

Books of the Week

For the editorial information of our readers, books received for review are listed. For convenient purchase of any U. S. book in print, send a remittance to cover retail price (postage will be paid) to Book Department, Science Service, 1719 N Street, N.W., Washington 6, D. C.

ADVANCED STANDING—Shirley A. Radcliffe; Winslow R. Hatch, Ed.—*Off. of Educ. (GPO)*, 24 p., paper, 15¢. Discussion of principles and practices of program enabling superior high-school students to receive college credit for college-level work.

ANIMAL HUSBANDRY HERESIES—Allan Fraser—*Lockwood, C. (Philosophical Lib.)*, 200 p., \$2.40. Discusses controversial theories and practices of animal breeding.

BASIC PHYSIOLOGY—Fred E. D'Amour—*Univ. of Chicago Press*, 642 p., illus., \$7.95. Textbook adaptable to course of varying length and intensity, asking students to think and solve problems.

THE BIRD WATCHER'S GUIDE—Henry Hill Collins, Jr.—*Golden Press*, 125 p., illus. by Richard Harker, photographs, \$3.95. Colorful handbook telling beginner about equipment, where to look for birds, how to attract, feed, band, and photograph them.

C.R.C. STANDARD MATHEMATICAL TABLES—Charles D. Hodgman, Samuel M. Selby and Robert C. Weast, Eds.—*Chem. Rubber Pub. Co.*, 12th ed., 525 p., \$4. Newly revised fact source.

CALCULUS: An Introductory Approach—Ivan Niven—*Van Nostrand*, 172 p., \$4.75. Aims at balance between theory and application, a brief course for high-school teachers and liberal arts students.

THE CENTRAL PURPOSE OF AMERICAN EDUCATION—Educational Policies Commission, Benjamin C. Willis, Chmn.—*NEA*, 21 p., paper, 35¢. See story p. 358, SNL, June 10, 1961.

CHECK-UPS: Safeguarding Your Health—Michael H. K. Irwin, M.D.—*Public Affairs Committee*, No. 314, 20 p., illus., paper, 25¢

direct to publisher, 22 E. 38th St., New York 16, N.Y.

THE CHEMICAL FORMULARY, Vol. XI—H. Bennett, Ed.-in-Chief—*Chemical Pub. Co.*, 416 p., \$8. Collection of new, up-to-date formulae and recipes for making products in many fields of industry, from adhesives to textiles.

COMMUNICATION AMONG SOCIAL BEES—Martin Lindauer—*Harvard Univ. Press*, 143 p., illus., \$4.75. Describes recent experiments which help us to understand the "language" by which bees communicate with one another.

CONCEPTS FROM TENSOR ANALYSIS AND DIFFERENTIAL GEOMETRY—Tracy Y. Thomas—*Academic*, 119 p., \$5. One-semester course at graduate level for students of mathematics.

CONTROL OF NUCLEAR REACTORS AND POWER PLANTS—M. A. Schultz—*McGraw*, 2nd ed., 462 p., illus., \$12.50. Revised edition has new chapters on elementary servo-mechanisms, boiling reactors and homogeneous reactors. Includes extensive bibliographies.

THE COUPLE WHO WANT A BABY—Marie Pichel Warner, M.D.—*Funk*, 244 p., \$3.95. A helpful book on the subject of infertility, dispels superstition, up-to-date on difficulties related to glandular or psychosomatic causes.

CYBERNETICS: Or Control and Communication in the Animal and the Machine—Norbert Wiener—*M.I.T. Press*, 2nd ed., 212 p., \$6.50. Revision considers present status of cybernetics and the new related modes of thinking which have evolved since book's first publication in 1948.

EDUCATION AND INCOME: Inequalities of Opportunity in Our Public Schools—Patricia Cayo Sexton; foreword by Kenneth B. Clark—*Viking*, 298 p., \$6. Study presenting concrete evidence that our public school system, rather than facilitating social mobility, has become an instrument of social and economic class distinctions in American society.

THE ENCYCLOPEDIA OF THE BIOLOGICAL SCIENCES—Peter Gray, Ed.—*Reinhold*, 1119 p., illus., \$20. Alphabetically arranged articles by experts on developmental, ecological, functional, genetic, structural and taxonomic aspects of biology, clearly presented for scientist and layman, from *Abiogenesis* to *Zoological Gardens*.

THE FORGOTTEN PENINSULA: A Naturalist in Baja California—Joseph Wood Krutch—*Sloane*, 277 p., photographs, \$5. Vivid story of exploring the long, largely unknown, dry peninsula between the Pacific Ocean and the Gulf of Mexico.

THE FOURTEEN SYSTEMS OF UNITS—Wm. R. Varner—*Vantage*, 3rd rev. ed., 159 p., \$3.95. Compilation of basic physical quantities and equations of the six systems in mechanics and eight in electricity, adopted by the International Committee on Weights and Measures.

HIGHER EDUCATION IN THE USSR—M. A. Prokofiev, M. G. Chilikin and S. I. Tulpanov—*Unesco Publications (N.Y.)*, 59 p., paper, \$1. Soviet reports on their higher educational system with curricula for technical and humanistic studies.

HOW TO USE VARIABLE CONTRAST PAPERS—Lou Jacobs, Jr.—*Amphoto*, 120 p., photographs by author, \$2.50. Practical discussion of how to get the best contrast and range of tones in printing your negatives.

THE IMPACT OF THE NEW PHYSICS—Frank Hinman—*Philosophical Lib.*, 174 p., \$4.50. Physician views some of the fundamentals of inorganic and organic evolution in the light of recent findings.

LABORATORY ANIMALS: I. Guide for Shipments of Small Laboratory Animals—L. R. Christensen and others—*NAS-NRC*, 21 p., illus., paper, \$1.50. A report of the Institute of Laboratory Animal Resources, concerned with alleviating the stresses encountered by experimental animals during transport by rail, air and road.

LABORATORY MANUAL FOR GENERAL MICROBIOLOGY—Jay V. Beck and others—*Burgess*, 55 p., paper, \$2. Outline of experiments to accompany elementary microbiology course.

LET US BEGIN: The First 100 Days of the Kennedy Administration—Martin Agronsky and others—*Simon & Schuster*, 145 p., photographs by Magnum, Cornell Capa and others, paper, \$1.95. Commentary and pictorial review of problem areas the "New Frontier" must cope with.

THE LIFE OF THE GREEN PLANT—Arthur W. Galston—*Prentice-Hall*, 116 p., illus., \$2.95; paper, \$1.50. Authoritative and readable treatment, emphasizing the scientific principles important to all biology.

LIVING AMPHIBIANS OF THE WORLD—Doris M. Cochran—*Doubleday*, 199 p., 220 photographs by Robert S. Simmons and others, \$12.50. Colorful and informative display of salamanders, frogs, toads and their relatives; of interest to specialist and layman.

THE LOGIC OF PERSONAL KNOWLEDGE: Essays Presented to Michael Polanyi on his Seventieth Birthday, 11th March, 1961—Paul Ignatus and others—*Free Press*, 248 p., illus., \$6.75. Essays cover wide range of scientist's interests, from Polanyi's contribution to the physics of metals to the probability of the existence of a self-reproducing unit.

MOBIL TRAVEL GUIDE, 4 Vols.: Northeastern States. Great Lakes Area. South Central and Southwestern States. California and Nevada—*Simon & Schuster*, 480 p., 383 p., 480 p., 335 p., maps, paper, \$1 each. Lists sightseeing, lodgings and good food.

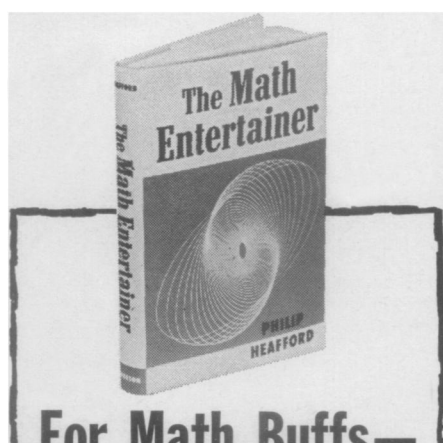
THE MORAL UN-NEUTRALITY OF SCIENCE—C. P. Snow, introd. by Warren Weaver—*Am. Friends Service Committee*, 10 p., paper, 10¢ direct to publisher, 160 North 15th St., Philadelphia 2, Pa. Reprint of address delivered before AAAS in December, 1960.

MOTIVATION AND EMOTION: A Survey of the Determinants of Human and Animal Activity—Paul Thomas Young—*Wiley*, 648 p., illus., \$10.75. College text in advanced courses on motivation and the affective processes, including findings of recent laboratory experiments.

MY HOME IN THE ZOO—Gerald Iles, introd. by Fairfield Osborn—*Doubleday*, 239 p., photographs, \$4.50. Zoo director's entertaining and informative tales about understanding and handling wild animals.

THE MYTH OF MENTAL ILLNESS: Foundations of a Theory of Personal Conduct—Thomas S. Szasz, M.D.—*Hoebner-Harper*, 337 p., \$7.50. Psychiatrist takes a fresh look at hysteria and the whole concept of mental illness, coming to

(Continued on p. 382)




THE MATH ENTERTAINER is the title of a brand new treasure trove of mathematical teasers, ticklers, traps, and twisters, gems, jests and gyrations—by the hundred!—to beguile, bemuse, and bewilder (perchance—whisper it softly!—to instruct).

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Books of the Week

(Continued from p. 380)

the controversial conclusion that psychiatrists call more and more kinds of behavior "illness."

THE NATIONAL DEFENSE STUDENT LOAN PROGRAM: A Two-Year Report—Robert C. Hall—*Off. of Educ. (GPO)*, 44 p., paper, 35¢. Summarizes and interprets information reported by colleges participating in the program.

NATURE AND MAN'S FATE—Garrett Hardin—*New Am. Lib.*, 320 p., illus., paper, 75¢. Biologist's semi-popular presentation of evolution, heredity and the future of man.

NEW CALEDONIAN LAND AND FRESH-WATER SNAILS: An Annotated Check List—Alan Solem—*Chicago Natural Hist. Mus.*, 182 p., illus., paper, \$2.50. Systematic list and bibliography.

NUCLEAR PULSE SPECTROMETRY—Robert L. Chase—*McGraw*, 221 p., illus., \$8.50. Discusses electronic pulse techniques applied to the study of nuclear reactions and radioactivity.

OUR FOREST BOUNTY—*Am. Forest Products Industries*, 19 p., illus., paper, single copies free upon request direct to publisher, 1816 N Street, N.W., Washington 6, D. C. Popularly told story of multiple use forest management.

PETROLEUM SOURCEBOOK 1960: A Regional Bibliography of Petroleum Information—Curtis Stevens, Ed.—*National Petroleum Bibliography*, 206 p., paper, \$7.50. Worldwide geographic index to petroleum literature and data.

PHYSICAL GEOGRAPHY OF ASIATIC RUSSIA—S. P. Suslov, transl. from Russian by Noah D. Gershevsky; Joseph E. Williams, Ed.—*Freeman*, 494 p., illus., maps, \$15. Translation of a textbook on the geographic regions of Siberia and Central Asia, intended for senior geography students in state universities of the USSR.

A PRELUDE TO MEDICAL HISTORY—Felix Marti-Ibanez—*MD Publications*, 253 p., \$5.75. The history of medicine in short review, told in vivid narrative style. List of Nobel Prize winners, and selective medical and historical chronology.

THE PRESIDENTIAL STAFF—Joseph I. Coffey and Vincent P. Rock—*NPA*, 100 p., paper, \$1.75. Analysis of the functions and organization of the staff designed to aid the President

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PROBABILITY WITH STATISTICAL APPLICATIONS—Frederick Mosteller, Robert E. K. Rourke and George B. Thomas, Jr.—*Addison-Wesley*, 478 p., \$6.50. Brief course in elementary probability theory, introducing student to random variables, their distributions, and properties of their distributions.

PROBLEMS IN QUANTUM MECHANICS—I. I. Goldman and others, transl. from Russian by D. ter Haar, Ed.—*Academic*, 394 p., \$12. Collection of problems in non-relativistic quantum mechanics of varying degrees of difficulty, given to senior physics students at Moscow State University.

PROCEEDINGS OF THE 1961 HEAT TRANSFER AND FLUID MECHANICS INSTITUTE—R. C. Binder and others, Eds.—*Stanford Univ. Press*, 236 p., illus., \$8. Papers presented at University of Southern California, June 19-21, 1961, reporting on completed fundamental research results.

PSYCHOTHERAPY OF THE PSYCHOSES—Arthur Burton, Ed.—*Basic Bks*, 386 p., \$7.50. Fifteen leading practitioners summarize the progress to date in the treatment of the psychoses, giving samples of the wide theoretical points of view extant in current psychotherapeutic work.

QUANTUM MECHANICS—Eugen Merzbacker—*Wiley*, 544 p., \$12. Textbook on elementary non-relativistic quantum mechanics for graduate students.

RADIATION CHEMISTRY OF GASES—Samuel C. Lind with Clarence J. Hochanadel and John A. Gormley—*Reinhold*, 313 p., \$12.50. Comprehensive treatment of physical principles and of gaseous reactions.

RADIOACTIVE SUBSTANCES—Marie Curie, transl. from French—*Philosophical Lib.*, 94 p., illus., \$2.75. Translation of the classical thesis presented to the Faculty of Sciences in Paris by the Nobel Prize winner.

RAND McNALLY GUIDE TO MEXICO—Herman and Juanita Liebes—*Rand McNally*, 379 p., fold-out map, \$4.95. Detailed handbook for planning trip through Mexico, includes fiesta calendar and suggested reading.

REFERENCE ELECTRODES: Theory and Practice—David J. G. Ives and George J. Janz, Eds.—*Academic*, 651 p., illus., \$20. Encyclopedic examination of electrodes from both mechanistic and thermodynamic viewpoints, for the research worker and graduate student.

RESPIRATORY METABOLISM IN PLANTS—Harry Bevers—*Row*, 232 p., paper, \$3.85. Presents biochemical events in higher plants which are of importance in respiration and considers relationships of respiration to other processes in plant. For graduate students.

SATELLITE ENVIRONMENT HANDBOOK—Francis S. Johnson, Ed.—*Stanford Univ. Press*, 155 p., illus., \$5.50. Data and analyses of factors concerning structure of the upper atmosphere and

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NATIONAL GEOGRAPHIC MAGAZINES, 1888-1960, any issue. Periodical Service, Box 465-SN, Wilmington, Delaware.

WANTED—PREPARED MICROSCOPE SLIDES—Zoology and Histology. Excellence Imperative. Contact: National Biological Laboratories, Inc., P.O. Box 511, Vienna, Virginia.

of ionosphere, penetrating radiation, micro-meteorites, radio noise, thermal radiation from the earth and geomagnetism.

SCIENCE INFORMATION IN LATIN AMERICA—Div. of Science Development—*Pan Am. Union*, 50 p., paper, \$1. Discussion of the problems of L.A. science information organizations, and descriptions of functioning libraries and information centers.

SCIENCE, PROPHECY AND PREDICTION: Man's Effort to Foretell the Future, from Babylon to Wall Street—Richard Lewinsohn, transl. by Arnold J. Pomerans—*Harper*, 318 p., illus., \$4.95. A history of man's attempts at predicting the future, from throwing dice to modern methods of predicting business cycles.

SCIENTIFIC RESEARCH AND PROGRESS IN NEWLY DEVELOPING COUNTRIES—Eugene Staley and David C. Fulton—*Stanford Research Inst.*, 48 p., paper, \$3. Explores ways in which basic and applied research can be used more effectively to speed development in Africa, Asia and Latin America.

A SOCIALIST EMPIRE: The Incas of Peru—Louis Baudin, transl. from French by Katherine Woods; Arthur Goddard, Ed.—*Van Nostrand*, 442 p., \$8. Scholarly analysis of the social affairs and conditions of the Inca regime in Peru, first published in French in 1928, with new foreword by Ludwig von Mises.

SOME REFLECTIONS ON GENIUS and other Essays—Russell Brain—*Lippincott*, 192 p., illus. by Norman Smith, \$4.20. British neurologist discusses the physiologic make-up of the brain and nervous system of genius with comments on such men as Swift, Dr. Johnson, Lord Monboddo, and Epstein.

SPACE AND DOLLARS: An Urban University Expands—Ruth Weinstock—*Educational Facilities Labs.*, 45 p., illus., paper, free upon request direct to publisher, 477 Madison Ave., New York 22, N.Y. Explores physical expansion problems of downtown urban universities based on case study of Drexel Institute of Technology.

SPACE ASTROPHYSICS—William Liller, Ed.—*McGraw*, 272 p., illus., \$10. Compilation of lectures on astronomical and astrophysical problems investigated from above the atmosphere, covering most recent advances, and many results reported here for the first time.

SPACE SHIP: The Story of the X-15—Irwin Stambler—*Putnam*, 48 p., photographs, \$2.50. Tells young people the exciting story of the development of the first manned space craft and the men who test it.

SUCCESSFUL SCIENCE TEACHING—Milton S. Lesser—*Teachers Practical Press*, 64 p., paper, \$1.75. Practical tips on lesson planning.

SUCCULENTS IN CULTIVATION (Cacti Included)—Vera Higgins—*St. Martins*, 168 p., illus. in color by author, photographs by J. E. Downward, \$4.95. Discusses natural conditions and treatment required by more moist, less sunny conditions.

UNDER WATER & SEA ADVENTURES: The Story of the Wonderful Waters Around the Earth—Patrick Ellum—*Grosset*, 92 p., illus., \$1.95. Tells young people about sea and winds, ocean bottom, marine animals and bathyscaphs.

VALUES AND IDEALS OF AMERICAN YOUTH—Eli Ginzberg, Ed., foreword by John W. Gardner—*Columbia Univ. Press*, 338 p., \$6. Representative thinking on development and adaptability of the older adolescent and papers on specific problem areas.

VAN NOSTRAND ATLAS OF THE WORLD—*Van Nostrand*, 240 p., illus., paper, 98¢. Up-to-date pocket-size handbook of maps, tables and descriptive information on countries and cities of the world.