

which every scientist, every person interested in the history of ideas, will find profitable and enjoyable. It is exciting, even—indeed especially—in those passages which do not entirely persuade.

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Bone and Radiostrontium. Arne Engstrom, Rolf Björnerstedt, Carl-Johan Clemedson, and Arne Nelsen. Wiley, New York; Almquist and Wiksell, Stockholm, Sweden, 1957. 139 pp. Illus. \$8.75.

For lack of a consistent editorial viewpoint this book is a puzzling mixture of general introductory material and highly specialized reports of research. It is aimed at no particular group or level. For all of that, the "shotgun approach" is not entirely without merit. Pieces and sections of the book will be interesting to almost anyone. For example, the casual scientific reader will find the introductory chapter a fine, annotated bibliography of the Sr⁹⁰ fallout literature. The rest of the book he can and will ignore; it's much too specialized. The bone specialist will find the introduction boring, but later he will encounter a good summary of the important work on microstructure of bone for which the Karolinska group has earned an enviable reputation. To the radiation biologist, the discussions of bone microstructure are a bit "thick," but the calculations of radiation dosage will be new and exciting.

I came upon two minor annoyances. In the specialized sections, the referencing is chauvinistic. There are only rare references to work done outside the Karolinska "family," and this is a field which has been built by many men of many nations. The other annoyance is with the final summary. Here, the authors wrestle weakly with the problem of Maximal Permissible Concentrations. It would have been better either to give the problem "full treatment" or not to mention it at all.

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The Mushroom Hunter's Field Guide.

Alexander H. Smith. University of Michigan Press, Ann Arbor, 1958. ii + 197 pp. \$4.95.

A simple yet authoritative field manual for the identification of mushrooms has long been needed in this country, since most of the books available to the

amateur mushroom collector are either obsolete in their nomenclature or limited in their geographical coverage. The preparation of a manual for the non-specialist has been made difficult by recent progress in the taxonomy of higher fungi, because much of this progress has resulted from the use of microscopic characters for the identification of species, so that identification of some mushrooms in the field has become impossible even for the specialist. Fortunately, some of the species that are of particular importance to those interested in mushrooms as food can be recognized in the field on a basis of macroscopic characteristics and habitat.

Alexander H. Smith, curator of fungi in the Herbarium of the University of Michigan, has selected some 124 species of fungi that can be recognized in the field for inclusion in *The Mushroom Hunter's Field Guide*. In addition to mushrooms (Agaricales), the book includes other Basidiomycetes such as coral fungi, shelf fungi, chanterelles, and puffballs and edible Ascomycetes such as the morels and their relatives. For each species listed, there is at least one photograph, together with paragraphs on (i) when and where to find the species, (ii) the important characteristics for field identification, and (iii) a discussion of its edibility. Poisonous species are clearly indicated, but Smith advises caution in eating others, because some individuals are sensitive to mushrooms that most people find innocuous.

In addition to the main part of the book, there is an introduction, written in nontechnical language, which tells a little about the place of mushrooms in the scheme of things, the structure of mushrooms, and the variability of their characteristics. It also contains some general remarks about eating mushrooms and mushroom poisoning. There are also useful lists of the names of species found in the western United States, of edible mushrooms safe for beginners, of mushrooms associated with certain trees, and of the habitats of selected mushrooms according to season.

The book has two unusual external features. The first is its shape. It is shaped to fit the pocket—that is, if one happens to have pockets of 5¼ by 10¾ inches. A second and laudable feature in a book designed for field use is the water-repellent cover.

The two most important requisites for a useful field manual are workable keys and adequate illustrations. One disadvantage to artificial keys of the type found in this book is the fact that the user does not know whether he is "getting warm" or not, so that if he makes a mistake, he is lost. He is also lost if the key is misleading. For example, if *Helvella gigas* were found in the Sierra Nevada, it could not be identified by

means of the key, because the choice leading to this species requires that it must occur in the Rocky Mountains.

Any deficiencies in the keys are more than compensated for by the illustrations, which are truly excellent—large, clear, and well-reproduced. Smith is an outstanding photographer, and many of his illustrations have esthetic qualities as well as scientific utility.

The Mushroom Hunter's Field Guide should have a wide appeal and help to fill the need for a book of its kind. Although it is written for the beginner, it should be useful to the more advanced collector because of its authoritativeness and the extent of its geographical range. Finally, it should be helpful as a reference work for physicians, but it is to be hoped that this attractive and scientifically accurate book will help to forestall unnecessary illness and needless deaths from mushroom poisoning.

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Young People's Book of Science. Glenn O. Blough, Ed. McGraw-Hill, New York, 1958. 446 pp. Illus. \$4.50.

Space Book for Young People. Homer E. Newell, Jr. McGraw-Hill, New York, 1958. 114 pp. Illus. \$2.95.

Frontiers of Science. Lynn Poole. McGraw-Hill, New York, 1958. 173 pp. Illus. \$3.25.

These three books are intended primarily for children from grades four through nine. However, the general public would benefit from their use. This is especially true of *Frontiers of Science* by Lynn Poole.

Young People's Book of Science is a collection of selections from the writings of the Bendicks, Crouse, Grant, Hyde, Kimble, Poole, Richardson, Schnieder, Schwartz, Skilling, Stillman, Sullivan, Swezey, and Tannenbaum, ranging in nature from those of historical significance to others concerned with modern science.

Many methods of gathering evidence are discussed, from using your eyes, without optical instruments, up to and including use of the electron microscope. Also included are studies of weather, atomic energy, space travel, the ocean, and electricity, including television. Although all the topics are presented in a factual, yet stimulating, manner, the portion devoted to the ocean is most fascinating. This includes descriptions of the geology of the ocean floor as well as of marine biology. As you read this section, you can actually visualize a dive using a scuba or snorkel.

Space Book for Young People includes a very readable presentation of elemen-