

books OF THE WEEK

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THE AMERICAN EPHEMERIS AND NAUTICAL ALMANAC FOR THE YEAR 1973—Nautical Almanac Office, U.S. Naval Observatory—GPO, 1972, 584 p., \$6.25. Source of basic calculations and data, principal ephemerides, eclipses, risings, settings and miscellaneous tables.

ANNUAL REVIEW OF BIOPHYSICS AND BIOENGINEERING, Vol. 1—Manuel F. Morales and others, Eds.—Annual Reviews, 1972, 589 p., plates, diagrams, \$10. Review articles present the essence of modern biophysics, concerned mainly with processes rather than with the organisms in which these processes occur. Included are mathematical and physical techniques of potential interest to biology.

APPLIED PLASTIC DESIGN IN STEEL—Robert O. Disque—Van Nostrand Reinhold, 1972, 243 p., diagrams, tables, \$13.95. An applications-oriented presentation, proceeds from demonstrations of the role of ductility in design, to examples for simplifying the design of beams and columns, to the application of plastic design in various types of welded and bolted connections.

ARTIFICIAL CELLS—Thomas Ming Swi Chang—Thomas, C. C., 1972, 221 p., illus., \$16. A chemical, biophysical, biochemical, physiological and clinical study of the feasibility of artificial cells, written for researchers and clinicians.

BIOGENESIS AND PHYSIOLOGY OF HISTAMINE—Georg Kahlson and Elsa Rosengren—Williams & Wilkins, 1971, 318 p., plates, diagrams, tables, \$21. Monograph represents up-to-date review of histamine research in general, and gives an account of the significant field work done in the authors' laboratory over the past 30 years.

THE BLENDING AMERICAN: Patterns of Inter-marriage—Milton L. Barron, Ed.—Quadrangle Bks., 1972, 357 p., tables, \$12.50; paper, \$2.95. An anthology of the most representative thought and research on American intermarriage along lines of religion, race, ethnic background and nationality.

CARBON-13 NUCLEAR MAGNETIC RESONANCE FOR ORGANIC CHEMISTS—George C. Levy and Gordon L. Nelson, foreword by F. A. L. Anet—Wiley-Interscience, 1972, 222 p., illus., \$9.95. Treats the subject in a practical, readable and non-mathematical fashion. Places emphasis on the use of spin-lattice relaxation times and nuclear Overhauser effects in making spectral assignments and structural deductions.

CLIMBING MAN'S FAMILY TREE: A Collection of Major Writings on Human Phylogeny, 1699 to 1971—Theodore D. McCown and Kenneth A. R. Kennedy—Prentice-Hall, 1972, 485 p., drawings, paper, \$5.95. Traces man's changing conception of his species from the early Platonic belief in ideal forms to the current search for fossil links to fill the gaps in the recorded history of evolution.

THE COBALAMINS: A Glaxo Symposium—H. R. V. Arnstein and R. J. Wrighton, Eds.—Williams & Wilkins, 1971, 208 p., plates, diagrams, \$12.50. Reviews recent developments in the field of cobalamin metabolism, from thin-layer chromatography of vitamin B₁₂ and its coenzymes, to observations on vitamin B₁₂ binding proteins.

INTRODUCTION TO ENVIRONMENTAL SCIENCE: Programmed Learning Aid for Self Review—Phillips W. Foster; Roger H. Hermanson, Ed.—Learning Systems, 1972, 181 p., illus., paper, \$3.50. Examines the relationships between man and his environment, man's interference with the earth's ecosystems, the biosphere, urbanization, various costs of environmental decay, and offers a framework for public policy.

KERATINS: Their Composition, Structure and Biosynthesis—R. D. B. Fraser, T. P. MacRae and G. E. Rogers—Thomas, C. C., 1972, 304 p., micrographs, diagrams, \$16.75. Monograph, brings together relevant results of investigations of the molecular structure and biogenesis of keratins, providing an integrated picture of the molecular biology of these structural proteins of skin, hair and nails.

OIL ON PUGET SOUND: An Interdisciplinary Study in Systems Engineering—Juris Vagners, Dir., coordinated by Paul Mar—U. of Wash. Press, 1972, 629 p., diagrams, maps, tables, \$10. A Sea Grant graduate student project, studying the full implications of water-borne oil transportation on the environmental, economic, and social quality of the Greater Puget Sound region.

199 COLOR TV TROUBLES & SOLUTIONS—R. L. Goodman—TAB Bks., 1972, 224 p., diagrams, \$7.95; paper, \$4.95. Describes actual case-history problems and their practical solutions, arranged by brand names, from Admiral to Zenith.

OSCILLATIONS—I. B. Hopley—Methuen (Barnes & Noble), 1972, 64 p., diagrams, papers, \$3. Discusses undamped, damped and forced simple harmonic oscillations, and considers mechanical and electrical oscillatory systems.

PEST CONTROL: Strategies for the Future—Agricultural Bd., Div. of Biology and Agriculture, NRC—NAS, 1972, 376 p., diagrams, tables, paper, \$6.75. National Academy assessment of the present means of pest control, strategies for better chemical control, alternative means of control, with recommendations for effective pest management consistent with environmental quality.

PHYSICS OF RARE EARTH SOLIDS—K. N. R. Taylor and M. I. Darby—Chapman & Hall (Barnes & Noble), 1972, 308 p., diagrams, tables, \$23.75. Describes the fundamental physical properties of the rare earths in the solid state, their ionic properties, band structures, magnetic properties, transport, and rare earth compounds.

PIPPA'S CHALLENGE—Joy Adamson—Harcourt, 1972, 177 p., 11 color plates, 94 photographs, map, \$9.50. The story of the tame cheetah the author had successfully released into the wild, and of her fourth litter growing up. Close observations through health and accidents, of feeding, mating and play, give new insights into the nature of cheetahs, documented with extraordinary photographic record. Includes comparison tables of leopard, lion and cheetah.

THE PRINCIPLES OF POLLINATION ECOLOGY—K. Faegri and L. van der Pijl—Pergamon, 1971, 2nd rev. ed., 291 p., drawings, \$14. Tries to formulate general principles applicable anywhere, enabling the reader to make his own observations within the confines of the flora of his region. Deals with techniques, spore and pollen dispersal in lower plants, pollination, retrograde development, development of flowers, and speciation. Illustrated by case histories.

PRODUCTION, POLLUTION, PROTECTION—W. B. Yapp—Springer-Verlag, N.Y., 193 p., photographs, diagrams, tables, paper, \$5.80. Expanded version of lectures to British physics students on practical aspects of whole-organism biology, on how organic matter is made and converted, how man has interfered with the natural flow of production, and how he can protect himself from

his own mismanagement of resources. A scientific account for the concerned layman.

A PROGRAMMED INTRODUCTION TO INFRARED SPECTROSCOPY—B. W. Cook and K. Jones—Heyden & Son, 1972, 192 p., diagrams, paper, \$3.90. Teaches the subject in logical progression at student's own speed, explains each concept thoroughly, aims at enabling reader to prepare a sample, set up and operate spectrophotometer and interpret resulting spectrum.

PROGRESS IN GROUP AND FAMILY THERAPY—Clifford J. Sager and Helen Singer Kaplan, Eds.—Brunner/Mazel, 1972, 935 p., \$25. Contains 52 articles selected to provide a comprehensive overview of recent significant theoretical and clinical innovations in group therapy, family therapy, treatment of marital and sexual problems, and approaches to special patient populations.

PSYCHOSOMATIC DISORDERS: A Behavioristic Interpretation—Sheldon J. Lachman—Wiley, 1972, 208 p., illus. \$7.50; paper, \$3.95. Attempts to cover in depth the abnormal psychology of psychosomatics. Discusses significant developments, surveys the range of psychosomatic disorders, examines the experimental evidence concerning the genesis and development of psychosomatic event, and provides general theoretical framework.

THE SOLAR SYSTEM—Frank W. Cousins—Pica Press (Universe Bks.), 1972, 300 p., 138 plates, drawings by Malcolm Chandler, \$20. Astronomer presents to layman a readable and authoritative picture of the nature of the solar system, of the planets and their atmospheres, the sun, earth/moon system, comets, meteors and tektites, the scale and origin of the solar system.

SWAMPS, RIVER BOTTOMS AND CANEBRAKES—Brooke Meanley—Barre Pubs., 1972, 142 p., 100 photographs, map, \$12.50. Takes the reader among the flora and fauna of the great swamplands of the South, from Great Dismal Swamp, the Okefenokee and the Everglades in the East, to the Great Pecan Forest of Arkansas and Reelfoot Lake in Tennessee.

TECHNOLOGY AND CULTURE: An Anthology—Melvin Kranzberg and William H. Davenport, Eds.—Schocken Bks., 1972, 364 p., \$10. A volume of scholarly studies in the history of technology, technology in relation to society, in relation to the humanities, man/machine techniques, and the effects of invention and innovation.

VIABILITY OF SEEDS—E. H. Roberts, Ed.—Chapman (Barnes & Noble), 1972, 448 p., photographs, diagrams, \$23.75. An international group of researchers take a fresh look at the problems of seed viability, its control, seed deterioration, effects of mechanical injuries, environmental effects, vigor, measurement of viability, dormancy, cytological, genetical and metabolic changes.

WEBSTER'S INSTANT WORD GUIDE—A Merriam Webster—Merriam, 1972, 378 p., \$2.95. A compact, quick-reference aid to word division, spelling and often-confused words. Lists 35,000 words, 1,500 abbreviations, punctuation, weights and measures.

WORLD ECO-CRISIS: International Organizations in Response—David A. Kay and Eugene B. Skolnikoff, introd. by Maurice F. Strong—U. of Wis. Press, 1972, 324 p., \$12.50; paper, \$2.50. Essays deal with present and future dimensions of the problems of environment, with the present and potential roles of international institutions, environmental quality and international trade.

THE WORLD OF THE SWAN—Joe Van Wormer—Lippincott, 1972, 156 p., photographs by author, \$5.95. Discusses the seven species of swans and follows the trumpeter, whistler, whooper and mute swans through the seasons in their North American habitats.