

does not gain an impression of two quite distinct and separate floras. With respect to the activities of marine forms, much stress is laid upon their saprophytic proclivities, more particularly in digesting wood. The exceptionally critical approach to this matter leaves the reader wondering sometimes whether marine fungi do in fact decompose woody materials. When we consider the extensive evidence at hand, however, and recognize the pronounced activity of wood-rotting terrestrial fungi, it seems that one can surely accept decomposition of submerged wood as a major activity of marine fungi. The authors' handling of parasitism—some parasites, such as *Dermocystidium* of oysters, *Ichthyosporidium* of fish, or wasting disease of eel-grass are far-flung and of obvious economic importance—is also somewhat obscured by what will seem to many readers an unnecessary pedantic and unhelpful distinction: that between pathogenesis and parasitism. Similarly, inserting the hydronium ion into considerations of pH is not calculated to clarify a subject still so unsophisticated as the physiology of marine fungi. While the taxonomic accounts are always carefully presented and very analytical, they are replete with doubts about the validity of many of the proposed taxa. Perhaps that is in the nature of mycological taxonomy, but nonmycological biologists are bound to be bewildered and irritated by the readiness with which new species of fungi are created, only to be seriously questioned soon after, not infrequently by their own authors.

Physically this book is a fine product of the printer's art, for which, however, the price seems unduly high. This is especially true in view of the fact that the text figures, useful as they are, are separated from their legends and assembled on plates at the very back of the volume, and are all simple linecuts, not one halftone being included. Students and monographers of microscopic fungi should long since have availed themselves of the modern methods of photomicrography to document their findings and descriptions. Another physical defect of the volume is the complete absence of numbering for any of the chapters, major headings, or subheadings. Moreover, the various sizes and kinds of type that are used for the several levels of headings have not been selected in any very helpful manner.

These and other shortcomings that might be noted are of minor significance when viewed against the high overall quality of this pioneering monograph. The coverage of the literature alone is a masterfully complete job. The writing is generally clear and forceful. The welding of a vast array of diverse material into one integrated and coherent area of biology is an achievement of which the authors can be justly proud. Their work marks the coming of age of marine mycology, and their book will no doubt become a classic in the field.

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British Textbook

Structural Principles in Inorganic Compounds. W. E. Addison, Wiley, New York, 1961. vii + 183 pp. Illus. Paper, \$3.25.

This book was written for first-year students in an English university, and it is on a level appropriate to American freshmen who have studied descriptive inorganic chemistry in high school. The author successfully accomplishes his purpose of presenting, in a nonmathematical but intuitively logical way, the fundamental consistencies in the structures of solids, many of which are available only in a few advanced texts, and even there are seldom presented in a collected fashion. Wide use of this book as supplementary reading in first-year courses should be quite effective in arousing students' interest in the inorganic chemical and structural fields; currently, both are minimized in many courses in favor of dilute physical chemistry.

The book starts with the aufbau principle and the periodic table, as might be expected, and continues with a short but clear description of various aspects of chemical bonding, including bond lengths, energies, ionic character, and so forth. The second chapter, on determination of structure by physical methods, is, in my opinion, the only really weak spot in the book, and it could well have been omitted from a work of this kind. Chapter 3, on the closest packing of spheres and the various types of structures of metals and ionic crystals that arise simply from packing considerations, and the

chapters that follow are excellent; these unifying concepts are presented clearly and in a manner easily comprehensible to serious students regardless of their background. Such physical properties of ions as radius ratio, charge, and polarizability are introduced as needed to coordinate structural types with known structures of crystals. More difficult to present, but still skillfully handled in a physically pictorial way, are explanations of directed bonds in molecules and of the structures of crystals containing covalent linkages as well as mixed ionic-covalent types such as those with polyanions. I doubt whether the ligand field theory of transition metal crystals has ever been discussed at this level; if it has not, Addison's treatment should serve as a model.

The book was written carefully and was read thoroughly in proof. Important structural types are exemplified by the most commonly encountered compounds, and the frequency of occurrence of possible types is always indicated. Illustrations are abundant. The text is short and does not attempt to cover completely so vast a subject; but it does not give the impression that important points have been skipped or treated hurriedly at the expense of understanding.

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Pharmacological Research

Annual Review of Pharmacology. vols. 1 and 2. Windsor C. Cutting, Ed. Annual Reviews, Palo Alto, Calif. vol. 1 (1961. viii + 479 pp.); vol. 2 (1962. vii + 477 pp.). Illus. \$7 each.

A periodic review of the basic scientific contributions in the field of pharmacology was long overdue, and therefore the publication of the first two volumes of this new series, entitled the *Annual Review of Pharmacology*, will be welcomed by all experimental biologists. The real value of these reviews lies in their primary emphasis on the basic scientific aspects of the discipline rather than on the use of drugs as therapeutic agents. The first volume, published in 1961, covers some 15 subjects of significant interest, five of which are reviewed again in 1962 by a new group of authors, along with a new series of topics. The repeated