haustively reviewed the literature but has covered it sufficiently to enable the reader to locate the entire literature on any particular subject of interest.

The scope of the book may be seen from the division of the subject matter into the following chapters: "The phosphorus atom, its nucleus and electronic structure"; "Interaction between atoms, with especial reference to phosphorus chemistry"; "Systematic chemistry of phosphorus and its compounds"; "Elemental phosphorus and the metal phosphides"; "Hydrides, halides, and pseudohalides of phosphorus and their organic derivatives"; "Oxides, sulfides, nitrides, and related compounds of phosphorus"; "Lower oxyacids of phosphorus, their salts and esters"; "Structure and properties of the condensed phosphates"; "Orthophosphoric acid, its salts and esters"; "Individual chain phosphates (pyro-, tripoly-, tetrapoly-, and pentapolyphosphates as well as Kurrol's salt and Maddrell's salt)"; "Ring and branched phosphates"; "Amorphous phosphates, including phosphate glasses, condensed phosphoric acids, and phosphate esters"; and "Halo-, peroxy-, thio-, and amidoacids of phosphorus, their salts, esters, and related compounds."

In addition, the book contains three appendices. Appendix A lists 187 accepted mineral names for phosphates, together with the chemical formulas, crystallographic data, and associated minerals. Appendix B contains a collection of single-bond energies and distances, with electronegativity differences for use in calculations concerning phosphorus compounds. Appendix C contains available thermodynamic data on the compounds of phosphorus.

Volume 2, still in preparation, will be devoted to the technology, functions, and applications of phosphorus and its compounds.

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The Atomic Age and Our Biological Future. H. V. Brøndsted. Translated by E. M. Huggard. Philosophical Library, New York, 1957. xiv + 80 pp. $2.75.

This little book is an attempt to supply the physical and biological background needed for an assessment of present and future radiation hazards. The author is professor of zoology at the University of Copenhagen, and the book is based on a series of his public lectures.

The first chapter is an elementary, simplified account of the structure of matter and the nature of radiation. Then follow sections on heredity, mutation, and embryogenesis and on the effects of radiation in these areas. The style is simple, and full use is made of analogies.

The over-all effect of the book is to create a correct impression—that is, that radiation can produce both genetic and somatic damage, and that suitable precautions are necessary. Yet there are so many factual errors, inconsistencies, oversimplifications, and vague statements that the book is of limited use for the serious reader. Perhaps it has suffered in translation, for some words are used in an unusual way, or even incorrectly. For example, *fallout* is given a meaning that is different from the customary one. On page 52, background radiation is given as one five-thousandth of a roentgen per week, whereas one five-hundredth would be more nearly correct.

So much has been written on this subject that this book does not fill a great need. There are much better sources of information—for example, the United Nations report; and there are other publications on the subject, as easy to read as this book, that are not marred by so many errors.

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Manuale di Micologia Medica. Raffaele Ciferri. Renzo Cortina, Pavia, Italy, 1958. 370 pp. L. 4000.

As a reflection of the growing interest in medical mycology throughout the world, manuals dealing with the fungus diseases of man have been published in many countries. Notable books have been written by mycologists in Argentina, Belgium, Brazil, Czechoslovakia, England, France, India, the Netherlands, and the United States. The latest addition to this growing family of publications is the present book, the first of two volumes, written by Raffaele Ciferri, director of the Botanical Institute and Cryptogamic Laboratory of the University of Pavia (Italy). This first volume is intended to provide basic information for the physician who is embarking upon the study of human pathogenic fungi with little or no training in mycology.

The author has fulfilled his objective admirably, for in the ten chapters of this volume a wealth of information, both theoretical and practical, is presented. This material, if assimilated, should enable the invesigator to detect, isolate, and identify fungi in clinical materials of all types.

In chapter 1, a concise history of the science of medical mycology is presented, along with a discussion of the nomenclature and classification of the mycoses. The biological affinities of fungi to other living organisms are discussed, and this is followed by a review of the taxonomy and nomenclature of the fungi. The chapter closes with a brief summary of the histological differences between deep mycotic infections and the superficial mycoses.

The activities of fungi as allergens, symbionts, and parasites and their industrial and pharmacological value are covered in the second chapter.

The next two sections are devoted to a thorough discussion of the morphology, physiology, ecology, and classification of the fungi.

Chapters 5 and 6 deal with specific techniques for the microscopic examination and culture of fungi. These are followed by a chapter on the preparation of antigens and their utilization in serological and skin tests.

Chapter 8 describes pathogenicity tests and their value in the identification of fungi.

A dichotomous key designed to aid in the diagnosis of all the mycoses constitutes chapter 9.

The book concludes with a brief discussion of the therapy of fungus diseases, some remarks on the publication of research findings, and an extensive bibliography. The bibliography cites general mycologic texts and books that deal specifically with medical mycology and includes a selected list of current papers on pathogenic fungi and the diseases that they cause.

The book is of a convenient size and is printed on glossy paper of a good quality. Simple line drawings and several photomicrographs are used to illustrate the text.

On the whole, the author has more than adequately fulfilled his objective of providing useful background information for the study of human pathogenic fungi. Objection can be taken to the classification schemes and nomenclature employed. For example, no valid evidence exists for considering *Coccidioides immitis* to be a phycomycete and for placing it in a special order, the "Coccidiales." Few mycologists will agree that sexual reproduction has been verified in the life cycle of *Cryptococcus neoformans.* Thus, the placement of this anascosporogenous yeast in the genus *Debaryomyces* is of questionable validity. The use of the generic names *Gilchristia* and *Scedosporium* for *Blastomyces dermatitidis* and *Monosporium apiospermum,* respectively, is also contrary to current usage. I also object to the use of *Rhinocladium beurmani* as the preferred name for *Sporotrichum schenckii.*

The most serious limitation in the value of this volume is the absence of an index. While an index for both volumes undoubtedly will be included in the second volume, it would be more convenient for the reader if the contents of each volume had been indexed separately.