

Books of the Week

Listing is for readers' information, not advertising. For convenient purchase of any book listed or any U.S. book in print, remit retail price (we pay postage) plus 25¢ handling charge if price is less than \$2 to Book Department, Science Service, 1719 N St., N.W., Washington, D. C. 20036.

THE BIBLE AND THE SCHOOLS—William O. Douglas—Little, Brown, 65 p., \$3.75. The Supreme Court Justice makes clear the reasoning behind the decisions regarding religion in the public schools.

BIRDS AROUND THE WORLD: A Geographical Look at Evolution and Birds—Dean Amadon—Nat. Hist. Press, 175 p., illus., \$3.95. Ornithologist takes reader from the geological past of the first birds through the continuing process of bird evolution and speciation.

COMPUTERS AND THE LIFE SCIENCES—Theodor D. Sterling and Seymour V. Pollack—Columbia Univ. Press, 342 p., illus., \$12.50. Written to give the scientist a clearer conception of the engineering-mathematics-information processing capacity of robots, how they are constructed, how to prepare problems and data for them and explore their future uses.

CRUSTACEANS—Waldo L. Schmitt—Univ. of Mich. Press, 204 p., illus., \$5; paper, \$1.95. Comprising lobsters as well as sand fleas and barnacles among its 20,000 species, the class of crustaceans makes interesting reading in this concise and authoritative treatment.

DISASTER BY DEFAULT: Politics and Water Pollution—Frank Graham, Jr., foreword by Harry and Bonaro Overstreet—Evans, M. & Co. (Lippincott), 256 p., \$4.95. Concerns itself with our pollution-threatened society, the sources of water pollution, the costs involved and some of the problems in trying to deal with water pollution.

ELECTRONIC BRAINS: How Computers Work—Rolf Lohberg and Theo Lutz—Sterling, 221 p., illus., \$4.95. Attempts to explain the mathematics, mechanism and programming of electronic computers in an entertaining way.

ELECTRONS AT WORK: Electro-Study Series, Unit 1—International Education Services Staff—International Textbook Co., 29 p. workbook, illus., paper, 70 p. study guide with frame windows, \$4.95; complete course of 16 units, \$65. A program in basic electricity/electronics specially prepared for self-teaching.

EXPERIENCE AND CONCEPTUAL ACTIVITY: A Philosophical Essay Based Upon the Writings of A. N. Whitehead—J. M. Burgers—M.I.T. Press, 277 p., \$7.50. Offers a philosophical background against which the relation between scientific knowledge in general and the value judgments of human life can be projected.

GEOLOGY AND PALEONTOLOGY OF THE ANTARCTIC—Jarvis B. Hadley, Ed.—Am. Geophysical Union, 281 p., 18 plates, illus., maps, \$14. Presents authoritative work of leading scientists engaged in Antarctic research, from summary of exploration, 1831-1962, to detailed discussion of Lower Devonian fauna of the Horlick Formation.

THE HEALTH OF WOMEN WHO WORK—Margaret F. McKiever—PHS (GPO), 62 p., illus., paper, 30¢. Presents facts and expert opinions concerning the health of one-third of today's U.S. labor force.

INJURIES OF NERVES and Their Consequences—S. Weir Mitchell—Dover, 377 p., paper, \$2.75. Reprint (1872) with new preface and a new introduction by Lawrence C. McHenry, Jr.

JOB DESCRIPTIONS OF MANAGERIAL AND ADMINISTRATIVE PERSONNEL in the Chemical Process Industry—Conrad Berenson and Henry O. Ruhne—Corporate Publications, N.Y., 111 p., paper, \$12.50. Analysis and description of 49 job functions, compiled from job descriptions of the industry's top 200 firms.

MECHANICS OF GYROSCOPIC SYSTEMS—A. Yu. Ishlinskii, transl. from Russian—IPST (Clearinghouse), 313 p., diagrams, paper, \$7. Discusses wide range of mathematical problems connected with practical application to gyroscopes.

NINE MONTHS TO GET READY: The Importance of Prenatal Care—Ruth Carson—Public Affairs Committee, Pamphlet No. 376, 20 p., illus., paper, 25¢ direct to Committee, 381 Park Ave. South, New York 10016. Discusses preventive measures to avoid complications in pregnancy and childbirth.

NOTES ON LOGIC—Roger C. Lyndon—Van Nostrand, 97 p., paper, \$2.50. Intended to present central problems and results of mathematical logic to mathematics student at advanced undergraduate level.

NOTES ON SPECTRAL THEORY—Sterling K. Berberian—Van Nostrand, 121 p., paper, \$2.50. Demonstrates the measure-theoretic approach to the spectral theorem for the normal operator.

PATIENTS, SURGEONS AND HOSPITALS—A.C.S., 15 p., paper, single copies free upon request direct to American College of Surgeons, 55 E. Erie St., Chicago, Ill. 60611. Statement of principles to guide fellows of the A.C.S. and governing bodies of hospitals in their relations with patients.

PEPYS' DIARY AND THE NEW SCIENCE—Marjorie Hope Nicolson—Univ. Press of Virginia, 198 p., illus., \$5. Three studies, covering the period 1660-1669, concerned with Samuel Pepys as amateur of science, the first blood transfusion, and "Mad Madge", Lady Newcastle and the Royal Society.

PERSIA I: From the Origins to the Achaemenids—Jean-Louis Huot, transl. from French by H. S. B. Harrison—World Pub. Co., 219 p., 160 p., 160 photographs, maps, \$10. Printed in Switzerland, with more than half of the illustrations in color, this volume handsomely pieces together the ancient history of Iran based on archaeological finds.

PICTURES, PAMPHLETS AND PACKETS for Air/Space Age Education—Nat'l Aerospace Education Council, 6th ed., 65 p., illus., paper, 50¢. Lists more than 670 free and inexpensive booklets, charts, kits, films, study units and models available from 113 sources.

RADIO, HI-FI, STEREO FOR EVERYONE—John P. Kennally—Coleman Publications, 64 p., illus., paper, 60¢ direct to publisher, Box 714, Man-

hasset, N.Y. Practical fundamentals and troubleshooting charts.

THE RAILROAD AND THE SPACE PROGRAM: An Exploration in Historical Analogy—Bruce Mazlish, Ed.—M.I.T. Press, 223 p., \$7.50. This scholarly exploration of the economic, social, political and intellectual consequences of a major technological advance illuminates a number of parallels between the railroads and the space effort.

RECOMMENDATIONS FOR NATIONAL DOCUMENT HANDLING SYSTEMS IN SCIENCE AND TECHNOLOGY, Vols. I-III—Committee on Scientific and Technical Information, William T. Knox, Chmn.—Federal Council for Science & Technology (Clearinghouse PB 168 267), multipaged, folded charts, paper, \$3.50. Background studies and panel recommendations.

RECORDS RETENTION—William E. Mitchell—Ellsworth Pub. Co., rev. ed., 72 p., paper, \$6.50. Shows what practical measures can be taken to systematically discard business records without running afoul of government regulations.

SCIENCE AND HUMAN AFFAIRS—Richard E. Farson, Ed.—Science & Behavior Bks., 214 p., \$4.95. Twelve Lucile P. Morrison lectures designed to acquaint both laymen and professionals with new concepts in the behavioral sciences and new approaches to the study of human behavior.

SOLAR-ACTIVITY FORECASTING—Yu. I. Vitinskii, transl. from Russian—Israel Program for Scientific Transl. (Clearinghouse), 129 p., illus., paper, \$4. Discusses the basic regularities of solar cycles, and the long-term, medium-period and ultra-long-range forecasts.

SPACE COMMUNICATION SYSTEMS—Richard F. Filipowsky and Eugen I. Muehldorf—Prentice-Hall, 575 p., illus., \$14.90. Describes complex electronic systems which serve communications functions and their integration with thermal, mechanical and optical systems in space missions.

STRESS AND ADAPTATION: Lectures and Discussions, 1964-65—Clifton Rhead, M.D., Chmn.—Forest Hospital Foundation, 81 p., illus., paper, \$1.25 direct to Foundation, 555 Wilson Lane, Des Plaines, Ill. Discusses various aspects of the psychic response of the individual in the face of multiple problems.

SYMBOLIC LOGIC AND THE REAL NUMBER SYSTEM: An Introduction to the Foundations of Number Systems—A. H. Lightstone—Harper, 225 p., \$7.50. Number systems are studied in the light of modern algebra and with the help of set theory.

U.S. INDUSTRIAL OUTLOOK 1966: Industry by Industry—Business & Defense Services Administration, U.S. Dept. of Commerce—GPO, 213 p., paper, \$1. Includes analyses of 66 industries, 13 group industry outlooks and statistical tables.

WHAT SHAPE IS IT?—Charles Hatcher—Duell, 32 p., illus. by Gareth Adamson, \$2.95. Treats the measurement of solids on the primary school level.

WHAT SIZE IS IT?—Charles Hatcher—Duell, 32 p., illus. by Gareth Adamson, \$2.95. Discusses all kinds of measurements for young readers.

• Science News Letter, 89:76 January 29, 1966

PUBLIC SAFETY

Freeway Entrances Safer Than Exits

► HIGHER ACCIDENT RATES occur on the off-ramps of traffic-congested freeways than on the on-ramps, a study has shown.

By counting crack-ups on 722 freeway ramps for three years, investigators from the highway division of the California Department of Public Works found there were more than 60% more accidents going off than there were coming on.

There were 1,643 accidents in the three-year period during which about two billion cars used the ramps, Richard A. Lundy and Helen Adachi reported to a meeting of the Highway Research Board in Washington, D.C. The off-ramp rate was 0.95 accidents per million vehicles, compared to 0.59 accidents per million cars entering the freeways.


Guard rails, sign supports, lamp posts and other miscellaneous freeway accessories were involved in 28% of the accidents, both on and off.

Single-car crashes rather than multicar collisions accounted for most of the rate difference between entering and exiting traffic. The one-car rate was almost three times higher on the off-ramps.

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WFF'N PROOF

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BOOKS ON ALGAE AND PROTOZOA. Comprehensive lists. Lew's, 2510 Van Ness Ave., San Francisco, Calif. 94109.

MAGNETS—ALNICO—CERAMIC—FLEXIBLE—Assemblies. What you need, we have. Special—Two 7" long "pick-up" magnets, \$1.00. Maryland Magnet, 5412-K Gist, Baltimore, Maryland 21215.

SURPLUS OPTICS-ELECTRONICS CATALOG. 72 pages 25¢. Meshna, Nahant, Mass. 01908.