

# books OF THE WEEK

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**AMERICAN INSTITUTE OF PHYSICS HANDBOOK**—Dwight E. Gray, Ed.—McGraw, 1972, 3rd ed., 2,342 p., 543 diagrams, \$49.50. Extensively revised reference for scientists and engineers. Wide range of tables, graphs and summaries of formulas in all fields of physics include new material on the viscosity of gases and liquids, revised meteorological and geodetic data, advances in acoustics, magnetic fields, infrared, and other recent discoveries.

**ANNUAL REVIEW OF ASTRONOMY AND ASTROPHYSICS**, Vol. 10—Leo Goldberg, David Layzer and John G. Phillips, Eds.—Annual Reviews, 1972, 513 p., illus., \$10. Topics reviewed include spectra of solar flares, solar neutrinos, evolution of rotating stars, supernova remnants, intergalactic matter and gravitational wave astronomy.

**BIRDS OF NORTH AMERICA: A Personal Selection**—Eliot Porter—Dutton, 1972, 10x12, 144 p., 88 photographs by author (64 in color), \$25. Captures characteristic portraits of birds nesting, feeding and flying in their habitat, with narrative giving away the master photographer's secrets of how to observe birds and catch the moments of perfect composition.

**THE EVOLUTION OF INSECTS**—Philip S. Callahan—Holiday Hse, 1972, 192 p., photographs and illus. by author, \$5.95. Concise, nontechnical and well-illustrated account by research entomologist, makes use of fossil insects, geologic calendar and microscopic studies of heredity to trace the evolution of insect species and insect behavior.

**FREEDOM FROM HEART ATTACKS**—Benjamin F. Miller, M.D. and Lawrence Galton; Daniel Brunner, M.D., Consultant—S&S, 1972, 320 p., tables, \$7.95. A contribution to preventive medicine, summarizes research findings from studies around the world, showing that heart attacks result from the interrelationships of many factors, and prevention depends on modifying such varied factors as diet, exercise, smoking and stress.

**HOMO SAPIENS: From Man to Demigod**—Bernhard Rensch, transl. from German by C. A. M. Sym—Columbia U Pr, 1972, 228 p., illus., tables, \$10. Zoologist's account of the uniqueness of man among living organisms, discusses in turn man's physical and mental evolution, biological aspects of man's cultural development, and considers the factors influencing man's future.

**INTRODUCTION TO GLASS SCIENCE**—L. D. Pye, H. J. Stevens and W. C. LaCourse, Eds.—Plenum Press, 1972, 722 p., photographs, diagrams, \$32.50. Tutorial Symposium Proceedings, offer comprehensive and contemporary treatment of the vitreous state, methods of structural analysis, and discuss the most important properties of glasses, including glass ceramics.

**THE JIVARO: People of the Sacred Waterfalls**—Michael J. Harner—Doubleday, 1972, 240 p., 22 photographs, drawings, \$7.95. Highly readable anthropological study of the fierce Indian tribe in eastern Ecuador, their ways of subsistence, crafts, social relations and customs that include use of hallucinogens, head-shrinking and shamanism.

**MAN FOR HUMANITY: On Concordance vs Discord in Human Behavior**—Jules H. Masserman, M.D., and John J. Schwab, M.D., Eds.—C. C. Thomas, 1972, 370 p., illus., \$20.50. Collection of contributions made at an international colloquium of anthropologists, psychiatrists, psychologists and sociologists.

**MINERALS AND ROCKS IN COLOR**—J. F. Kirkaldy—Hippocrene Bks, 1972, 184 p., 290 color photographs by Folke Johanson and Michael Allman, drawings, tables, \$5.95. Identification guide, discusses rock formation and properties, illustrated with specimens from Scandinavian and British collections.

**MOLECULAR EVOLUTION AND THE ORIGIN OF LIFE**—Sidney W. Fox and Klaus Dose; foreword by A. Oparin—W. H. Freeman, 1972, 359 p., illus., tables, \$16. Scholarly analysis of the successive stages of the evolution of carbon compounds, beginning with their cosmic origin and concluding with the Darwinian evolution of primitive living systems.

**MOLECULAR REACTIONS AND PHOTOCHEMISTRY**—Charles H. DePuy and Orville L. Chapman—P-H, 1972, 150 p., diagrams, \$10.95; paper, \$5.95. Brief introduction to the so-called "no-mechanism" chemical reactions and organic photochemistry.

**MOLECULES AND LIFE: Historical Essays on the Interplay of Chemistry and Biology**—Joseph S. Fruton—Wiley, 1972, 590 p., \$19.95. Examines progressive advances in the study of the nature of enzymes, the chemical basis of heredity, the role of oxygen in biological systems, and chemical pathways of metabolism.

**THE MOSQUITO: Its Life, Activities and Impact on Human Affairs**—J. D. Gillett—Doubleday, 1972, 358 p., photographs, drawings, \$9.95. An informative, interestingly told and well-illustrated account of the life cycle, flight, biological rhythms, strains, species and enemies, and the role of mosquitoes as disease carriers. Includes lists of species by region.

**THE MOUNTAIN PEOPLE**—Colin M. Turnbull—S&S, 1972, 309 p., photographs, drawings, \$7.95. Anthropological field study of a small group of African hunters, describes their dehumanization and social disintegration after exile in a barren land had made individual survival their only concern.

**MUSHROOMS OF NORTH AMERICA**—Orson K. Miller Jr.—Dutton, 360 p., 292 color plates, drawings, \$17.95. Comprehensive handbook for identification, describes 422 species, includes pictorial keys, glossary and discussion of toxins.

**NATURAL DYES: Plants and Processes**—Jack Kramer—Scribner, 1972, 144 p., color plates, photographs, drawings by Charles Hoepfner, \$9.95. Fully illustrated guide to the art of extracting plant dyes and applying them to yarns. Describes dyer's garden, gathering of materials, preparing yarns and mordanting, the dyeing process, commercial woods, color basics and combinations, and tested recipes.

**NUCLEAR MILESTONES: A Collection of Speeches**—Glenn T. Seaborg—W. H. Freeman, 1972, 390 p., 300 photographs, \$7.50. In well-illustrated memorial and dedication speeches by the former chairman of the AEC, the book reviews highlights and outstanding personalities of U.S. atomic energy developments.

**NUCLEIC ACID SEQUENCE ANALYSIS**—Stanley Mandel—Columbia U Pr, 1972, 282 p., diagrams, \$15. Covers the subject from introduction through detailed methodology in such a manner that the newcomer to nucleic acid sequencing could use this manual alone.

**PARADISE BELOW ZERO**—Calvin Rutstrum—Collier—Macmillan, 1972, 244 p., photographs, illus. by Les Kouba, paper, \$2.45. Handbook on how to camp in winter, with checklist of provisions and equipment for trips of varying length.

**PERSONAL RAPID TRANSIT: A Collection of Papers on a New Type of Urban Transportation**—J. Edward Anderson and others, Eds.—Inst. of Technol., U. of Minn., 1972, 502 p., illus., paper, \$8.75. Compre-

hensive account of PRT, a fixed-guideway urban transit system, with stations off the main line and automobile-size vehicles operated individually by automatic control.

**THE PREHISTORY OF THE TEHUACAN VALLEY**, Vol. 4: Chronology and Irrigation—Frederick Johnson, Ed.—U. of Texas Press, 1972, 290 p., photographs, drawings, maps, tables, \$15. Study provides detailed results of chronometric dating, and presents intensive archeological study of irrigation over a 1500-year period, showing its importance to the rise of civilization in this area of Mesoamerica.

**PROGRESS IN POLYMER SCIENCE, JAPAN; Vols. 1-3**—M. Imoto and S. Onogi, Eds.—Halsted P. (Wiley), 1972, 520 p., 380 p., 388 p., diagrams, tables, \$25, \$18.50, \$18.50. Vol. 1 deals with advances in both the synthesis and characterization of polymers; vol. 2, with radial polymerization and the structure and properties of polymers; vol. 3 treats ionic and coordination polymerizations.

**THE QUANTIFICATION OF CONCERN: Some Aspects of Social Accounting**—Eli Goldston—Columbia U Pr, 1972, 76 p., illus., \$4.50. Explores the potentials and limitations to quantify some national goals beyond greater GNP, some corporate purposes beyond maximum net profit, and management responses to social audit.

**QUICK CALCULUS: For Self-Study or Classroom Use**—Daniel Kleppner and Norman Ramsey—Wiley, 1972, 294 p., diagrams, paper, \$3.95. Manual designed to give a working knowledge of differential and integral calculus, derivations and differentiation.

**RED ROCK COUNTRY: The Geologic History of the Colorado Plateau**—Donald L. Baars—Doubleday, 1972, 264 p., photographs, diagrams, \$9.95. Geologist's guided tour through canyons revealing rock formations and life forms going back hundreds of millions of years in geologic time.

**SCIENTIST EXTRAORDINARY: The Life and Scientific Work of Thomas Henry Huxley, 1825-1895**—Cyril Bibby—St. Martin's, 1972, 208 p., photographs, \$8.95. Biographical study emphasizes Huxley's work as a research scientist, as an organizer and administrator of science, and as a scientific educator.

**THE SEARCH FOR A THEORY OF MATTER**—Mendel Sachs—McGraw, 1972, 221 p., illus., \$6.95. An authoritative and readable account of man's efforts to find a unified theory to explain the nature of the universe, with emphasis on the development and conflict of ideas in the 20th century.

**SHELLS**—William K. Emerson—Viking Pr, 1972, 10x12, 295 p., 32 color plates, 208 photographs by Andreas Feininger, drawings, \$27.50. Above all an aesthetic treat in appreciation of the sculptural and design qualities of some of the world's finest specimens, with malacologist's classification, and description of particular characteristics shaped to fit environmental conditions.

**SMOG: A Report to the People**—Lester Lees and others—Caltech Environmental Quality Lab (Ritchie), 1972, 175 p., illus., paper, \$3.50. Research team findings on measures designed to control motor vehicle pollution through reduced emissions, vehicle use control, incentives and disincentives.

**SNAKE WILDERNESS**—Boyd Norton—Sierra Club, 1972, 160 p., 8 color plates, map, \$7.95. A description of Idaho's Snake River watershed, one of the least spoiled environments in the U.S., and the on-going struggle for its preservation between conservationists, mining interests and power dam developers.

**SOWING THE WIND: A Report from Ralph Nader's Center for Study of Responsive Law on Food Safety and the Chemical Harvest**—Harrison Wellford—Grossman, 1972, 384 p., \$7.95. Analyzes findings in three areas chosen for investigation—pesticides, meat and poultry inspection by the U.S. Department of Agriculture.