

pages 269 to 692. Such an allotment of space seems logical, because 39 pages are required just to list the plant viruses and their insect vectors, 42 pages are needed for a tabulation of arthropod vectors of plant viruses and the viruses they transmit, and five pages are devoted to a list of plant viruses for which no insect vectors are known. A subject index (pp. 693-705) completes the volume and greatly enhances the value of the book as a reference volume.

Each of the 13 chapters is followed by a list (varying in number from 14 to 241) of pertinent references to the literature published all the way from 1801 to 1962, and of inestimable value to the serious-minded researcher who wishes to add to the knowledge already accumulated. It seems probable that the restrictions of special interest, which most biologists have in these days, are such that none will try to make a thorough study of this book in its entirety. In any book covering such a broad field, especially one with the size and scope of *Insects in Relation to Plant Disease*, errors in interpretation or of omission are inevitable. In the area with which I am most familiar, I noted a few such errors. However, these shortcomings do not detract greatly from the book, and the author deserves much commendation for doing a very creditable job of covering so thoroughly the whole of such an extremely broad field of study to which he has devoted his entire professional career.

FRED W. POOS

Arlington, Virginia

Note

Geophysics

Fundamental Problems in Turbulence and Their Relation to Geophysics (American Geophysical Union, Washington, D.C., 1962. 236 pp. Illus. \$5), edited by Francois N. Frenkiel, contains 32 of 41 papers that were prepared for a symposium sponsored by the International Union of Geodesy and Geophysics and the International Union of Theoretical and Applied Mechanics. The symposium was held at Marseilles, France, in September 1961.

Although the contributors represent many countries, including the United States, the U.S.S.R., Japan, and Germany, all of the papers are in English.

The volume is a reprint, without change of pagination, of the papers as they were published in the *Journal of Geophysical Research* [67, No. 8 (July 1962)].

Most of the papers are concerned with meteorological problems, but many, particularly the fundamental theoretical papers, are of more general interest. Some are related to turbulence in the ocean.

At any rate, the volume gives a useful picture of the present development of turbulence theory and of its possible applications to geophysics.

A. E. SCHEIDEGGER

Department of Mining, Metallurgy, and Petroleum Engineering
University of Illinois

New Books

Biological and Medical Sciences

Advances in Biological and Medical Physics. vol. 8. Cornelius A. Tobias and John H. Lawrence, Eds. Academic Press, New York, 1962. 467 pp. Illus. \$15.

Advances in Clinical Chemistry. vol. 5. Harry Sobotka and C. P. Stewart, Eds. Academic Press, New York, 1962. 343 pp. Illus. \$12.

Advances in Food Research. vol. 11. C. O. Chichester, E. M. Mrak, and G. F. Stewart, Eds. Academic Press, New York, 1962. 464 pp. Illus. \$14.50.

Advances in Immunology. vol. 2. W. H. Taliaferro and J. H. Humphrey, Eds. Academic Press, New York, 1962. 400 pp. Illus. \$12.

Concepts of Forest Entomology. Kenneth Graham. Chapman and Hall, London; Reinhold, New York, 1963. 400 pp. Illus. \$9.50.

Culture Collections. Perspectives and problems. Proceedings of the specialists' conference (Ottawa, Canada), 1962. S. M. Martin, Ed. Univ. of Toronto Press, Toronto, Canada, 1963. 231 pp. Illus. \$8.

Diffusion and Membrane Technology. Sidney B. Tuwiner. Chapman and Hall, London; Reinhold, New York, 1962. 431 pp. Illus. \$12.

Enzyme Histochemistry. And its application in the study of neoplasms. M. S. Burstone. Academic Press, New York, 1962. 635 pp. Illus. \$22.50.

Enzyme Models and Enzyme Structure. Report of a symposium, 1962. Brookhaven National Laboratory, Upton, N.Y., 1962 (order from the Office of Technical Services, Dept. of Commerce, Washington, D.C.). 447 pp. Illus. \$3.50.

Food Values of Portions Commonly Used. Anna dePlanter Bowes and Charles F. Church. Revised by Charles F. Church and Helen Nichols Church. Lippincott, Philadelphia, ed. 9, 1963. 136 pp. Paper, \$4.50.

General Zoology. Claude A. Villee, Warren F. Walker, Jr., and Frederick E.

Smith. Saunders, Philadelphia, ed. 2, 1963. 868 pp. Illus. \$8.50.

International Review of Tropical Medicine. vol. 2. David Richard Lincicome, Ed. Academic Press, New York, 1963. 439 pp. Illus. \$16.

Introduction to Dynamic Morphology. Edmund Mayer. Academic Press, New York, 1963. 555 pp. Illus. \$16.

Invertebrate Zoology. Robert D. Barnes. Saunders, Philadelphia, 1963. 646 pp. Illus. \$10.

Klinik und Therapie der Kollapszustände. Proceedings of a symposium (Mainz, Germany), 1962. R. Duesberg and H. Spitzbarth, Eds. Schattauer, Stuttgart, Germany, 1963. 310 pp. Illus. DM. 68.

Klinische Physiologie. Aktuelle probleme in übersichten. vol. 1. W. A. Müller. Thieme, Stuttgart, Germany, 1963. 102 pp. Illus. Paper.

A Laboratory Manual of Comparative Anatomy. William Montagna and Walter Kenworthy. Wiley, New York, ed. 2, 1963. 115 pp. \$2.95.

Malnutrition and Food Habits. Report of a conference (Cuernavaca, Mexico), 1960. Anne Burgess and R. F. A. Dean. Macmillan, New York, 1962. 230 pp. Illus. \$4.50.

The Organic Constituents of Higher Plants. Their chemistry and interrelationships. Trevor Robinson. Burgess, Minneapolis, Minn., 1963. 310 pp. Illus. \$6.75.

Physiological Measurements of Metabolic Functions in Man. C. Frank Consolazio, Robert E. Johnson, and Louis J. Pecora. McGraw-Hill, New York, 1963. 515 pp. Illus. \$14.50.

Physiologie de l'Hippocampe. A symposium. Éditions du Centre National de la Recherche Scientifique, Paris, 1962. 475 pp. Illus. NF. 58.

Progress in Drug Research. vol. 4. Ernst Jucker, Ed. Interscience (Wiley), New York, 1962. 606 pp. Illus. \$30.

Recent Advances in Food Science. Papers read at the residential summer course (Glasgow, Scotland), 1960. vols. 1 and 2. vol. 1. *Commodities* (316 pp.); vol. 2. *Processing* (350 pp.). J. Hawthorn and J. Muil Leitch, Eds. Butterworth, Washington, D.C., 1962. Illus. \$12.50 each.

Specific and Non-Specific Factors in Psychopharmacology. Proceedings of a symposium held at the Third World Congress of Psychiatry, Montreal, Canada (1961). Max Rinkel, Ed. Philosophical Library, New York, 1963. 192 pp. Illus. \$3.75.

A Stereoscopic Atlas of Human Anatomy. Section 8, *The Back*. David L. Bassett. Sawyer's, Portland, Ore., 1962. 112 stereoscopic transparencies.

Temperature. Its measurement and control in science and industry. Charles M. Herzfeld, Ed. vol. 3, pt. 3, *Biology and Medicine*. James D. Hardy, Ed. Reinhold, New York; Chapman and Hall, London, 1963. 695 pp. Illus. \$22.50.

Transfusionspraxis. P. Dahr and M. Kindler, Eds. Schattauer, Stuttgart, Germany, 1963. 347 pp. Illus. DM. 60.

Vitamins and Hormones. Advances in research and applications. vol. 20. Robert S. Harris and Ira G. Wool, Eds. Academic Press, New York, 1962. 725 pp. Illus. \$16.