

# Books of the Week

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**ADVANCES IN PSYCHOANALYSIS:** Contributions to Karen Horney's Holistic Approach—Harold Kelman, Ed.—Norton, 255 p., \$5. Articles extending the theories and techniques developed by Dr. Horney.

**AMERICAN WOLVES, COYOTES AND FOXES**—B. F. Beebe—McKay, 151 p., illus. by James Ralph Johnson, \$3.75. Stories about wildlife, for young people.

**THE CELL**—Carl P. Swanson—Prentice-Hall, 2nd ed., 118 p., illus., \$3.95; paper, \$1.75. Revised edition eliminates unnecessary overlaps of content and introduces new and relevant information.

**COMMUNICATION SATELLITES**—G. E. Mueller and E. R. Spangler—Wiley, 280 p., illus., \$10. This monograph treats the use of earth satellites for communications relay as a series of related problems, examined both individually and as they affect each other.

**CONSTITUTIONAL PROBLEMS IN ORGANIC CHEMISTRY**—M. B. Watson and G. W. Youngson—Van Nostrand, 136 p., diagrams, \$4.75. A collection of widely differing problems whose solution is based on the traditional analytical and synthetic approach.

**THE EARTH BENEATH THE SEA**—Francis P. Shepard—Atheneum, 275 p., illus., paper, \$1.65. A readable book about submarine geology, published originally in 1959.

**EPISODES FROM THE EARLY HISTORY OF MATHEMATICS**—Asger Aaboe—Random House, 133 p., illus., \$1.95. A New Mathematical Library monograph, describes Babylonian mathematics as revealed from recently discovered cuneiform texts, and discusses topics developed by the Greeks as reconstructed from the writings of Euclid, Archimedes and Ptolemy.

**EXPERIMENTAL BIOLOGY:** Measurement and Analysis—R. H. Kay—Reinhold, 416 p., diagrams, \$12. Covers the essential principles of the most important experimental techniques in biological research in

a manner that biologists only marginally trained in physics and mathematics can understand.

**EXPERIMENTAL STATISTICS**—Mary Gibbons Natrella—NBS Handbook 91 (GPO), multipaged, diagrams, \$4.25. The material in this volume was prepared in the Statistical Engineering Laboratory, National Bureau of Standards, as an aid to scientists and engineers engaged in research and development programs.

**GEOMETRIC DISSECTIONS**—Harry Lindgren—Van Nostrand, 165 p., illus., \$4.95. A recreational mathematics book inviting the puzzler to change any rectilinear plane figure into any other of the same area using the fewest cuts.

**HANDBOOK OF PULP AND PAPER TECHNOLOGY**—Kenneth W. Britt, Ed.—Reinhold, 537 p., illus., \$22. Presents in concise form the essential facts about the technology of pulpwood forest practice, wood preparation, pulping, groundwood, bleaching, the paper machine, finishing, and the properties and testing of paper.

**INDIVIDUALIZING EDUCATION**—Margaret Rasmussen, Ed.—Assn. for Childhood Educ., 64 p., illus., paper, \$1.25. Discusses techniques of reaching the individual learner among groups of children.

**LECTURES ON MODERN MATHEMATICS**, Vol. I—T. L. Saaty, Ed.—Wiley, 175 p., \$5.75. Expanded versions of expository lectures on the Hilbert space theory, application of the theory of distributions, numerical analysis, algebraic topology and representations of finite groups.

**MINERALS YEARBOOK 1962**, Vol. I: Metals and Minerals (Except Fuels)—Bureau of Mines, Marling J. Ankeny, Dir.—GPO, 1,410 p., \$4.75. A review of mineral industries, statistical summary of mineral production, and detailed chapters on metal and nonmetal mineral commodities.

**MINERALS YEARBOOK 1962**, Vol. II: Fuels—Bureau of Mines, Marling J. Ankeny, Dir.—GPO, 531 p., \$2.50. Contains chapters on each mineral fuel and on helium, employment and injuries, and summarizes development in the fuel industries.

**MINERALS YEARBOOK 1962**, Vol. III: Area Reports—Bureau of Mines, Div. of Mineral Resources—GPO, 1,208 p., \$4.25. Contains chapters covering each of the 50 States, plus island possessions, Puerto Rico and the Canal Zone.

**NON-STOICHIOMETRIC COMPOUNDS**—I. Mandelcorn, Ed.—Academic Press, 674 p., illus., \$22.50. Treats in detail oxides, sulfides, selenides, tellurides, and inclusion compounds of inorganic, organic and solution types, stressing structural features and physical properties of these systems.

**PLANT DISEASES: Epidemics and Control**—J. E. Van der Plank—Academic Press, 349 p., diagrams, \$10. Describes new methods of epidemiological analysis based largely on infection rates and on the relation between the amount of inoculum and the amount of disease it causes.

**PLAYING WITH INFINITY: Mathematics for Everyperson**—Rozsa Peter, transl. from Hungarian by Z. F. Dienes—Atheneum, 268 p., diagrams, paper, \$1.65. Reprint (1961) of book written by mathematician for intellectually minded people who are not mathematicians, it stresses the beauty of mathematical solutions.

**THE POLITICS OF POPULATION**—William Petersen—Doubleday, 350 p., \$4.95. Collection of essays that appeared in professional and general journals during the past decade.

**PREHISTORIC TECHNOLOGY: An Experimental Study of the Oldest Tools and Artifacts from Traces of Manufacture and Wear**—S. A. Semenov, transl. from Russian with preface by M. W. Thompson—Barnes & Noble, 211 p., illus., \$12.50. The result of 20 years of microscopic research on prehistoric bone and stone tools, analyzing traces of wear and ethnographic parallels.

**PRINCIPLES OF PHYSICAL GEOGRAPHY**—J. Lee Guernsey and Arthur H. Doerr—Barron's Educ. Ser., 216 p., illus., \$3.50; paper, \$1.95. A study guide and basic reference for the general reader.

**RETURN TO LAUGHTER**—Elenore Smith Bowen, foreword by David Riesman—Doubleday, 297 p.,

paper, \$1.45. An anthropological novel, originally published in 1954, about the conflicts faced by an anthropologist caught between his own culture's values and those of another.

**ROCKS AND MINERALS OF CALIFORNIA**—Vinson Brown and David Allan—Naturegraph, 2nd rev. ed., 120 p., 48 color plates, illus., maps, \$4.50; paper, \$2.95. Shows in simple language how to be a good rock collector and helps to identify some of the more common species.

**SCIENCE FOR CAMP AND COUNSELOR**—William T. Harty—Assn. Press, 320 p., diagrams, \$9.95. Provides 117 practical projects suitable for the summer camp environment, from constructing a camp weather bureau to building a Geiger counter.

**THE SCIENCE OF SCIENCE: Methods of Interpreting Physical Phenomena**—Russell Fox, Max Garbun and Robert Hooke; Sharon Banigan, Ed.—Walker & Co., 243 p., photographs, diagrams, \$5.95. An examination of scientific methods by staff members of the Westinghouse Research Laboratories, addressed to seriously interested high school students and adults.

**SCIENTISTS WHO WORK WITH ASTRONAUTS**—Lynn and Gray Poole, foreword by Hugh L. Dryden—Dodd, 172 p., photographs, \$3.50. Brief descriptions of the technical effort of key scientists and engineers involved in selected technical areas of the U.S. space effort.

**THE SEA SHORE**—C. M. Yonge—Atheneum, 350 p., 24 plates, illus., paper, \$1.95. Reprint (1949), tells about the vast variety of life in the sea shore communities along the edge of Britain among seaweeds and boulders, on sandy and muddy shores, and in the estuaries.

**THE SINGING FOREST**—H. Mortimer Batten—Farrar, Straus, 214 p., illus. by Maurice Wilson, \$3.50. A true story about a Scottish Highland's deer, for young people.

**SPACE IN THE SIXTIES**—Patrick Moore—Penguin, 218 p., diagrams, paper, 95¢. An astronomer reviews the technical difficulties surmounted and still to be faced to bring about the space achievements of this decade.

**SPACEFLIGHT TODAY**—K. W. Gatland, Ed.—Brit. Interplanetary Soc. (Aero Publishers), 254 p., illus., \$7.50. Articles review outstanding features in space technology and science, from liquid propellant motors through astrobotany to superior galactic communities.

**SPRING IS HERE!**—Dorothy Sterling—Doubleday, 95 p., illus. by Winifred Lubell, \$3.25. A nature story for young children.

**STAR NAMES: Their Lore and Meaning** (formerly titled: *Star-Name and Their Meanings*)—Richard Hinckley Allen—Dover, 563 p., paper, \$2.35. Unabridged and corrected republication of the work first published in 1899.

**STARGAZING: A Group Leader's Guide**—Janet Nickelsburg—Burgess, 98 p., diagrams, \$3.85. An aid for the study and observation of the constellations and the planets, particularly suitable for summer camps.

**THE STRENGTHENING OF METALS**—Donald Peckner, Ed.—Reinhold, 250 p., diagrams, \$10. Examines in detail the basic mechanisms by which metals are strengthened—dislocation, strain hardening, solid-solution and precipitation hardening, dispersed phase strengthening, diffusionless transformations, and superlattice formation.

**TEMPLES, TOMBS AND HIEROGLYPHS: The Story of Egyptology**—Barbara Mertz—Coward-McCann, 349 p., photographs, illus., maps, \$6.95. A popularly written book, piecing together the history of Egypt from the archaeological record.

**THIS VIEW OF LIFE: The World of an Evolutionist**—George Gaylord Simpson—Harcourt, 308 p., \$5.95. The author, known for his distinguished career as an objective interpreter of the fossil record, presents in these essays his more personal philosophical thoughts on such subjects as the problem of apparent purpose in the universe, among living things, and in our lives.

**TRAINING THE PSYCHIATRIST TO MEET CHANGING NEEDS: Report of Conference on Graduate Psychiatric Education**—Walter E. Barton and William Malamud, Co-Chm.—Am. Psychiatric Assn., 263 p., \$3. Besides considering sound clinical training in psychiatry, the 1962 Conference also dealt with contributions from the fields of sociology and the biological and behavioral sciences generally.

**TRANSISTOR AND DIODE EXPERIMENTS**—Harry E. Stockman—Sine-Ser Co., 2nd ed., 85 p.,

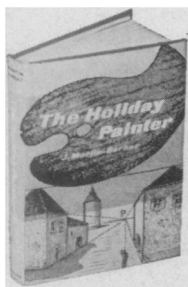
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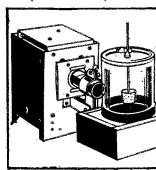


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diagrams, paper, \$2. Manual describes in detail 11 laboratory experiments at Junior or Senior college level.

**VITAMINS AND COENZYMES**—Arthur F. Wagner and Karl Folkers—Interscience, 532 p., diagrams, \$17.50. Comprehensive treatment of isolation and structure determination—organic and biosynthesis, metabolic role, mechanism of action, biological activity, nutritional role in animals and in the human—for all the known vitamins and coenzymes.

**WAVES AND BEACHES:** The Dynamics of the Ocean Surface—Willard Bascom—Doubleday, 267 p., illus. by author, photographs, paper, \$1.45. Scientist's account of the interplay in the surf zone, and of the properties and measuring of waves, for the general reader.

**THE WEB OF THE SPIDER**—Laura Barr Lougee—Cranbrook Inst. of Science, 44 p., illus. by author,

## SOCIOLOGY

## Need For Birth Control

► WILL THE HUMAN RACE face its most pressing problem like a man—or, like a mouse, will it just let nature take its course?

The exploding population problem needs immediate and intelligent action, many scientists say in the book "Human Fertility and Population Problems" (Schenkman Publishing Co., Inc., Cambridge, Mass., \$7.45 regular, \$2.65 paperbound), just published.

Man's will power and birth control methods in today's world will distinguish him from lower animals in a far more fundamental way than his works of art or atomic bombs, states Dr. A. S. Parkes, University of Cambridge, England.

On the other hand, if we leave the human birth problem to nature, we can expect many unpleasant results of overcrowding. Nature has her own way of dealing with overpopulation in the lower animals that is not always in keeping with good manners, says Prof. Frederick L. Hisaw, professor emeritus at Harvard University.

When experimental rats are kept in crowded quarters, for instance, they show marked symptoms of mental and physical stress, points out Dr. Hudson Hoagland of Boston University Graduate School, Boston, Mass., and president of the American Academy of Arts and Sciences.

The mother rats become sloppy and fail to build nests and care for their young. Their pregnancies are not full term, and many babies are left carelessly to die, are born dead or are eaten.

Among male rats there is unusual sexual behavior, cannibalism and abnormal behavior ranging from overactivity to pathological withdrawal in which some males emerge from their nests only to eat and drink. By such drastic methods, nature manages to keep down the population.

Other species of lower animals respond to crowded conditions, Dr. Hoagland added.

When microorganisms become too heavily crowded, their toxic wastes such as acids or alcohol accumulate and kill off many potential organisms.

If flour beetles are too crowded, cannibalism sometimes occurs, egg production drops off, and the females even puncture and destroy their own eggs. The spectacular suicides of the lemmings which, every four years or so, travel many miles to drown themselves in the sea, may be a result of overpopulation.

The crowded jack rabbits of Minnesota

\$3.50. Beautiful little book, developed from a project of collecting webs for exhibit purposes, tells about the various webs and how they are made.

**WILDLIFE IN AMERICA**—Peter Matthiessen, introd. by Richard H. Pough—Viking, 304 p., 100 illus. by Bob Hines, paper, \$1.95. A history of man's effect on the fishes, amphibians, reptiles, birds and mammals of the North American continent, reprint (1959).

**X-RAY SECTION OF THE CIVIL DEFENSE EMERGENCY HOSPITAL**—Division of Health Mobilization, Public Health Service, 40 p., illus., paper, free upon request direct to publisher, Washington, D. C. 20201. Authoritative information to assist community personnel in preparing the X-ray section for emergency hospital.

• Science News Letter, 85:220 April 4, 1964

fight savagely among themselves, sex drives drop to a low ebb, young rabbits are often eaten, and the animals become more susceptible to infections.

Animals in the Philadelphia Zoo developed atherosclerosis and other symptoms caused by adrenal stress syndrome under crowded conditions.

What about man in this state of increasing population density, asks Dr. Hoagland. What can we do about the world population explosion in our own species?

We can, of course, do nothing, and wait for the stress syndrome or for a new virus to do its work. Perhaps nuclear weapons will solve the whole problem.

Or we can use our intelligence and will power and decide on an optimum population density. We should, he says, overcome psychological prejudice, indifferences and economic barriers that prevent people from using some of the many methods of birth control now known.

With education and social pressures, such as tax bonuses for small families, perhaps the tide of humanity could be controlled for better living.

The book, edited by Dr. Roy O. Greep, Harvard School of Dental Medicine, sets forth the proceedings of the 1963 seminar on population problems, sponsored by the American Academy of Arts and Sciences, with the support of the Ford Foundation.

• Science News Letter, 85:221 April 4, 1964

## Do You Know?

Alaska had a much warmer *climate* 8,000 to 11,000 years ago, based on carbon-14 dating of soil samples.

Mandarin *Chinese* is the most widely spoken language in the world; it maintains its position by the sheer numbers of Chinese.

Naturalists in Florida are using marsh-mallows to lure *alligators* out of deep swamps.

When a *meteor* plunges through the earth's atmosphere, it leaves behind an ionized trail of charged particles.

A record harvest of 3.5 billion board feet of *timber* was cut from National Forests in the third quarter of this year.

• Science News Letter, 85:221 April 4, 1964

## EXPLORE THE SKIES!

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