

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

review of a field by different authors adds strength to these volumes, since, as pointed out by many of the contributors, each individual review comprises a particular emphasis and interest. The scope of the material covered requires a continuing review of the literature by a variety of authors who will present the material from divergent points of view.

The attempt to review, for the English-reading biologist, the highlights of pharmacology in foreign lands, while of interest, is inadequate to meet the present needs. It is obvious that one author could not hope to provide a balanced picture of pharmacological research in such countries as Russia, India, or Japan, or in a region such as Central Europe.

The review of reviews by the master reviewer, Chauncey Leake, which appears in each volume, requires no review.

The editors and publishers of the *Annual Review of Pharmacology* are to be congratulated on this valuable addition to the literature of pharmacology.

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## New Books

### Biological and Medical Sciences

**Adolph Hans Schultz Anniversary Issue** (*Bibliotheca Primatologica*, fasc. 1). H. Hofer, A. H. Schultz, and D. Starck, Eds. Karger, New York, 1962 (order from Phiebig, White Plains, N.Y.). 290 pp. Illus. Paper, \$13.

**The Basal Ganglia.** And their relation to disorders of movement. D. Denny Brown. Oxford Univ. Press, New York, 1962. 144 pp. Illus. \$5.

**The Development of British Heathlands and Their Soils.** G. W. Dumbleby. Oxford Univ. Press, New York, 1962. 120 pp. Plates. \$9.60.

**A Dictionary of Biology.** M. Abercrombie, C. J. Hickman, and M. L. Johnson, Aldine, Chicago, 1962. 254 pp. \$5.

**Fortschritte der Zoologie.** vol. 15, pt. 1. Max Hartmann, Ed. Fischer, Stuttgart, Germany, 1962. 164 pp. Illus. Paper.

**Früherkennung des Krebses.** Ein kurzes Handbuch für die Praxis. A. Linke, Ed. Schattauer, Stuttgart, Germany, 1962 (available from Intercontinental Medical Book Corp., New York). 669 pp. Illus. \$27.50.

**Functional Anatomy of the Feeding Apparatus in Waterfowl** (Aves: anatidae). Donald C. Goodman and Harvey I. Fisher. Southern Illinois Univ. Press, Carbondale, 1962. 204 pp. Illus. \$6.50.

**Guide to the Literature of the Zoological Sciences.** Roger C. Smith. Burgess,

Minneapolis, Minn., ed. 6, 1962. 244 pp. Paper, \$4.

**A History of American Pathology.** Esmond R. Long. Thomas, Springfield, Ill., 1962. 474 pp. Illus. \$12.50.

**Internationales Symposium über Fragen der Struktur und Funktion der roten Blutkörperchen** (*Folia Haematologica*, vol. 78, Nos. 3 and 4). S. Rapoport and F. Jung, Eds. Akademische Verlagsgesellschaft, Leipzig, Germany, 1962. 434 pp. Illus. Paper, DM. 56.

**Introduction to Evolution.** Paul Amos Moody. Harper, New York, ed. 2, 1962. 564 pp. Illus. \$7.50.

**Kurzlehrbuch der modernen Anästhesie.** Heinz Pflüger. Schattauer, Stuttgart, Germany, 1962 (available from Intercontinental Medical Book Corp., New York). 178 pp. Illus. \$5.50.

**Laboratory Manual of Pediatric Micro- and Ultramicro-Biochemical Techniques.** Donough O'Brien and Frank A. Ibbott. Harper and Row, New York, ed. 3, 1962. 351 pp. Illus. Paper, \$6.50.

**Lipids and Their Oxidation.** The second Symposium on Foods, held at Oregon State University, September 1961. H. W. Schultz, Ed. Avi Publishing Co., Westport, Conn., 1962. 452 pp. Illus. \$3.

**Micrographia.** Or some physiological descriptions of minute bodies made by magnifying glasses with observations and inquiries thereupon. Robert Hooke. Dover, New York, 1961 (facsimile reproduction of ed. 1, 1665). 318 pp. Plates. Paper, \$2.

**Neural Physiopathology.** Some relationships of normal to altered nervous system activity. Robert G. Grenell, Ed. Harper and Row, New York, 1962. 411 pp. Illus. \$10.

**New Names Introduced by H. A. Pilsbry in the Mollusca and Crustacea.** William J. Clench and Ruth D. Turner. Acad. of Natural Sciences, Philadelphia, 1962. 218 pp. Paper, \$5.

**Praktische EKG-Auswertung.** Differentialdiagnostisches tabellarium. R. Schröder and H. Südhof. Schattauer, Stuttgart, Germany, 1962 (available from Intercontinental Medical Book Corp., New York). 99 pp. Illus. \$12.

**Primatologia.** vol. 2, No. 1, pt. 6, *Sehorgan.* H. Hofer, A. H. Schultz, and D. Starck. Karger, New York, 1962. 210 pp. Illus. Paper.

**The Problems of Laboratory Animal Disease.** A symposium held at Liblice and Smolenice in September 1961. R. J. C. Harris, Ed. Academic Press, New York, 1962. 275 pp. Illus. \$9.

**Progress in Allergy.** vol. 6. Paul Kallos and Byron H. Waksman, Eds. Karger, New York, 1962. 609 pp. Illus. \$24.50.

**Spermatozoan Motility.** AAAS Publ. No. 72. David W. Bishop, Ed. American Assoc. for the Advancement of Science, Washington, D.C., 1962. 321 pp. Illus. Cash price to members, \$6.50; \$7.50. A symposium presented at the 1960 meeting of the AAAS, held in New York, December 1960.

**Steroid Drugs.** Norman Applezweig. McGraw-Hill, New York, 1962. 757 pp. Illus. \$25.

**Structural Aspects of Ageing.** Geoffrey H. Bourne, Ed. Pitman, London; Hafner, New York, 1962. 419 pp. Illus. \$20.

**Summer School of Botany, 1960** (Dar-

jeeling). *Proceedings.* P. Maheshwari, B. M. Johri and I. K. Vasil, Eds. Ministry of Scientific Research and Cultural Affairs, New Delhi, India, 1962. 530 pp. Illus. Rs. 25.

**Textbook of Biochemistry.** Benjamin Harrow and Abraham Mazur. Saunders, Philadelphia, ed. 8, 1962. 657 pp. Illus.

**This Is Life.** Essays in modern biology. Willis H. Johnson and William C. Steere, Eds. Holt, Rinehart, and Winston, New York, 1962. 366 pp. Illus. Paper, \$3.95.

**Typhoid Fever.** And other *Salmonella* infections. R. L. Huckstep. Livingstone, Edinburgh, 1962 (available from Williams and Wilkins, Baltimore, Md.). 350 pp. Illus. \$8.75.

**The Various Aspects of Biology.** Essays by a botanist on the classification and main contents of the principal branches of biology (*Verhandelingen der Koninklijke Nederlandse Akademie van Wetenschappen, Natuurkunde*, vol. 54, No. 2). C. E. B. Bremekamp. North-Holland, Amsterdam, 1962. 199 pp. Fl. 15.

**The Vertebrate Body.** Alfred S. Romer. Saunders, Philadelphia, ed. 3, 1962. 633 pp. Illus. \$8.

### Economics and the Social Sciences

**Animal Dispersion in Relation to Social Behaviour.** V. C. Wynne-Edwards. Oliver and Boyd, London; Hafner, New York, 1962. 664 pp. Illus. Plates. 55s.

**Fruition of an Idea: 50 Years of Psychoanalysis in New York.** Martin Wagh, Ed. International Universities Press, New York, 1962. 131 pp. Illus. \$3.

**Handbook of Small Group Research.** A. Paul Hare. Free Press (Macmillan), New York, 1962. 526 pp. Illus. \$10.

**Introduction to Psychology.** Norman L. Munn. Houghton Mifflin, Boston, ed. 4 (abridged), 1962. 602 pp. Illus. Plates.

**The Making of a Scientist.** Anne Roe. Dodd, Mead, New York (reprint of ed. 2), 1962. 244 pp. Paper, \$1.75.

**My Language Is Me.** Psychotherapy with a disturbed adolescent. Beulah Parker. Basic Books, New York, 1962. 407 pp. \$8.50.

**The Nature of Ego.** A study. Benjamin Meynard. Philosophical Library, New York, 1962. 211 pp. \$4.50.

**On the Theory of Social Change.** How economic growth begins. A study from the Center for International Studies, Massachusetts Institute of Technology. Everett E. Hagen. Dorsey Press, Homewood, Ill., 1962. 574 pp. \$10.

**Psychologie in Biologischer Sicht.** W. R. Hess. Thieme, Stuttgart, Germany, 1962. 127 pp. DM. 20.

**The Self and Others.** Further studies in sanity and madness. R. D. Laing. Quadrangle, Chicago, 1962. 198 pp. \$6.

**Sleeping and Waking.** Physiology and psychology. Ian Oswald. Elsevier, New York, 1962. 241 pp. Illus. \$7.50.

**Sociology.** Jessie Bernard and Deborah MacLurg Jensen. Mosby, St. Louis, Mo. ed. 6, 1962. 356 pp. Illus. \$6.

**Vienna Psychoanalytic Society, Minutes.** vol. 1, 1906-1908. Herman Nunberg and Ernst Federn, Eds. Translated from the German by M. Nunberg. International Universities Press, New York, 1962. 447 pp. \$10.