

# 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.

**AFTER THE SEVENTH DAY: The World Man Created**—Ritchie Calder—*Simon & Schuster*, 448 p., illus., \$6.95. Handsome volume, gives general reader a fast-moving review of man's history in terms of technological advances and the challenges they present for the future.

**ANIMAL ECOLOGY**—W. H. Dowdeswell—*Harper*, 209 p., illus., paper, \$1.50. Reprint, shows what is meant by the animal's environment, the kind of results environment influences can achieve, and the role of ecology in evolution.

**ART AND ANATOMY**—Heidi Lenssen; Lancaster M. Greene, Ed.—*Barnes & Noble*, 80 p., illus., paper, \$1.75. Anatomical structures of the human body explained and illustrated.

**THE ART OF THE STONE AGE: Forty Thousand Years of Rock Art**—Hans-Georg Bandi and others—*Crown*, 249 p., 60 illus. in color, drawings, maps, \$5.95. Presents Franco-Cantabrian rock art and rock pictures of the Spanish Levant, North Africa, South Africa and Australia.

**BIOCHEMISTS' HANDBOOK**—Cyril Long, Ed., with Earl J. King and Warren M. Sperry, Consult. Eds.—*Van Nostrand*, 1,192 p., illus., \$25. Presents in concise form a wide range of biochemical data, both qualitative and quantitative, arranged for quick reference to serve biochemists and those engaged in closely allied fields.

**CALCULUS**—George B. Thomas, Jr.—*Addison-*

*Wesley*, 2nd ed., 850 p., illus., \$9.75. Revised textbook of differential and integral calculus, for students who have completed a course in analytic geometry.

**THE CALIFORNIA GOLD RUSH**—Ralph K. Andrist with Archibald Hanna—*Am. Heritage Pub. (Golden Press)*, 153 p., illus., \$3.50. Colorfully illustrated historical account of the men who mined the rich deposits on the West Coast.

**THE CELL AND THE ORGANISM: Essays Presented to Sir James Gray**—J. A. Ramsay and V. B. Wigglesworth, Eds.—*Cambridge*, 350 p., illus., \$9.50. Essays describing recent advances in our knowledge of cells and organisms, venturing rather further along speculative lines than is usual in more formal publications.

**THE CILIATED PROTOZOA: Characterization, Classification and Guide to the Literature**—John O. Corliss—*Pergamon*, 310 p., illus., \$12. Written at graduate level, of interest to research workers in protozoology, parasitology and cell biology.

**THE COMMON SPIDERS OF THE UNITED STATES**—James H. Emerton, with New Key to Common Groups of Spiders by S. W. Frost—*Dover*, 227 p., illus., paper, \$1.35. Reprint, first published in 1902.

**COMPUTER PROGRAMMING FUNDAMENTALS**—Herbert D. Leeds and Gerald M. Weinberg—*McGraw*, 368 p., \$8.50. Introductory text on digital computers, written especially for the layman.

**A DICTIONARY OF SAILING**—F. H. Burgess—*Penguin*, 237 p., illus., paper, 95¢. Includes matter relating not only to craft with sails but also to nautical life in general.

**EUROPEAN MILITARY MUSEUMS: A Survey of Their Philosophy, Facilities, Programs and Management**—J. Lee Westrate—*Smithsonian Inst.*, 206 p., photographs, \$4. Report on survey of 25 outstanding military museums in 13 European countries.

**THE EVOLUTION OF HUMAN NATURE**—C. Judson Herrick—*Harper*, 500 p., illus., paper, \$2.45. Reprint of 1956 book discussing the biological factors of the evolution of behavior and the evolution of brains.

**A FIRST COURSE IN MATHEMATICAL STATISTICS**—C. E. Weatherburn—*Cambridge*, 277 p., paper, \$2.75. Reprint of second edition, provides mathematical foundations of statistics.

**FUNDAMENTAL CONCEPTS OF HIGHER ALGEBRA**—A. Adrian Albert—*Univ. of Chicago Press*,

## ASTRONOMY

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165 p., paper, \$1.35. Compact exposition of the place of finite field theory in modern mathematics.

**FUNDAMENTALS OF PHYSICAL GEOGRAPHY**—Glenn T. Trewartha, Arthur H. Robinson and Edwin H. Hammond—*McGraw*, 425 p., illus., maps, \$6.95. Selection of materials to fit a one-semester, one-quarter, or two-quarter introductory college survey course.

**INDIVIDUAL AND GROUP BEHAVIOR IN A COAL MINE DISASTER**—H. D. Beach and R. A. Lucas, Eds.—*NAS-NRC*, 160 p., illus., paper, \$3. Report illustrates some of the differences in the way journalists and behavioral scientists examine and report the same disaster phenomena.

**LIGHT ALL AROUND**—Tillie S. Pine and Joseph Levine—*Whittlesey House*, 48 p., illus. by Bernice Myers, \$2.50. Tells young reader about light and its influence in everyday living.

**MATHEMATICAL PROGRAMMING**—S. Vajda—*Addison-Wesley*, 310 p., \$8.50. Graduate textbook of linear and nonlinear programming, including a large number of worked-out examples.

**OFFERINGS AND ENROLLMENTS IN SCIENCE AND MATHEMATICS IN PUBLIC HIGH SCHOOLS, 1958**—Kenneth E. Brown and Ellsworth S. Obourn—*Off. of Educ. (GPO)*, 87 p., illus., paper, 35¢. Discusses improvements in school facilities, equipment, supervisory programs, science clubs and science fairs.

**A PATENT MANUAL FOR SCIENTISTS AND ENGINEERS**—George M. Naimark—*Thomas, C. C.*, 108 p., \$5.50. Designed to make scientists and engineers "patent-wise," both as inventors and as part of the patent attorney-inventor team.

**PHYSICS OF THE AURORA AND AIRGLOW**—Joseph W. Chamberlain—*Academic*, 704 p., illus., \$16.50. A reference volume, covering all aspects of aurora and airglow, emphasizing those subjects not covered extensively elsewhere. Suitable also as graduate textbook.

**PROBABILITY AND THE LOGIC OF RATIONAL BELIEF**—Henry E. Kyburg, Jr.—*Wesleyan Univ. Press*, 346 p., \$10. The theory of probability presented here is designed to provide a practical framework for assessing the rationality of given beliefs on given evidence.

**READING, WRITING AND SPEECH PROBLEMS IN CHILDREN**—Samuel Torrey Orton—*Norton*, 215 p., illus., \$4.95. Neuropathologist discusses causes and treatment of a number of types of disorders in the development of the language faculty.

**RETIREMENT VILLAGES**—Ernest W. Burgess, Ed.—*Univ. of Mich.*, 160 p., illus., paper, \$3.50. On types of retirement villages, their location, design, operation and financing.

**RUSSIAN FOR ENGLISH SPEAKING STUDENTS, Vol. I**—I. M. Pul'kina and E. B. Zakhava-Nekrasova, transl. from Russian by D. G. Fry—*Pergamon*, 308 p., \$9.50. A teaching grammar based on experience in teaching advanced Russian to English-speaking students studying in Soviet universities.

**THE SAGA OF FLIGHT: From Leonardo da Vinci to the Guided Missile**—Neville Duke and Edward Lanchbery, Eds.—*Day*, 406 p., \$5.95. Anthology of good writing on ballooning, airships and airplanes in war and peace.

**THE SALMON**—J. W. Jones—*Harper*, 192 p., photographs, diagrams, \$4. On the natural history of the salmon, zoologist describes in detail the different stages of its fascinating life cycle, for biologists and the general reader.

**SCHOOL-INDUSTRY COOPERATION FOR BETTER SCIENCE EDUCATION IN NEW JERSEY**—Henry Urows, Ed., foreword by John T. Connor, preface by Frederick M. Raubinger—*Edison Foundation*, 32 p., illus., paper, single copies free upon request direct to publisher, 8 W. 40th St., New York 18, N. Y.

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**THE SCIENTIFIC APPROACH TO CAREER PLANNING**—M. C. Cobb—*Lantern Press*, 142 p., \$3.95. Describes major career fields and how to go about applying for jobs in the chosen field.

**THE SOCIAL INSECTS**—O. W. Richards—*Harper*, 219 p., illus., paper, \$1.50. Deals with the social behavior of wasps, bees, ants, termites and insect parasites. First published in 1953.

**SOILS MANUAL FOR DESIGN OF ASPHALT PAVEMENT STRUCTURES**—*Asphalt Institute*, 248 p., illus., paper, single copies free upon request direct to publisher, Univ. of Md., College Park, Md. Reference aid for the highway engineer.

**STEDMAN'S MEDICAL DICTIONARY**—Isaac Asimov and others—*Williams & Wilkins*, 20th ed., 1,680 p., illus., thumb-indexed, \$14.95. Golden Jubilee edition of fully revised up-to-date vocabulary of medicine and its allied sciences, with pronunciations and derivations.

**SWAMPS**—Delia Goetz—*Morrow*, 64 p., illus. by Louis Darling, \$2.75. Explains for young children how swamps are formed, the ways in which they differ, and the various forms of life found there.

**SYMPOSIUM ON HUMAN PROBLEMS IN THE UTILIZATION OF FALLOUT SHELTERS**—George W. Baker, John H. Rohrer and Mark J. Nearman, Eds.—*NAS-NRC*, 234 p., illus., paper, \$3. Symposium was held at the National Academy of Sciences in Washington, D. C. on February 11 and 12, 1960.

**TESTED WAYS TO HELP YOUR CHILD LEARN**—Virginia Burgess Warren—*Prentice-Hall*, 276 p., illus., \$4.95. Among its more than 800 suggestions, tells parents about ways to help a child explore science and how to use television as a teaching tool.

**WHITEFOOT: The Story of a Wood Mouse**—Robert M. McClung—*Morrow*, 48 p., illus. by author, \$2.75. A life-cycle story for the young-est readers.

**WORK-STUDY COLLEGE PROGRAMS: Appraisal and Report of the Study of Cooperative Education**—James W. Wilson and Edward H. Lyons, introd. by Ralph W. Tyler—*Harper*, 240 p., \$3.50. Based on the findings and recommendations of a study made under the auspices of the Thomas Alva Edison Foundation.

**YOU AND YOUR HEARING**—Norton Canfield—*Public Affairs Committee*, Pamphlet No. 315, 20 p., illus., paper, 25¢ direct to publisher, 22 E. 38th St., New York 16, N. Y. Describes types of hearing loss, psychological effects, treatment and hearing aids.

• Science News Letter, 80:108 August 12, 1961

## Questions

**AERONAUTICS**—How are designers lowering the death rate from airplane crashes? p. 100.

**MEDICINE**—What pest is now providing a weapon against fungus infection? p. 99.

Photographs: Cover, U. S. Coast and Geodetic Survey; p. 99, Northrop Corp.; p. 101, General Electric; p. 106, General Dynamics; p. 112, Bradford's, Inc.

## INVENTORS NEEDED AT ONCE

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## MEDICINE

# Blood Clot Removal

➤ A 37-YEAR-OLD WOMAN owes her life to the first successful removal of blood clots from the lungs during use of a heart-lung machine.

Pulmonary embolism—the closing of the lung artery or one of its branches by a blood clot or other plug brought by the blood current from a distant vessel—has remained a constant threat to life in surgical patients. Despite occasional survival after blood clots have been surgically removed, autopsies of 375,000 patients in the past 50 years showed 10,497 died from pulmonary embolism.

The achievement of Drs. Denton A. Cooley, Arthur C. Beall Jr., and James K. Alexander of the Baylor University College of Medicine and Jefferson Davis Hospital, Houston, Texas, was hailed by the *Journal of the American Medical Association*, 177:283 and 326, 1961, as “another milestone in cardiovascular surgery.”

Editorially, the *JAMA* said application of the cardiopulmonary bypass for open-

heart surgery has opened an entirely new field, permitting operation for many lesions which formerly were not surgically correctable. Application of this technique to emergency treatment of pulmonary embolism was a logical step.

Quick action is necessary if blood clots in the lungs are not to be fatal. The Houston surgeons recommended that a physician who diagnoses massive pulmonary embolism in a patient should immediately begin “supportive measures, including oxygen inhalation.”

The operation they performed included forceful compression of the lungs by hand to remove the many clots present in the patient's lungs. They also tied off the inferior vena cava (trunk for the lower extremities and pelvic organs) to prevent further clots.

The patient had undergone hysterectomy and ovarian tube removal following ruptured tubal pregnancy.

• Science News Letter, 80:109 August 12, 1961

## MEDICINE

# High Speed X-Rays

➤ THE EFFECTIVENESS of high speed X-ray motion pictures in spotting calcium salt deposits on heart valves, a condition that interferes with the efficient pumping action of the heart, is being investigated at the University of California, Los Angeles, Medical School.

The study, supported by the Los Angeles County Heart Association, is being conducted at the Harbor General Hospital by Dr. J. H. Woodruff.

Finding out the nature and extent of such deposits is increasingly important, Dr. Woodruff explained, because of the rapid advances in surgery that make it possible to repair defective heart valves.

Simple X-ray pictures have not proved entirely reliable in diagnosing calcification

because the fast action of the valves, opening and closing with each heart beat, blurs the picture. The fluoroscope has been more satisfactory but does not provide a permanent record for detailed study.

• Science News Letter, 80:109 August 12, 1961

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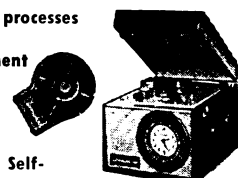
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