# **books** of the week

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ADVANCES IN PARTICLE PHYSICS, Vol. 1—R. L. Cool and R. E. Marshak—Interscience Pubs., 1968, 497 p., diagrams, \$18.95. Contains articles on high energy muon scattering, system and spectrometer design, weak interactions and symmetries, higher symmetries of hadrons, and leptonic decays of elementary particles.

ALGEBRAIC THEORY OF PARTICLE PHYSICS: Hadron Dynamics in Town ALGEBRAIC THEORY OF PARTICLE PHYSICS: Hadron Dynamics in Terms of Unitary Spin Currents—Yuval Ne'eman—Benjamin, 1967, 334 p., paper, \$6.95. Summarizes advances in abstract and physical algebra of unitary spin, unitary symmetry, applying SU(3), integrated charges, U(12) TOA of space-integrals, and spectrum-generating algebra.

ANATOLIA I (From the Beginnings to the End of the 2nd Millenium B.C.)—U. Bahadir Alkim, transl. from French by James Hogarth—World Pub. Co., 1968, 279 p., 158 plates, 61 in color, maps, \$10. Describes illustrated samples of the prehistoric archeology of Asia Minor, Anatolia in the Stone Age, in the Chalcolithic Period, in Early and Late Bronze Age.

ANIMALS FOR RESEARCH: A Directory of Sources of Laboratory Animals, Fluids, Tissues, Organs, Equipment and Materials — Institute of Laboratory Animal Resources, NRC — National Acad. of Sciences, 1968, 7th rev. ed., 125 p., paper, \$3.25. Standard cross-referenced source of information on the supply of animal species for experimental research.

ANIMALS IN DANGER: The Story of Vanishing American Wildlife—Frances and Dorothy Wood—Dodd, 1968, 181 p., photographs, \$4.95. Tells why some species are threatened and what is being done about it.

THE BIOLOGY OF THE COCKROACH—D. M. Guthrie and A. R. Tindall—St. Martin's Press, 1968, 408 p., illus., \$19. Cockroaches have long been favorite experimental material due to their large size, ease of culture and relatively generalized structure. This book is intended as a review of research on the various aspects of cockroach biology, together with some original observations.

THE CHINA CLOUD: America's Tragic Blunder and China's Rise to Nuclear Power—William L. Ryan and Sam Summerlin—Little, Brown, 1968, 309 p., map, \$7.95. Two foreign correspondents and news analysts piece together the story of how the U.S.-trained Chinese aerodynamicists, nuclear physicists and metal research experts came to develop China's nuclear potential.

DESCRIPTION OF THE INDIES (c. 1620) (originally titled Compendium and Description of the West Indies) — Antonio Vazquez de Espinosa, transl. by Charles Upson Clark—Smithsonian Institution Press, 1968, 862 p., \$12.50. The notes of a learned Carmelite friar on what he observed of the Indian cultures, the Spanish administration, the geography of the continent, and the plant and animal life.

DISSOCIATION ENERGIES and Spectra of Diatomic Molecules—A. G. Gaydon—Chapman & Hall (Barnes & Noble), 1968, 3rd ed., 330 p., diagrams, \$10. Updated and expanded edition, concludes with critical assessment of data, gives rec-

ommended values for more than 400 diatomic molecules, and lists atomic heats for a number of polyatomic molecules.

ENCOUNTER WITH REALITY: New Forms for an Old Quest—Gardner Murphy and Herbert E. Spohn—Houghton Mifflin, 1968, 162 p., illus., \$4.75. Explores the dimensions of reality as a matter of personal relevance, man's struggle to come to terms with reality, in the light of some of the experimental evidence available.

FISH MIGRATION—F. R. Harden Jones—St. Martin's Press, 1968, 325 p., illus, by H. E. Jenner, \$21. Studies of the spectacular movement of fish which impels migrants to return to the regions from which they have migrated, in particular the migrations of salmon, eel, herring, cod and plaice.

GENETIC MOSAICS AND OTHER ESSAYS—Curt Stern—Harvard Univ. Press, 1968, 185 p., illus., \$6.50. Includes Essay on Mendel's influence on the development of human genetics, and the author's original contributions to theories on the nature of human compounds, discoveries of genetic mosaics in man and other mammals, and the role of genes in the development of patterns.

IN THE WAKE OF THE SEA-SERPENTS—Bernard Heuvelmans, transl. from French by Richard Garnett—Hill & Wang, 1968, 645 p., 75 plates, drawings by Alika Watteau, \$10. Zoologist's annotated story of chronologically reported sightings and speculations about animals thought to be sea-serpents, with chronologial table of sightings, strandings and captures.

INTERNATIONAL SYSTEMS AND THE MOD-ERNIZATION OF SOCIETIES: The Formation of National Goals and Attitudes—J. P. Nettl and Roland Robertson—Basic Bks., 1968, 216 p., \$5.95. Essays based on informal discussions between two scholars in search of a theory of societal guid-

INTRODUCTION TO MASS SPECTROMETRY OF ORGANIC COMPOUNDS—A. A. Polyakova and R. A. Khmel'nitskii, transl. from Russian—IPST (Daniel Davey), 1968, 151 p., diagrams, \$8. Special stress is laid on the connection between mass spectra and structure of organic compounds as the base of mass spectrometric methods of analysis.

LIFE HISTORIES OF NORTH AMERICAN CARDINALS, GROSBEAKS, BUNTINGS, TOWHEES, FINCHES, SPARROWS AND ALLIES, Order Passeriformes: Family Fringillidae, Parts 1-3—Arthur Cleveland Bent and Collaborators; Oliver L. Austin, Jr., Ed.—Smithsonian Institution (GPO), 1968, 1889 p., 80 plates, paper, \$8.25 per set of 3 vols. Last in a monumental series of bulletins of the U.S. National Museum on the life histories of North American birds, started more than half a century ago, and brought up-to-date to include the more significant new information. information.

THE LOST AMERICANS—Frank C. Hibben—Crowell, 1968, rev. ed., 187 p., photographs, \$5.95. Popularly told story of the excavations and findings of traces of prehistoric man in America.

MACHINE DESIGN—Paul H. Black and O. Eugene Adams, Jr.—McGraw-Hill, 1968, 3rd ed., 678 p., illus., \$14.50. Acquaints the reader with the elements of machine design and the units of power transmission with respect to the required characteristics of strength, rigidity, minimum space, wear and economy of production and operation.

THE "OTHER" STATE DEPARTMENT: The United States Mission to the United Nations, Its Role in the Making of Foreign Policy—Arnold Beichman, foreword by Leland M. Goodrich—Basic Bks., 1968, 221 p., \$5.95. An annotated study of the relationship of the U.S. Mission to the policy makers in Washington, based on first-hand acquaintance with U.N. affairs and some of the principal personalities.

RADIOISOTOPES IN MEDICINE: In Vitro Studies—Raymond L. Hayes, Francis A. Goswitz and Beverley E. Pearson Murphy, Eds.—USAEC (CFSTI, CONF-671111), 1968, 753 p., illus., paper, \$3. Proceedings of a 1967 symposium, deals with protein-binding studies and radioassays, activation analysis, and cytologic and chromosomal labeling studies.



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REVIEW OF THE SOVIET SPACE PROGRAM with Comparative United States Data—Charles S. Sheldon II—McGraw-Hill, 1968, 152 p., illus, 59.95. Results of a 10-year study of the Soviet space program and flight data, examines Soviet launch vehicles and launch sites, and presents comprehensive statistics contrasting Soviet and U.S. accomplishments in space during the past decade.

### TEXTBOOKS

BIOLOGICAL SCIENCE: Molecules to Man (Blue Version)—Biological Science Curriculum Study, Arnold B. Grobman, Chmn.; Claude A. Welch, Ed.—Houghton Mifflin, 1968, rev. ed., 840 p., illus., \$9.80. Completely revised high school course of biology, treats living things on many different levels of organization, relates these levels to each other, from molecules and cells to whole organisms and complicated groups of organisms living together.

ECOLOGY AND RESOURCE MANAGEMENT: A Quantitative Approach—Kenneth E. F. Watt—McGraw-Hill, 1968, 450 p., illus., \$14.50. Aimed at biologists rather than mathematicians, text considers all resources in a comparative approach, dealing with the problem, the theory and the principles of resource management and the quantitative methods employed.

ESSENTIALS OF CHEMISTRY IN THE LABORATORY: With Report Forms—Harper W. Frantz and Lloyd E. Malm—Freeman, 1968, 2nd ed., 373 p., illus by Roger Hayward, paper, \$4.75. Revised text continues to emphasize the conviction of the authors that general chemistry, even to liberal arts students, should be taught as a laboratory-centered course.

GEOLOGICAL EVOLUTION OF NORTH AMERICA—Thomas H. Clark and Colin W. Stearn—Ronald Press, 1968, 2nd ed., 570 p., illus, \$9.50. A historical geology textbook for firstyear geology students. Regional approach presents historical development of the continent in terms of its major structural units: the bordering geosynclines, the platform, and the Canadian Shield.

HEREDITY, EVOLUTION AND SOCIETY—I. Michael Lerner—Freeman, 1968, 307 p., illus., \$8. Intended as a text for single-term course on the social implications of biology. Emphasis ion organic evolutionary thought, hereditary transmission, and the biochemistry of the cell and its relation to biological communication between generations.

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