

# New Books

**New Books** is an editorial service for readers information. To order any book listed or any U.S. book in print please remit retail price, plus 25¢ handling charge for each book to **BOOK ORDER SERVICE**, Science News, 1719 N Street, N.W., Washington, D.C. 20036. All books sent postpaid.

**AMERICA'S OIL FAMINE:** How It Happened and When It Will End—Ruth Sheldon Knowles—Coward, 1975, 254 p., \$8.95. Informative and readable book by petroleum expert, brings together the various international and national developments to present a coherent picture of the U.S. energy situation in regard to petroleum.

**A BIOGRAPHICAL DICTIONARY OF SCIENTISTS**—Trevor I. Williams, Ed.—Halsted Pr, 1975, 2nd ed., 656 p., \$17.95. International and historical selection of more than 1,000 authoritative biographies of scientists and their achievements, from Abbe to Watson-Watt.

**BIOLOGICAL ANTHROPOLOGY:** Readings from SCIENTIFIC AMERICAN—Introductions by Solomon H. Katz—W. H. Freeman, 1975, 494 p., photographs, diagrams, \$14.95; paper, \$6.95. Articles cover aspects of the evolutionary roots and potentials of the human species, evolutionary theory, race and individuality, adaptation and adaptability, and present challenges.

**BY JUPITER!** The Remarkable Journey of Pioneer 10—Lou Jacobs, Jr.—Hawthorn, 1975, 108 p., photographs, diagrams, \$5.95. Succinct and readable account of the hazardous mission, instruments, experiments and discoveries of the spacecraft, launched in March 1972. Includes chronology and glossary.

**EMBRYOS** and How They Develop—Marie M. Jenkins—Holiday, 1975, 194 p., photographs, drawings, \$6.95. Biologist's lucid account, in nontechnical terms, of the development of protozoans, worms, fruit fly puffs, half-eggs, fins to feet, egg to chick, and mammals.

**EYE MOVEMENTS, VISION AND BEHAVIOR:** A Hierarchical Visual Information Processing Model—Kenneth R. Gaarder—Hemisphere (Wiley), 1975, 168 p., illus., \$14.95. Describes model based on the thorough consideration of the discontinuity of eye movements in perception.

**FRITZ**—Martin Shepard—Sat Rev Pr. (Dutton), 1975, 235 p., \$9.50; paper, \$3.95. An intimate portrait of Fritz Perls and Gestalt Therapy, compiled by family and associates who knew him.

**GEOCHEMISTRY AND THE ORIGIN OF LIFE**—Keith A. Kvenvolden, Ed.—DH&R (Halsted Pr), 1975, 440 p., photographs, diagrams, tables, \$26. Highlights 20 years of landmark papers searching the chemical record for clues to the mystery of life, from Urey's paper on the early chemical history of the earth to Barghoorn & Schop's description of three-billion year old microorganisms from the Precambrian in South Africa.

**GOD'S DOG**—Hope Ryden, introd. by Michael W. Fox—Coward, 1975, 288 p., 100 color and b&w photographs by author, \$12.50. Ethological study of the elusive coyote, observing for two consecutive years America's native wild canine, its feeding, mating, breeding and group behavior in the wild.

**GOING ON A DIG:** A Guide to Archaeological Fieldwork—Robert K. Moffett—Hawthorn, 1975, 110 p., photographs, drawings, \$6.95. About how to become a volunteer helper, accompanying the archaeologist, learning to select a site, working on a dig, and learning to understand the data.

**HEAT AND MASS TRANSFER IN THE BIOSPHERE,** Part 1: Transfer Processes in the Plant Environment—D. A. deVries and N. Afgan, Eds.—Halsted Pr, 1975, 594 p., diagrams, tables, \$28.50. Brings together research and engineering aspects of heat and mass transfer related to soil science, micrometeorology, crop physiology, hydrology and ecology.

**HEDGES**—E. Pollard, M. D. Hooper and N. W. Moore—Taplinger, 1975, 256 p., 20 plates, diagrams, maps, \$14.95. British research team's authoritative treatment of the historical role of hedges, their flora, fauna, management, and use for school projects.

**HELPLESSNESS:** On Depression, Development and Death—Martin E. P. Seligman—W. H. Freeman (Scribner), 1975, 250 p., \$8.95. Psychologist proposes theory that anxiety and depression grow out of a feeling of helplessness, a feeling that had to be learned, and shows how this learned helplessness operates in a variety of clinical cases.

**HOMOGENEOUS RELATIVISTIC COSMOLOGIES**—Michael P. Ryan, Jr. and Lawrence C. Shepley—Princeton U Pr, 1975, 335 p., diagrams, paper, \$7.50. Monograph concentrates on the structure of models of the universe. By emphasizing the moderator nature of vectors and tensors the authors develop modern tensor analysis to the point where it can be applied to general relativistic cosmology.

**MAGNETISM,** Vols. I and II—S. V. Vonsovskii, transl. from Russian by Ron Hardin—IPST (Wiley), 1975, 1,285 p., illus., tables, \$99.50. Attempts to summarize present ideas about the magnetic properties of solids, from basic interpretations of magnetism to magnetic properties of substances without magnetic ordering, and weakly magnetic substances.

**MATHEMATICS ON VACATION**—Joseph S. Madachy—Scribner, 1975, 251 p., 150 diagrams, paper, \$4.95. A choice selection of recreational mathematics, includes geometric dissections, chessboard problems, flexagons, magic and antimagic squares, alphabetics, and lost chords.

**THE MEDIA IN AMERICA**—John Tebbel—T. Y. Crowell, 1975, 433 p., \$10. Study attempts to synthesize the history of books, newspapers, magazines and broadcasting, and project it against the backdrop of political and social history—from the perspective of today's attitudes and viewpoints.

**MEDICAL GENETICS TODAY**—Daniel Bergsma, M.D., Ed.—Nat'l Foundation (Johns Hopkins U Pr), 1975, 314 p., photographs, diagrams, tables, \$20. Conference papers cover advances in cytogenetics and cell biology; biochemical, clinical and population genetics; animal models of human genetic disease, and future trends in medical genetics.

**MICROBIAL GROWTH**—P. S. S. Dawson, Ed.—DH&R (Halsted), 1975, 440 p., diagrams, tables, \$27. Benchmark papers outline the key experimental, theoretical and philosophical developments in the study of the growth cycles of bacterial cultures.

**ON THE TRAIL OF THE ARAWAKS**—Fred Olsen, foreword by George Kubler, introd. by Irving Rouse—U of Okla. Pr, 1974, 427 p., color plates, b&w photographs, drawings, maps, \$8.95. Generously illustrated archeological search for the origins of the first Indians encountered by Columbus, their ball-game courts, cultivation of manioc, tools and sherds.

**OXIDATION OF PETROCHEMICALS:** Chemistry and Technology—Theodore Dumas and Walter Bulani—Halsted Pr, 1975, 186 p., diagrams, tables, \$18.75. Brings together the most recent information about various process technologies,

abstracted from some 460 references, noting their technological, economic and chemical similarities, and relating them whenever possible to corresponding fundamental processes.

**PERCEPTUAL ASSURANCE AND THE REALITY OF THE WORLD**—Errol E. Harris—Clark U Pr (Crown), 1974, 70 p., \$5.95. The author deals with perception in the light of the phenomenological theories of Husserl, Heidegger and Merleau-Ponty, synthesizing his own solution to the problem of transcendence.

**THE PEST WAR**—W. W. Fletcher—Wiley, 1974, 228 p., 12 plates, tables, \$11.95. Describes some of the battles that have been fought in various parts of the world against agricultural pests, in particular insects, their maneuvers for survival, the weapons at man's command, their application, biological control, pesticides and the environment.

**PHYSICAL PROPERTIES OF INORGANIC COMPOUNDS:** SI Units—A. L. Horvath—Crane-Russak, 1975, 10 x 13, 480 p., graphs, tables, \$64. Extensive compilation of data on the physical properties of 31 elements and compounds selected for their importance in most industrial processes, with data critically evaluated and converted to SI units.

**SPEAKING OF CHILDREN:** Their Learning Abilities/Disabilities—Careth Ellingson—Har-Row, 1975, 294 p., plates, diagrams, \$8.95. Describes normal development as well as the different patterns and characteristics of dysfunctions. Discusses evaluation procedures, testing methods, behavior modification, chemotherapy, and screening instruments.

**SYNERGETICS:** Explorations in the Geometry of Thinking—R. Buckminster Fuller with E. J. Applewhite; preface by Arthur L. Loeb—Macmillan, 1975, 908 p., illus., \$25. The transcendental meanderings of an exploring mind, forming its own world of patterns in terms of conceptuality, tensegrity, omnitopology and operational mathematics.

**UNDERWATERMAN**—Joe MacInnes, foreword by Pierre Elliott Trudeau—Dodd, 1975, 142 p., photographs, \$6.95. First-person accounts describing the work and adventure of 11 descents into the ocean's depths, in equatorial waters and beneath the arctic ice.

**THE WEATHER MACHINE**—Nigel Calder—Viking, 1975, 143 p., color plates, b&w photographs, drawings, \$14.95. Graphic and highly readable account of how our weather works and why it is changing. Describes the worldwide efforts of meteorologists to understand the intricate interactions of air, water and ice, likened to a powerful machine in continual motion.

**THE WILD CANIDS:** Their Systematics, Behavioral Ecology and Evolution—M. W. Fox, Ed., foreword by Konrad Lorenz—Van Nostrand Reinhold, 1975, 524 p., photographs, tables, \$19.95. Encyclopedic compilation of comparative studies of behavior in closely related species, following their life history under different ecologies, gives insight as to their evolution, taxonomic relationships, and adaptation.

**WORLD TRAVELER'S ALMANAC**—Nancy and Larry Meyer, Eds.—Rand, 1975, 320 p., photographs, maps, paper, \$6.95. Up-to-date reference to world travel by air, overland, tours, cruises, country-by-country facts, and world calendar events.

**YOUR HOMEMADE GREENHOUSE** and How to Build it—Jack Kramer—Cornerstone (S&S), 1975, 96 p., photographs, drawings, paper, \$2.95. Easy-to-follow directions, discusses location, design, size, materials, foundations, roof variations, maintenance, with working drawings for a wide variety of greenhouses.