

Books of the Week

For the editorial information of our readers, books received for review since last week's issue 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. Request free publications direct from publisher, not from Science Service.

THE AMPHETAMINES: Their Actions and Uses—Chauncey D. Leake—*Thomas, C. C.*, 167 p., \$4.50. Survey of significant aspects of various drugs chemically and pharmacologically related to amphetamine sulfate.

THE ATLANTIC CABLE—Bern Dibner—*Burndy Lib.*, 96 p., illus., \$3.50, paper: \$2.50. Historical account of the Anglo-American technical achievement which, by linking the telegraph lines of two continents, made electrical communication possible on a world-wide scale.

AUTOMATION AND SOCIETY—Howard Boone Jacobson and Joseph S. Roucek, Eds.—*Philosophical Lib.*, 553 p., \$10. In this handbook 32 experts examine the present and potential impact of automation on different aspects of our society. Automation dictionary included.

CHALLENGERS OF THE DEEP: The Story of Submarines—Wilbur Cross—*Sloane*, 258 p., illus., \$5. Surveys the history of undersea boats,

the men who built and sailed them, from Bushnell's *Turtle* to the atomic *Skipjack*.

COLLEGE ZOOLOGY—Robert W. Hegner and Karl A. Stiles—*Macmillan*, 7th ed., 726 p., illus., \$7.50. Introductory text covering the animal world from simple to complex organisms including man.

COMPUTATIONAL METHODS OF LINEAR ALGEBRA—V. N. Faddeeva, transl. from Russian by Curtis D. Benster—*Dover*, 252 p., paper, \$1.95. Systematizes the most important numerical methods of linear algebra.

DICTIONARY OF MODERN CHESS—Byrne J. Horton, with James B. Horton and Dorothy Bawden Horton—*Philosophical Lib.*, 224 p., illus., \$6. General and basic terms, diagrams of chess openings, biographical sketches and organizations.

THE DYNAMICS OF PARTICLES AND OF RIGID, ELASTIC AND FLUID BODIES: Being Lectures on Mathematical Physics—Arthur Gordon Webster—*Dover*, 2nd ed., 588 p., illus., paper, \$2.35. Reprint of 1912 second edition.

ENCYCLOPEDIA OF AMERICAN ASSOCIATIONS—*Gale Research Co.*, 2nd ed., 716 p., \$20. Directory of non-profit organizations, arranged in 20 sections, among them scientific, technical and educational organizations. Fully indexed.

EXCURSION FLORA OF THE BRITISH ISLES—A. R. Clapham, T. G. Tutin and E. F. Warburg—*Cambridge Univ. Press*, 579 p., \$4.50. Keys and descriptions, portable version designed for the student and amateur botanist.

EXPERIMENTAL STUDIES ON THE NATURE OF SPECIES, IV: Genetic Structure of Ecological Races—Jens Clausen and William M. Hiesey—*Carnegie Inst.*, 312 p., illus., \$4.75, paper: \$4.25. Investigates the ecological races of the perennial *Potentilla glandulosa*, which inhabit a wide range of climates.

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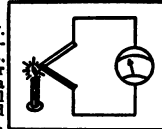
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GENERAL CIRCUIT THEORY—Gordon Newstead—*Wiley*, 144 p., \$3. Pocket-size handbook, emphasizing development of general relationships rather than detailed analysis of electric circuit theory.

GROUP THEORY and its Application to the Quantum Mechanics of Atomic Spectra—Eugene P. Wigner, transl. from German by J. J. Griffin—*Academic*, expanded and improved ed., 372 p., \$8.80. Includes new chapters on time inversion and Racah coefficients.

THE HISTORICAL BACKGROUND OF THE DEAD SEA SCROLLS—Cecil Roth—*Philosophical Lib.*, 87 p., \$4.75. Monograph dealing with the circumstances surrounding the Scrolls from a purely historical viewpoint.

HUMAN PHYSIOLOGY—Thomas F. Morrison, Frederick D. Cornett and J. Edward Tether—*Holt*, 408 p., illus., \$5.32. Introductory text for secondary school students.

HURRICANE—Marjory Stoneman Douglas—*Rinehart*, 393 p., illus., \$5.95. Scientific facts and historical data tell the story of hurricanes from the time of Columbus to Hurricane Audrey in 1957.

ILLUSTRATED GUIDE TO U. S. MISSILES AND ROCKETS—Stanley Ulanoff—*Doubleday*, 128 p., illus., \$3.95. For quick reference, gives facts about the 65 basic missiles and rockets in use and under test by U. S. Army, Navy, Air Force and NASA.

INSIGHT INTO ASTRONOMY—Leo Mattersdorf—*Lantern Press*, rev. ed., 247 p., illus., \$4. Brought up to date in connection with changes in our concept of the size and age of the universe, with chapter on artificial satellites added.

THE INTEGRATED CLASSROOM—H. Harry Giles—*Basic Bks.*, 338 p., \$5. A New York University professor of education analyzes the nature of the social conflict and provides concrete examples of how classroom integration is being handled around the nation.

JOURNAL OF MOLECULAR BIOLOGY, Vol. I, No. 1—J. C. Kendrew, Ed.-in-Chief—*Academic*, 86 p., illus., paper, six issues per annum, \$14. Publishes papers on the nature, production and replication of biological structure at the molecular level, and its relation to function.

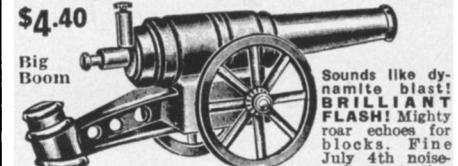
LANDSCAPE FROM THE AIR: A Physical Geography in Oblique Air Photographs—F. J. Monkhouse—*Cambridge Univ. Press*, 53 p., illus., \$1.75. Descriptions with photographs showing rock formations, vulcanicity, river valleys, glaciation and coast lines.

MANUAL OF INSECT MORPHOLOGY—E. Melville DuPorte—*Reinhold*, 224 p., illus., \$5. Zoology text concerned with the evolution of structure in the species.

MARINE ELECTRONICS HANDBOOK—Leo G. Sands—*Sams*, 232 p., illus., paper, \$3.95. Information about the various kinds of electronic devices used on pleasure craft and commercial vessels.

MEDICAL SCIENCE AND SPACE TRAVEL—William A. Kinney, introd. by Major General Harry

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MR. WIZARD'S EXPERIMENTS FOR YOUNG SCIENTISTS—Don Herbert—*Doubleday*, 187 p., illus. by Dan Noonan, \$2.95. Introduces each branch of science with simple experiments performed with household equipment.

NATIVE PEOPLES OF SOUTH AMERICA—Julian H. Steward and Louis C. Faron—*McGraw*, 481 p., illus., \$8.50. Summarization of the six-volume Handbook of South American Indians, with interpretations. For the student and general reader.

THE NIMONIC ALLOYS—W. Betteridge—*Arnold, E. & Co. (St. Martins)*, 332 p., illus., \$15. Brings together information on high-temperature materials, their constitution, properties and uses.

PACKAGE DESIGN ENGINEERING—Kenneth Brown—*Wiley*, 263 p., illus., \$8.50. Course in the fundamental engineering approach to industrial package design.

PLANE TRIGONOMETRY—Nathan O. Niles—*Wiley*, 234 p., \$3.95. Textbook stressing analytical aspects of trigonometry.

REPRODUCTION IN DOMESTIC ANIMALS, Vol. I—H. H. Cole and P. T. Cupps, Eds., foreword by Herbert M. Evans—*Academic*, 651 p., illus., \$14. Treatise dealing with the complex mechanisms involved in the reproduction of higher animals, the internal (nervous and endocrine) and external (food and environment) factors which play vital roles in breeding farm animals.

SOVIET PHYSICS: Technical Physics, Vol. 3, No. 1, A Translation of the *Journal of Technical Physics* of the Academy of Science of the USSR (Russian Original Vol. 28, No. 9)—Robert T. Beyer, Chmn.—*Am. Institute of Physics*, 219 p., illus., paper, monthly, annual subscription starting with Vol. 3, No. 1: \$75, libraries of non-profit academic institutions: \$35.

THE SPECTRUM OF BETA LYRAE—J. Sahade and others—*Am. Philosophical Soc.*, 64 p., illus., paper, \$2. Contains atlas of 195 Mount Wilson coude spectrograms. Vol. 49, Part 1 of the *Transactions*.

SULFUR IN PROTEIN: Proceedings of Symposium held at Falmouth, Mass., May 1958—Reinhold Benesch and others, Eds.—*Academic*, 469 p., illus., \$14. Deals with the role of sulfur in a variety of biological systems, presenting the findings of recent research.

SYMPOSIUM ON RADIOACTIVITY IN INDUSTRIAL WATER AND INDUSTRIAL WASTE WATER—A. Louis Medin and others, introd. by A. R. Belyea—*Am. Soc. for Testing Materials*, 70 p., illus., \$2.50. Discussion of test methods and samples.

THEY EXPLORED! Humboldt, Livingstone, Fremont, Hedin, Scott, Herzog—Rhoda Hoff and Helmut de Terra—*Walck, H. Z.*, 120 p., illus., \$3.25. Tells young people why these men explored, what they discovered and how the world benefited from their explorations.

URANIUM AND OTHER MIRACLE METALS—Fred Reinfeld—*Sterling*, rev. ed., 128 p., illus., \$3.95. Tells the general reader what uranium is, where and how it is being mined and how it is used in atomic energy, radioactive drugs and other peacetime applications.

VIRUS GROWTH AND VARIATION: Ninth Symposium of the Society for General Microbiology—A. Isaacs and B. W. Lacey, Eds.—*Cambridge Univ. Press*, 272 p., illus., \$7. Symposium was held at University of London in April 1959.

YOUR MICROSCOPE AND HOW TO USE IT—Hy Ruchlis and Bernard Friedman—*Science Materials Center*, 32 p., illus., paper, 70¢. Pamphlet explains parts of the microscope, tells boys and girls how to use it, suggesting experiments.

Science News Letter, June 6, 1959

AGRICULTURE

Russia Is Third Largest Producer of Fats and Oils

THE SOVIET Union is now the third largest producer of fats and oils in the world, exceeded only by the United States and Communist China. Its estimated 1958 production was 2.6 million metric tons.

Edible vegetable oils accounted for the main share of the output, followed by lard and tallow, butter, and fish and whale oils.

These figures, based largely on Russian sources, have been published by the Food and Agriculture Organization.

Total 1958 production of edible vegetable oils, including those extracted from imported seeds, is estimated at about 1.2 million tons. In 1959 it is likely to reach an all-time record, mainly because of an exceptionally good sunflower seed harvest.

Increased Russian production of oilseeds has been accompanied by improved extraction processes, the FAO reports. Hydraulic presses have been almost completely replaced by continuous screw presses and solvent extraction mills, thus increasing the yield of oil.

This technical advance doubled the extracting capacity between 1941 and 1956, although the number of plants increased only slightly.

The FAO study showed estimates of present Russian consumption, placed at about 30 pounds per head, were still far below the 61 pounds per head in North America and the 50 pounds per head in Western Europe.

Science News Letter, June 6, 1959

METEOROLOGY

High-Speed Weather Network Inaugurated

THE FIRST EXTENSIVE high-speed weather facsimile network is now operating for the Air Force, doubling the previous speed at which high-altitude weather information is transmitted.

The new network links 57 Air Weather Service weather stations at Air Force bases throughout the U.S., making immediate transmission of up-to-the-minute weather maps possible. Center of the network is the Global Weather Central at Offutt AFB, Omaha.

The National Weather Analysis Center, Suitland, Md., provides the daily reports on winds, temperatures and vorticity as well as forecasts of Northern Hemisphere weather. NWAC is a joint Weather Bureau, Navy and Air Force facility.

Designed and installed by the Western Union Telegraph Company, the new network will transmit data at a speed of 120 revolutions per minute, twice present speeds. The system, known as the Strategic Facsimile Network, was developed to fulfill Strategic Air Command requirements.

Weather maps transmitted by the network are about three times larger than any now being sent by facsimile.

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