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.