24.00.

The Fresh-Water Algae of the United States. 2nd ed. Gilbert M. Smith. New York: McGraw-Hill, 1950. 719 pp. $10.00.

Technological Applications of Statistics. L. H. C. Tippett. New York: Wiley; London: Williams & Norgate, 1950. 189 pp. $3.50.

Raudon-Cirujano Poblano de 1810. Aspectos de la Cirugia Mexicana de Principios del Siglo XIX en Torno de Una Vida. J. Joaquin Izquierdo. Mexico, D. F.: Ediciones Ciencia, 1949. 299 pp. $5.50.