

Books of the Week

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THE ACHIEVEMENTS OF WESTERN CIVILIZATION: An Historical Outline—Joan Thompson—Harper, 287 p., maps, folded charts, \$5. One-volume reference, correlates parallel developments in different branches of human achievement including science; each chapter deals with a period of history subdivided into fields of activity with brief notes on the most important figures.

ALMOST HUMAN: The Baboon, Wild and Tame, in Fact and in Legend—Julie Macdonald—Chilton Bks., 162 p., photographs, \$5.95. This absorbing account by an artist and close observer of the ways of a young Hamadryas baboon who adopted the sculptor's family as his "troop" is rich in scientific detail and illustrations of the baboon both in art and nature.

ARCHIMEDES: Mathematician and Inventor—Martin Gardner—Macmillan, 42 p., illus. by L. E. Fisher, \$2.95. Introduces small readers to the excitement of invention.

ASSATEAGUE DEER—B. F. Beebe—McKay, 150 p., illus. by J. R. Johnson, \$3.75. About a young Sika deer raised in the wilderness of Assateague Island.

AUTOMATION: The Challenge of Men and Machines—Joel Seldin—Coward-McCann, 121 p., photographs, \$3.25. Discusses what automation can do for and to people.

BIOLOGY IN THE LABORATORY—Addison E. Lee and Osmond P. Breland—Harper, 327 p., illus.,

paper, \$3.95. Manual uses the leopard frog as the laboratory "type" animal and incorporates knowledge gained from studies using the electron microscope, and the latest classification.

THE CASE FOR THE WORKING MOTHER—Dorothy Whyte Cotton—Stein & Day, 185 p., \$4.95. Written primarily to help a mother determine what is likely to work best for her and her family, examines the reasons why mothers choose work, the effects on children, and looks at ways of handling the working mother's dual responsibilities.

CHARLES DARWIN: A Scientific Biography—Sir Gavin de Beer—Doubleday, 295 p., 23 plates, illus., paper, \$1.45. Reprint (1963).

CLOSED SYSTEMS AND OPEN MINDS: The Limits of Naivety in Social Anthropology—Max Gluckman, Ed.—Aldine Pub. Co., 274 p., \$7.95. Essays on field studies in social anthropology, and a searching discussion of the modes and consequences of limiting specific problems within a restricted field of study.

CLOTH: From Fiber to Fabric—Walter Buehr—Morrow, 96 p., illus. by author, \$2.90. For boys and girls.

CYBERNETICS AND BIOLOGY—F. H. George—Freeman, 138 p., paper, \$2.50. Intended to introduce cybernetics to ethologists or biologists with special interest in behavioral problems.

DISCRIMINATION AND POPULAR CULTURE—Densy Thompson, Ed.—Penguin Bks., 199 p., paper, \$1.25. A critical and constructive commentary on the offerings of British mass media.

DRAFT OF A GENERAL SCIENTIFIC FRAMEWORK FOR WORLD OCEAN STUDY—Intergovernmental Oceanographic Commission—Unesco (N.Y.), 76 p., illus., paper, \$1. Preliminary draft submitted by marine scientists throughout the world.

ELEMENTS OF PHYSICS: An Introduction for Students of Science and Engineering—Robert F. Kingsbury—Van Nostrand, 630 p., illus., \$9.75. This college physics text is designed to carry students into physics as deeply as a three-or-four semester sequence with previous or concurrent study of calculus will permit. Emphasis is on progressively sophisticated mathematical treatment.

FUNDAMENTALS OF ENGINEERING MECHANICS—L. Levinson, transl. from Russian, S. Klein, Ed.—Gordon & Breach, 334 p., illus., \$10.50. Monograph on theoretical mechanics, on the theory of machines and fundamental concepts of strain.

FUNDAMENTALS OF SEMICONDUCTOR DEVICES—Joseph Lindmayer and Charles Y. Wrigley—Van Nostrand, 486 p., illus., \$11.95. Attempts to encompass in a single text the wide area joining solid-state physics and electronics.

LIGHT SCATTERING FROM DILUTE POLYMER SOLUTIONS—D. McIntyre and F. Gornick, Ed.—Gordon & Breach, 318 p., \$5.95. Volume 3 of International Science Review Series.

THE METABOLISM OF INSECTS—Darcy Gilmore—Freeman, 195 p., diagrams, paper, \$2.50. Authoritative review on recent research in the total pattern of metabolism in insects, exploring in detail the biochemistry of energy metabolism, or carbohydrate, lipid, amino acid and protein metabolism.

THE NATURE OF INDUCTION MACHINES—Philip L. Alger—Gordon & Breach, 516 p., diagrams, \$25. Provides an understanding of the nature, design and uses of both single-phase and polyphase induction machines, the most widely used forms of electric motor.

NEW HORIZONS WORLD GUIDE: Pan American's Travel Facts About 109 Countries—Gerald W. Whitted, Ed.—Pan Am (Simon & Schuster), 12th rev. ed., 640 p., illus., \$2.50. Useful facts in capsule form.

NEWS DICTIONARY: An Encyclopedic Summary of Contemporary History, 1964—Howard M. Epstein, Ed.—Facts on File, 441 p., \$6.75. paper, \$4.75. Alphabetically arranged news commentaries, mainly political.

OUR FELLOW IMMIGRANTS—Robert Froman—McKay, 118 p., illus. by Anna Marie Jaus, \$3.50. Entertaining book about animals and plants that have been transferred from the Old World to the New and have prospered here.

PROGRESS IN NUCLEAR TECHNIQUES AND INSTRUMENTATION, Vol. I—F. J. M. Farley, Ed.—Interscience, 398 p., illus., \$17.50. Contributions cover sector focusing cyclotron, polarized targets, digital systems for data handling, and the development of spark chamber techniques.

THE QUEST: A Report on Extraterrestrial Life—Tom Allen—Chilton Bks., 323 p., illus., \$4.95. Brings together from a great many sources statements and speculations by scientists and others on the possibilities of life beyond earth.

RELATIVITY: The Special Theory—J. L. Synge—North-Holland Pub. Co. (Wiley), 2nd ed., 459 p., \$14. This revised edition includes new section on infinitesimal Lorentz transformations and gives more attention to rigid motions.

REPRODUCTION IN THE INSECTS—K. G. Davey—Freeman, 96 p., illus., paper, \$2.50. Offers graduates in biology a review of the latest findings in this particular field of study.

THE ROCKEFELLER FOUNDATION: The President's Review from the Annual Report 1964—J. George Harrar, Pres.—Rockefeller Foundation, 115 p., photographs, paper, single copies free upon request direct to publisher, 111 W. 50th St., New York, N.Y. 10020. A discussion of private philanthropy in a changing world, and the foundation's efforts in abating hunger, overpopulation, and developing cultural programs.

THE SECRETS OF TUTANKHAMEN'S TOMB—Leonard Cottrell—N.Y. Graphic Soc. Pubs., 139 p., photographs, illus. by R. Cruz, \$4.50. Story of a dramatic archaeological find, for young people.

SELECTIVE TOXICITY—Adrien Albert—Wiley, 3rd ed., 394 p., illus., \$10. Advanced treatment concerned with the physical and chemical means by which toxic substances injure certain undesirable cells without harming others, as in the development of drugs for man and animals, and in fungicides, insecticides and weedkillers.

SOCIETY AND THE ADOLESCENT SELF-IMAGE—Morris Rosenberg—Princeton Univ. Press, 326 p., \$6.50. Presents the results of a systematic survey focusing exclusively on the self-evaluation of more than 5,000 high-school students of different social, religious and nationality backgrounds.

THE SUMMER OF THE WHITE REINDEER—Lillian Pohlmann—Westminster Press, 154 p., illus., \$3.50. A Lapland story for children.

SURFACE PHENOMENA IN METALLURGICAL PROCESSES: Proceedings of an Interinstitution Conference—A. I. Belyaev, Ed., transl. from Russian—Consultants, 228 p., illus., paper, \$27.50. Reviews the work of Russian investigators of surface phenomena in pyrometallurgy of nonferrous and ferrous metals.

SYMMETRY PRINCIPLES AT HIGH ENERGY: Coral Gables Conference, January 1964—Behram Kursunoglu and Arnold Perlmutter, Eds.—Freeman, 171 p., paper, \$4.75. Discussions deal with new symmetry group for elementary particles, the SU₃ group, and internal symmetries.

TEACHING THE PURSUIT OF SCIENCE—John H. Woodburn and Ellsworth S. Obourn—Macmillan, 470 p., illus., \$7.50. Introduces methods and materials for teaching science in the secondary school, giving examples which show how scientists select problems for investigation, form working hypotheses, plan and execute experiments, and report results.

THEORY AND PRACTICE IN EXPERIMENTAL BACTERIOLOGY—G. G. Meynell and Elinor Meynell—Cambridge Univ. Press, 288 p., illus., \$9.50. A documented guide to basic bacteriological techniques intended primarily for experimental bacteriologists.

THEY CLOSED THEIR SCHOOLS: Prince Edward County, Virginia, 1951-1964—Bob Smith—Univ. of N.C. Press, 281 p., \$5.95. A detailed account of the only instance in the history of the United States in which the citizens of a locality, faced with the choice of complying with a federal edict or of ending free public education, chose to close their schools.

THEY LIVED LIKE THIS IN ANCIENT EGYPT—Marie Neurath—Watts, Franklin, 32 p., illus. by John Ellis, \$2.65. A child's introduction to the ways of an ancient civilization.

THEY LIVED LIKE THIS IN ANCIENT MESOPOTAMIA—Marie Neurath—Watts, F., 32 p., illus. by Evelyn Worboys, \$2.65. A child's introduction to Sumerian civilization.

TIZARD—Ronald W. Clark, foreword to Am. ed. by Vannevar Bush—M.I.T. Press, 458 p., photographs, \$10. Annotated biography giving the record of the British scientist's extraordinary influence on defense science between 1914 and 1951, the study is based primarily on the Tizard Papers and the Chervell Papers which have become available since C. P. Snow's dramatic account of the controversy.

TRAPPED: Families and Schizophrenia—Lloyd H. Rogler and August B. Hollingshead—Wiley, 436 p., photographs, \$8.95. Sets forth a controlled case study comparing three generations of families with members afflicted with schizophrenia, and others medically acknowledged free of the disturbance.

TREES, SHRUBS AND WOODY VINES OF GREAT SMOKY MOUNTAINS NATIONAL PARK—Arthur Stupka—Univ. of Tenn. Press, 186 p., photographs, paper, \$2.75. Descriptions of native and naturalized woody plants.

UNIVERSITY MATHEMATICS I—Jack R. Britton, R. Ben Krieger, and Leon W. Rutland—Freeman, 662 p., \$9.50. A textbook for two-year introductory courses in analytic geometry and calculus.

WATERHAMMER ANALYSIS—John Parmakian—Dover, 161 p., diagrams, paper, \$1.65. Unabridged reprint of 1955 edition.

WHAT IS ARCHAEOLOGY?—Edward Pyddoke—Roy Pubs., 64 p., photographs, maps, \$2.75. A brief

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outline of the aims of archaeology, and the methods employed in field, laboratory and study.

WHY SPACE? AND HOW IT SERVES YOU IN YOUR DAILY LIFE—Martin Caidin, foreword by Homer E. Newell—Messner, 208 p., photographs, \$4.95. Explains in layman's language the broad scope of the U.S. space program and some of the practical results it is yielding to U.S. industry and the consumer.

WONDERS OF GRAVITY—Rocco Feravolo—Dodd, 64 p., illus. by R. Bartram, \$3. Explains the principles of gravity to young boys and girls.

THE WORLD ABOVE—Clifford B. Hicks—Holt, 153 p., illus. by R. Potts, \$3.50. An entertainingly written, yet factual account of the atmosphere, the sea of air, the magnetosphere and outer space.

THE WORLD OF SOUND RECORDING—Don Murray—Lippincott, 128 p., photographs, \$3.50. A short history of phonograph-record-making and a description of the ingenious uses to which recording equipment is put today.

THE YEARBOOK OF THE INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS, 1965—ICSU Secretariat, 138 p., paper, \$1.50. Calendar of scientific meetings, list of national members, scientific members, and other pertinent information.

THE YOUNG EXPERIMENTERS' WORK-BOOK: Treasures of the Earth—Harry and Laura Sootin—Norton, 58 p., illus., \$2.90. Shows boys and girls how to test rocks and minerals to find out about their composition.

• Science News Letter, 87:316 May 15, 1965

Nature Note

Sea Lamprey

► THE GREAT SEA LAMPREY is a primitive eel-like fish with an ugly, round, jawless sucking mouth lined with more than a hundred sharp teeth.

This vigorous swimmer, *Petromyzon marinus*, firmly attaches itself onto a fish with its mouth, rasping a hole in the victim's flesh with its sharp teeth and sucking the blood and body fluids. A large variety of fish have been attacked and destroyed by the voracious sea lamprey including cod, haddock, shad, menhaden, sturgeon and salmon. Some large fish, such a swordfish, manage to escape the sucking parasite and carry round scars to mark where once the lamprey was attached. Lampreys have been known to attach themselves to humans but no injuries have been reported.

The wriggling creature grows to be three feet long in the ocean. Its long body is covered with scaleless skin that is bluish, brownish or blackish on its back, and white or grey underneath. A row of about seven small gill-openings extend along each side, beginning a short distance behind each eye. These holes may have given the sea lamprey one of its common names, Nine-eyes.

The great sea lamprey lives along the shore of the North Atlantic Ocean, from Labrador to as far south as Florida. In the spring and early summer, full-grown lampreys swim up coastal streams and rivers to spawn.

Both male and female help make a nest of pebbles and gravel in the streambed by seizing and removing larger stones from the area with their sucker-mouths. Numerous tiny eggs are deposited in the "nest," and the parents then die. The young lampreys are eyeless and do not have a sucking mouth. They burrow into the mud, feeding on tiny bits of organic matter. When they are about six inches long, they follow the stream down to the sea and live in the salt water until old enough to ascend the stream, spawn and die.

• Science News Letter, 87:317 May 15, 1965

Do You Know?

Benign blood vessel tumors, popularly called *strawberry marks*, have been successfully treated with the laser.

Every day, 1,500 young people in the U.S. contract *venereal disease*.

Detergent foaming, the cause of unsightliness and pollution in many lakes and streams, may be the basis of a new water purification technique called foam separation or foam fractionation.

Tuna swim with their mouths open most of the time.

Seven out of 10 persons in the United States have *foot ailments*.

• Science News Letter, 87:317 May 15, 1965

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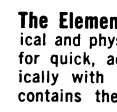
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