

books OF THE WEEK

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ABSORPTION, DISTRIBUTION, TRANSFORMATION AND EXCRETION OF DRUGS—Peter K. Knoeffel, Ed.—C. C. Thomas, 1972, 210 p., diagrams, \$13.50. Sets forth the principles of the fate of foreign substances in the animal body, from the movement across cellular membranes to the properties of bodily structures and drugs which determine translocation and transformation.

ALIVE MAN! The Physiology of Physical Activity—Roy J. Shephard, M.D.—C. C. Thomas, 1972, 607 p., diagrams, \$31.75. Text is principally concerned with normal physiological responses to exercise; modifications of human performance by environment, age and drugs; concepts of physical fitness and training; and activity, metabolism and health.

THE ANNUAL GUIDE TO GRADUATE STUDY, 1973. Book III: Biological and Health-Related Sciences. Book VII: Engineering and Applied Sciences. Book VIII: Physical Sciences—Karen C. Hegener, Ed.—Peterson's Guide, 1972, 1114 p., 449 p., 602 p., photographs, paper, \$13.50, \$10, \$10. Up-to-date directory statistics and full-page descriptions prepared by current faculty heads.

ANNUAL REVIEW OF ANTHROPOLOGY, Vol. 1—Bernard J. Siegel, Alan R. Beals and Stephen A. Tyler, Eds.—Annual Reviews, 1972, 451 p., illus., \$10. Among topics covered are culture as behavior, dating methods, ethnohistory, kinship semantics, linguistic models, and structuralism in cultural anthropology.

ANNUAL REVIEW OF GENETICS, Vol. 6—Herschel L. Roman, Laurance M. Sandler and Allan Campbell, Eds.—Annual Reviews, 1972, 287 p., illus., \$10. Review articles on such topics as genetic control of immunoglobulin synthesis, the molecular basis of hemoglobin disease, the operon, and the genetics of transfer RNA.

ANTARCTIC TERRESTRIAL BIOLOGY: Vol. 20, Antarctic Research Series—George A. Llano, Ed.—Am Geophysical Union, 1972, 322 p., photographs, diagrams, maps, tables, \$30. Original papers cover a broad range of subjects, from the limnology, physiology and ecology of aquatic systems to the taxonomy of fresh-water algae, lichens, fungi, protozoa and land arthropods in Antarctica.

BIOLOGICAL BOUNDARIES OF LEARNING—Martin E. P. Seligman and Joanne L. Hager—Appleton, 1972, 480 p., illus., \$12.95. Articles concerned with innate and learned behavior give evidence that learning has evolved biologically rather than environmentally. Text deals with classical conditioning, instrument learning, avoidance learning, and the relation of ethology to psychology.

THE BIRDS OF THE REPUBLIC OF PANAMA, Part 3: Passeriformes: Dendrocolaptidae (Woodcreepers) to Oxyruncidae (Sharpbills)—Alexander Wetmore—Smithsonian (Braziller), 1972, 631 p., color plate, 48 drawings, \$15. The 196 species covered include the more commonly known flycatchers and their tropical relatives, the woodcreepers, antshrikes, contingas and manakins.

BLOOD LIPIDS AND LIPOPROTEINS: Quantitation, Composition and Metabolism—Gary J. Nelson, Ed.—Wiley-Interscience, 1972, 980 p., illus., \$39.95. Comprehensive treatise attempts to provide a complete summary of the field, covering original research in analytical methods, formed elements of blood, and soluble lipoproteins.

CHROMATOPHORES AND COLOR CHANGE: The Comparative Physiology of Animal Pigmentation—Joseph T. Bagnara and Mac E. Hadley—P-H, 1973, 218 p., color plate, photographs, diagrams, \$12. Presents a balanced review of all aspects of animal pigmentation, emphasizing the physiology of the epidermal melanophore, a chromatophore common to all vertebrate classes.

THE EDGE OF AN UNFAMILIAR WORLD: A History of Oceanography—Susan Schlee—Dutton, 1973, 398 p., photographs, maps, \$10.95. Tells the story of the world's oceanographers, their motivation, and the evolution of their ideas; tells of the adventures, both intellectual and nautical, that have led to the present knowledge of the oceans.

FROM STONEHENGE TO MODERN COSMOLOGY—Fred Hoyle—W. H. Freeman, 1972, 100 p., photographs, diagrams, \$4.95. Four essays outline new astronomical interpretations of Stonehenge, and the latest developments in the continuing research into the origin of the universe.

LINNAEUS—Heinz Goerke, transl. from German by Denver Lindley—Scribner, 1973, 188 p., illus., \$9.95. Medical historian's modern biography of the Swedish 18th-century botanist, based on autobiographical and contemporaneous sources as well as recent research. Reference notes, chronology and reading list are included.

THE MECHANICS OF CONDITIONED BEHAVIOR: A Critical Look at the Phenomena of Conditioning—Wanda Wyrwicka—C. C. Thomas, 1972, 179 p., illus., \$11.50. Study analyzes well-known data as well as new findings in conditioning experiments, and discusses a possible neural mechanism for the formation of the patterns of associations between stimuli which develop in the process of conditioning.

ORGANIC PHOSPHORUS COMPOUNDS, Vols. 1, 2, 3, & 4—G. M. Kosolapoff and L. Maier—Wiley-Interscience, 1972, 545 p., 508 p., 500 p., 531 p., \$29.95 each. Comprehensive treatise, each volume provides definitive coverage of the methods of preparation, and the chemical and physical properties of organic phosphorus compounds, along with detailed references to the original literature.

PACEM IN MARIBUS—Elisabeth Mann Borgese, Ed.—Dodd, 1973, 426 p., \$10. Peace on the Oceans, theme of 1970 international conference, considers the urgent issues raised by impending exploitation and pollution of the oceans, the problems of planning and development, harvesting sea resources, international controls, demilitarization of the seabed, and control of threats of pollution.

PROGRESS IN PEPTIDE RESEARCH, Vol. II—Saul Lande, Ed.—Gordon, 1972, 395 p., diagrams, \$19.50. Proceedings cover such topics as fundamental experiments in solid-phase peptide synthesis, synthesis of polypeptides by solid-phase fragment coupling, the chemistry and immunochemistry of calcitonins, and conformation of peptide antibiotics.

THE SEAS IN MOTION—F. G. Walton Smith—Crowell, 1973, 248 p., 70 photographs, 50 diagrams, \$7.95. Informative and readable account of the complex patterns of the ocean, of waves, tides and currents, how they move, explains heat exchanges at the air-sea interface, and describes the relationship between the movements of the sea, weather and climate.

SOLAR ACTIVITY: Observations and Predictions—Patrick S. McIntosh and Murray Dryer, Eds.—MIT Pr, 1972, 444 p., photographs, diagrams, \$17.50. Brings together a set of research papers in the interdisciplinary field of solar-terrestrial physics dealing with theories, the interplanetary medium, geophysical responses to solar activity, and progress in forecasting technology.

TEXTBOOKS

DIELECTRICS—P. J. Harrop—Wiley, 1972, 155 p., diagrams, \$9.75. Undergraduate text, develops the subject from the fundamental theory in an integrated fashion employing a minimum of mathematics and electromagnetic theory while including the major advances of the last few years.

FUNDAMENTALS OF ELEMENTARY PARTICLE PHYSICS—Michael J. Longo—McGraw, 1973, 237 p., photographs, diagrams, \$9.95. Designed for a junior-senior level one-semester course, the book is basically written from an experimentalist's point of view, with a number of problems provided for each chapter.

INFORMATION SYSTEMS, SERVICES AND CENTERS—Herman M. Weisman—Becker-Hayes (Wiley), 1972, 265 p., diagrams, tables, \$10.50. Reference and text, concerned with the practices of information transfer and use, examines information science for the purpose of control of the information "flood" through documentation practices, management of services, and analysis centers.

AN INTRODUCTION TO MACROMOLECULES—Leo Mandelkern—Springer-Verlag, 1972, 172 p., electron micrographs, diagrams, paper, \$5.90. Undergraduate text, non-mathematical presentation discusses the structures and properties of all classes of macromolecules, from synthetic polymers to proteins and nucleic acids.

MATHEMATICAL MODELS IN THE SOCIAL SCIENCES—John G. Kemeny and J. Larie Snell—MIT Pr, 1972, 145 p., diagrams, \$10.95. Text for a one-semester junior mathematics course, with techniques and applications in such fields as ecology, market stability and optimal scheduling.

THE MOLECULAR BASIS OF ANTIBIOTIC ACTION—E. F. Gale and others—Wiley, 1972, 456 p., plates, diagrams, \$23.50. Advanced text summarizes our present knowledge of the mechanisms by which antibiotics work, stressing those interactions which enable antibiotics to act selectively, and giving the reader a framework for understanding the molecular basis of bacterial resistance to drugs.

PHYSICS OF ATOMS AND MOLECULES: An Introduction to the Structure of Matter—U. Fano and L. Fano—U of Chicago Pr, 1973, 592 p., diagrams, \$14.50. Advanced undergraduate text, presents atomic phenomena in harmony rather than in contrast with classical physics. Book deals with isolated atoms, focusing on problems of size and stability, on their ability of aggregate, and their electric, magnetic and spectroscopic properties.

PRINCIPLES AND PROCESSES OF BIOLOGY—M. J. Hollingsworth and K. Bowler—Chapman (Halsted Pr), 1972, 457 p., photographs, diagrams, \$15.75. Text presents the fundamentals of biology in an ordered sequence, rather than treating various plant and animal types. Provides students with an opportunity to develop an analytical rather than a descriptive approach to the study of living organisms.

PRINCIPLES OF GENETICS—Irwin H. Herskowitz—Macmillan, 1973, 630 p., photographs, diagrams, \$12.95. Text approaches the subject in a highly structured manner, and since principles are dealt with rather than history, the presentation aims to be logical rather than chronological. Includes a large amount of optional material to provide complete coverage of the topic.

THE SUPERALLOYS—Chester T. Sims and William C. Hagel, Eds.—Wiley, 1972, 626 p., illus., \$29.95. Metallurgical reference source and suitable text for college courses on high-temperature materials, provides both the scientific and technical background needed to understand the physical metallurgy for the superalloy systems in use today.