

# Books of the Week

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**ANCIENT ATHENIAN CALENDARS ON STONE**—W. Kendrick Pritchett—Univ. of Calif. Press, 126 p., 24 plates, paper, \$4. A study of the three types of Athenian calendars, the prytany or conciliar calendar, the festival or archon's, and the regulatory calendar with dates according to the moon.

**ANIMAL PHOTOPERIODISM:** Relationship of Daylength to Animal Growth, Development and Behavior—Stanley D. Beck—Holt, 124 p., illus., \$2.50. Nontechnical introduction to the subject of photoperiodism written by scientist, shows how experiments in this area may yield vital information on the basic organization of living matter.

**COFFEE PROCESSING TECHNOLOGY, Vol. I:** Fruit-Green, Roast and Soluble Coffee. Vol. II: Aromatization, Properties, Brewing, Decaffeination, Plant Design—Michael Sivetz and H. Elliott Foote—Avi Pub. Co., 598 p., 379 p., illus., \$17.25, \$12.50; set of two vols. \$29.75. Technical reference books.

**CURRENT MEDICAL TERMINOLOGY 1964**—Burgess L. Gordon, Ed., and John H. Talbott, Dir.—Am. Medical Assn., 476 p., paper, \$2 direct to publisher, 535 N. Dearborn St., Chicago, Ill. 60610.

**EARLY AMERICAN HURRICANES, 1492-1870**—David M. Ludlum—Am. Meteorological Soc., 198 p., illus., \$7; paper, \$5. This first volume of a new series of historical monographs on principal weather events in the past covers the period from the voyages of Columbus to the formation of the Weather Bureau.

**ELECTRON AND ION EMISSION**—L. N. Dobretsov—NASA Technical Transl. (OTS), 348 p., diagrams, paper, \$5. Deals with Soviet experimental and theoretical studies in the field of physical electronics.

**EXPERIMENTAL SPECTROSCOPY**—Ralph A. Sawyer—Dover, 3rd ed., 358 p., illus., paper, \$2. Corrected and enlarged version of the second (1951) edition.

**JAPANESE SCIENCE AND TECHNOLOGY:** OTS Selective Bibliography—Office of Technical Services, 71 p., paper, 10¢ direct to publisher, U.S. Dept. of Commerce, Washington, D. C. 20230.

**KILLER WHALE!**—Joseph J. Cook and William L. Wisner—Dodd, photographs, \$3. A factual and fascinating account of one of the fiercest creatures of the ocean.

**LIFE ALONG THE SEASHORE**—Alan Solem—Encyclopaedia Britannica Press, 32 p., color photographs, illus. by Ruth Rooney, 99¢. A picture-essay book about invertebrates and other beach life.

**LIFE HISTORIES OF NORTH AMERICAN DIVING BIRDS**—Arthur Cleveland Bent—Dover, 239 p., 55 plates, paper, \$2.75. Unabridged republication of work first published by Smithsonian Institution in 1919.

**LIFE HISTORIES OF NORTH AMERICAN MARSH BIRDS**—Arthur Cleveland Bent—Dover, 392 p., 98 plates, paper, \$2.75. Unabridged republication (1926) of original Smithsonian treatise.

**THE LONG ARM OF AMERICA:** The Story of the Amazing Hercules Air Assault Transport and Our Revolutionary Global Strike Forces—Martin Caidin—Dutton, 369 p., photographs, illus. by Fred L. Wolff, \$5.95. About operations of ground and air teams of the turboprop Hercules.

**MODERN BIOLOGY**—Truman J. Moon, James H. Otto and Albert Towle—Holt, rev. ed., 758 p., illus., \$5.60. A basic course designed to meet the needs of a wide range of ability levels of high school students.

**MOST-OFTEN-NEEDED TELEVISION SERVING INFORMATION 1964**—M. N. Breitman—Supreme Publications, 192 p., illus., paper, \$3. Updated service manual.

**PATHWAYS TO PROBABILITY:** History of the Mathematics of Certainty and Chance—Amy C. King and Cecil B. Read—Holt, 139 p., illus., \$2.50. Chronological presentation of how our theories of probability have developed.

**PROBLEMS OF SPACE BIOLOGY, Vol. 1**—N. M. Sisakyan, Ed.—USSR Acad. of Sciences, transl. for NASA (OTS), 506 p., illus., paper, \$7. Contains theoretical and survey articles, papers on biological experiments on spaceships and satellites, and on ground experiments.

**PROCEEDINGS OF THE ELEVENTH PACIFIC NORTHWEST INDUSTRIAL WASTE CONFERENCE, 1963**—Judson H. Holloway, Chmn.—Oregon State Engineering Experiment Station, 300 p., illus., paper, \$1 direct to publisher, Corvallis, Ore. Papers by representatives of water management agencies, wood-pulp-paper, mining-metallurgy, chemical-petroleum and food agriculture industries.

**PROCEEDINGS OF THE SYMPOSIUM ON THE ASTRONOMY AND PHYSICS OF METEORS:** Smithsonian Contributions to Astrophysics, Vol. 7—J. S. Greenhow and others—GPO, 314 p., illus., paper, \$2.75. First international meteor physics symposium to discuss data of measurements made above the earth's atmosphere.

**PROCEEDINGS OF THE USAF AEROSPACE FLUIDS AND LUBRICANTS CONFERENCE** (April 16-19, 1963)—P. M. Ku, Ed.—Southwest Research Institute, 712 p., photographs, diagrams, \$15. Contains 58 technical papers with discussions, presenting unclassified results of Air Force internal and contractual research and development programs in the field of aerospace lubricants and fluids.

**QUEST FOR A CONTINENT**—Walter Sullivan—McGraw, 372 p., photographs, maps, paper, \$2.95. Describes the purposes and operation of the recent U.S. explorations of Antarctica.

**SCIENCE IN MODERN LIFE**—George Greisen Mallinson and Fred C. Meppelink Jr.—Ginn, 560 p., illus., \$5.60. General science course at secondary school level, stressing the interdisciplinary nature of science concepts.

**STATISTICAL ASTRONOMY**—Robert J. Trumpler and Harold F. Weaver—Dover, 644 p., diagrams, paper, \$3. Unabridged republication of work first published in 1953.

**TAPESTRIES IN SAND:** The Spirit of Indian Sandpainting—Paintings and Interpretation by David V. Villaseñor, foreword by Vinson Brown, Ed.—Naturegraph, 112 p., \$4.50; paper, \$2.95. Interpretation of the meaning of the ceremonial paintings by Southwest Indian medicine men.

**TECHNOLOGY AND THE ACADEMICS:** An Essay on Universities and the Scientific Revolution—Eric Ashby—St. Martins, 118 p., paper, \$1.95. About developments in British and German universities.

**THROUGH THE ALIMENTARY CANAL WITH GUN AND CAMERA**—Personally conducted by George S. Chappell, introd. by Robert Benchley—Dover, 114 p., illus. by O. Soglow, paper, \$1. Reprint (1930) of a parody on academic pomposity, describing a journey to the human interior.

**WORLD-WIDE SUMMER PLACEMENT DIRECTORY 1964**—A. L. Verssen, Ed.—Advancement & Placement Institute, 82 p., illus., paper, \$5. Compilation of summer jobs and study awards available to teachers and college students, listed by country and states.

• Science News Letter, 85:12 Jan. 4, 1964

## TECHNOLOGY

### Ultraviolet Tested For Sorting Mail

➤ TESTS to sort and cancel first class mail by use of ultraviolet light are now underway in the Post Office Department.

Postmaster General John A. Gronouski made the announcement before the National Association of Letter Carriers in Washington, D. C., where a new postage stamp commemorating the 100th anniversary of free city delivery of mail was introduced. Norman Rockwell designed the stamp.

The modified electronic facer-canceler machine is activated by postage stamps impregnated by phosphors that glow green or orange under special lamps.

Test quantities of five stamps have been phosphor-treated—the George Washington, Christmas and City Mail commemorative—all 5¢ stamps; the regular 4¢ and regular 8¢ airmail.

The airmail stamp is extracted from the flow of mail, the result of an orange glow. The other stamps glow green.

All 130 million of the City Delivery stamps are "tagged" to test mass production techniques as part of the study. Only limited numbers of the other items are treated.

In preliminary tests last August, phosphor-tagged airmail was faced and canceled with almost 100% accuracy at a rate of 30,000 per hour.

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## MEDICINE

### White Blood Cells May Be Key to Transplants

➤ TRANSPLANTATION of skin and body organs from one person to another may depend upon matching white blood cells.

Transplantation of skin, kidneys and other organs between persons other than identical twins has been plagued by a mechanism that causes eventual rejection of such transplants by the recipient.

Many investigators believe the key to this rejection is the white blood cell, which attacks the transplanted tissue just as it does other foreign bodies.

Blood transfusions are possible because red blood cells of donor and recipient are matched for certain key factors.

Dr. Paul Terasaki of the University of California, Los Angeles, Medical School has just received a five-year grant from the National Institutes of Health to explore the typing of white blood cell factors that might be matched in the search for a graft donor. He is being assisted by John McClelland, Norman Rich, Michael Mandell, and Teresa Kaufmann.

If such white cell factors could be identified and matched between graft donor and recipient, permanent acceptance of the graft might be possible.

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## Nature Note

➤ THE EXTRAORDINARY seahorse has a head like a horse, a tail like a monkey, a pouch for its babies like a kangaroo, an outer skeleton like an insect, and eyes that move independently like a chameleon—yet it is really a fish.

This marvelous veteran of tropical and warm temperate seas travels through the water in a vertical position, his head at right angles to his body. Using his small dorsal and almost invisible pectoral fins, he moves forward sedately in a series of little jerks.

His body is encased in jointed bony rings, and more than half of his length is sometimes made up of tail, which he uses more like a monkey than a fish, coiling it around bits of eel-grass or seaweed to anchor himself.

Seahorses feed on small sea creatures such as tiny shrimp and water fleas, which they slowly and gravely pursue and catch with their toothless jaws. Varying in size from an inch to a foot long, this strange fish has practically no enemies among the other residents of the deep.

One of the most interesting rites of the seahorse is the nuptial dance that usually takes place in the fall. Male and female with tails entwined begin a graceful dance in the water which ends in an embrace. Suddenly the female releases her eggs into the brood pouch of the male, on the underside of his body, just before the tail. The male then carries the eggs in his protective pouch until the young are big enough to care for themselves in the open sea—about 45 days after incubation.

• Science News Letter, 85:12 Jan. 4, 1964