

# 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.

**ANIMAL GROWTH AND DEVELOPMENT**—Maurice Sussman—*Prentice-Hall*, 114 p., illus., \$2.95; paper, \$1.50. Compact text, part of the new series "Foundations of Modern Biology," written by research scientists for students on undergraduate level.

**THE ATOMIC SUBMARINE: A Practice Combat Patrol Under the Sea**—Russell Hoban—*Harper*, 32 p., illus. by author, \$2.50. A book for boys.

**BEHAVIOR GENETICS**—John L. Fuller and W. Robert Thompson—*Wiley*, 396 p., illus., \$8.95. Surveys the methods used in studying the influence of heredity on behavior and offers comprehensive review of modern research covering both animal and human studies. Extensive bibliography included.

**BOATING IN AMERICA**—Wm. Taylor McKeown, Ed.—*Ziff-Davis*, 303 p., illus., \$6.95. Guide to boating on the North American continent, from Nova Scotia to the Bahamas; from Padre Island, Texas, to central Canada; from the west coast of Mexico to Alaska.

**THE CELL**—Carl P. Swanson—*Prentice-Hall*, 114 p., illus., \$2.95; paper, \$1.50. First in a new series of short, compact volumes designed to teach biology by closing the gap between current research and college teaching, with stress on scientific principles rather than details of classification.

**A CENTURY OF OIL AND GAS IN BOOKS: A Descriptive Bibliography**—E. B. Swanson—*Appleton*, 214 p., \$4.75. Sponsored by the American Petroleum Institute; includes all

items published commercially or privately in English; a guide for researchers and librarians.

**CHEMISTRY IN THE SERVICE OF MAN**—Alexander Findlay—*Harper*, 8th ed., 318 p., illus., paper, \$1.75. Some of older material has been cut to include more recent work on metals, drugs, insecticides, artificial fibers, hormones, plant growth regulators and nuclear energy.

**CLOCKS TELL THE TIME**—Alma Kehoe Reck—*Scribner*, 48 p., illus. by Janina Domanska, \$2.75. Beautifully designed children's book about clocks through the ages, from shadow clocks to atomic clocks.

**A DICTIONARY OF ENGLISH SYNONYMS AND SYNONYMOUS EXPRESSIONS**—Richard Soule, Alfred Dwight Sheffield, Ed., foreword by Edward Weeks—*Bantam Bks*, 528 p., paper, 95¢. Unabridged reprint of latest edition of standard work designed as a guide to apt and varied diction; contains more than 20,000 word entries.

**ECOLOGY AND DISTRIBUTION OF RECENT FORAMINIFERA**—Fred B. Phleger—*Johns Hopkins Press*, 297 p., illus., \$7.50. Summarizes principal work done on the ecology of modern Foraminifera and attempts to present results in a system useful to oceanographers and geologists.

**ELECTROPHYSIOLOGY OF THE HEART**—Brian F. Hoffman and Paul F. Crane, foreword by Franklin D. Johnston—*McGraw*, 323 p., illus., \$12.50. Comprehensive presentation of technique of microelectrode recording and discussion of records obtained by this method.

**EXPERIMENTAL BIOCHEMISTRY: A Laboratory Manual**—Gerald Litwack—*Wiley*, 313 p., illus., paper, \$5.50. To serve as an outline of experiments for an introductory course in the biochemical laboratory at the undergraduate or beginning graduate level.

**FAMILIAR INSECTS OF AMERICA**—Will Barker, foreword by Hilary J. Deason—*Harper*, 236 p., illus. by Carl Burger, \$4.95. Introduction to the study of insects; helps understanding of their evolution, the curious ways in which they live and reproduce, and their influence on other living creatures, humans included.

**FLAMES: Their Structure, Radiation and Temperature**—A. G. Gaydon and H. G. Wolfhard—*Chapman (Macmillan)*, 2nd rev. ed., 383 p., illus., \$12. Advanced discussion of stationary flames, with emphasis on the physical rather than the chemical viewpoint.

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**THE GOLDEN BOUGH: A Study in Magic and Religion**—Sir James George Frazer—*Macmillan*, 864 p., paper, \$2.50. Reprint of Frazer's abridged edition of his book on the remarkable rule that regulated the succession to the priesthood of Diana at Aricia.

**GUIDE TO FITTING OUT**—Jim Emmett—*Ziff-Davis*, 246 p., illus., \$6.95. Large-size handbook of advice with 240 different plans for the improvement of small boats.

**HEALTH STATISTICS: Peptic Ulcers Reported in Interviews, United States, July 1957-June 1959**—U. S. National Health Survey—*GPO*, 26 p., paper, 25¢. Statistics on prevalence of peptic ulcers by age, sex and medical care status.

**THE HIGHER ARITHMETIC: An Introduction to the Theory of Numbers**—H. Davenport—*Harper*, 172 p., paper, \$1.35. First published in 1952, treats factorization and the primes, congruences, quadratic residues and forms, continued fractions and sums of squares.

**HYSTERIA, REFLEX AND INSTINCT**—Ernst Kretschmer, transl. from German by Vlasta and Wade Baskin—*Philosophical Lib.*, 162 p., \$4.75. Theory of hysteria built on the foundation laid by Charcot's studies of suggestion and hypnosis and Freud's discovery of the interrelations between psychic and somatic disturbances.

**LABORATORY MANUAL FOR GENERAL ZOOLOGY**—Jewett Dunham and Robert E. Haupt—*Burgess*, 191 p., illus., paper, \$4.25.

**LET'S COLLECT ROCKS**—*Shell Oil Co.*, 17 p., illus., paper, single copies free upon request direct to publisher, 50 W. 50th St., New York 20, N. Y. Answers beginners' questions about rocks, minerals, fossils and how to start a collection.

**NEW HOPE FOR STROKE VICTIMS**—Robert A. Kuhn—*Appleton*, 206 p., illus., \$4. Neurosurgeon describes for the layman modern tests by which strokes are investigated, the different causes of strokes, their treatment, case histories and answers to questions.

**ORIGINS OF ALCOHOLISM**—William McCord and Joan McCord with Jon Gudeman—*Stanford Univ. Press*, 193 p., \$4.75. Longitudinal social study of 29 boys who later became alcoholics. By comparing childhood data of alcoholics and those who were not alcoholics, the authors distinguish a pattern of experiences and traits that set the alcoholics apart and suggest the causes of their disorder.

**THE OTHER CHILD: The Brain-Injured Child**—Richard S. Lewis, Alfred A. Strauss and Laura E. Lehtinen—*Grune & Stratton*, 2nd rev. ed., 148 p., \$3.75. Written for parents and laymen; discusses perception, language, behavior, management and education of the brain-injured child.

**PARAPSYCHOLOGY**—Rene Sudre, transl. from French by C. E. Green—*Citadel Press*, 412 p., \$6. A French writer gives his interpretation of this controversial subject.

**PESTICIDE HANDBOOK 1960**—Donald E. H. Frear—*College Science Publishers*, 12th ed., 265 p., \$3.25; paper, \$1.75. Lists names, active ingredients and manufacturers of more than 7,000 insecticides, fungicides, herbicides, rodenticides and other agricultural chemicals.

**PETROLEUM SOURCEBOOK 1959: A Regional Bibliography of Petroleum Information**—Curtis Stevens, Ed.—*Nat. Petroleum Bibliography*, 234

## IDENTIFY ANY TREE!

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**PHYSICS: Foundations and Frontiers**—George Gamow and John M. Cleveland—*Prentice-Hall*, 551 p., illus., \$7.95. Introduction to modern physics at the college level, based on Gamow's "Matter, Earth and Sky." Calculus has not been used; trigonometry included has been treated in the text itself.

**PROBLEMS OF LIFE: An Evaluation of Modern Biological and Scientific Thought**—Ludwig von Bertalanffy—*Harper*, 216 p., paper, \$1.35. First published in 1954, gives survey of basic biological problems and laws within the framework of "organismic conception."

**RUDOLPH MATAS: A Biography of One of the Great Pioneers in Surgery**—Isidore Cohn with Hermann B. Deutsch—*Doubleday*, 431 p., photographs, \$5.95. The New Orleans surgeon's life as seen through the eyes of an admiring student, associate and friend of many years.

**SCIENTIFIC MANPOWER 1959: Papers of the Eighth Conference on Scientific Manpower**—National Science Foundation—*GPO*, 38 p., paper, 30¢. Conference theme was "Higher Education and Training in Emerging Fields of Science and Technology."

**SELECTIVE TOXICITY**—Adrien Albert—*Wiley*, 2nd rev. ed., 233 p., illus., \$5.50. About toxic agents that injure some kinds of cells and not others, even when the two kinds are growing close together. Book is concerned with drugs, weed killers and insecticides.

**STATISTICAL HANDBOOK OF SCIENCE EDUCATION**—National Science Foundation—*GPO*, 94 p., paper, 55¢. Compilation of pertinent statistical material on the education and training of scientists and engineers in the United States.

**THE TRUE BOOK OF PLANT EXPERIMENTS**—Illa Podendorf—*Childrens Press*, 48 p., illus. by Bill Armstrong, \$2. For the beginning reader, simple experiments he can do at home or at school.

**USSR: Its People, Its Society, Its Culture**—Thomas Fitzsimmons, Peter Malof and John C. Fiske—*HRAF Press*, 590 p., \$8.50. An analysis that seeks to define the dominant sociological, political and economic aspects of the USSR as a functioning society, to present that society's strength and weaknesses, and to identify the patterns of behavior characteristic of its members.

• Science News Letter, 78:124 August 20, 1960

#### ELECTRONICS

### Nuclear-powered "Sentry" to Be Built

➤ A NUCLEAR-POWERED automatic electronic "sentry" capable of recording data and transmitting it from a remote ground location for at least two years without servicing or refueling is being developed for the U. S. Atomic Energy Commission.

Energy for the "sentry" will be supplied by a five-watt generator, which will convert heat from safely-enclosed pellets containing strontium-90 directly into a continuous flow of electricity.

The device will be linked with weather instruments to measure temperature, wind speed, wind direction and barometric pressure in order to demonstrate its capabilities. It could, however, be easily modified to detect seismic disturbances or to record continuously any other type of information in a remote area.

• Science News Letter, 78:125 August 20, 1960

#### ROCKETS AND MISSILES

## Probe for Life on Mars

➤ THE FIRST ROCKET PROBE to Mars should contain equipment capable of detecting interference by intelligent Mars beings, two California scientists said.

The probe should also carry instruments to transmit back to earth information on the nature of the Martian canals and on Phobos and Deimos, the two Martian moons, Wells A. Webb, a research chemist for Hexcel Products, Inc., at Berkeley, and Dr. James A. Harder, assistant professor of civil engineering at the University of California, Berkeley, told the third annual West Coast meeting of the American Astronautical Society at Seattle, Wash.

They believe there is enough evidence indicating the possibility of past or present intelligent life on Mars to make it worthwhile to instrument the first Mars probe to detect manifestations of such intelligence. Most astronomers believe that not man or man-like creatures, but mosses and lichens, are the highest form of life on Mars.

The chemist and civil engineer, who suggest the possibility of a high form of life on Mars, said that the best way to make allowances for the interception or destruction of a Mars probe would be to install a proximity detector in the probe. This would preferably be one which detects the velocity of

approach of nearby objects by means of a shift in the frequency of a signal given off by the probe.

Why expect interference from Mars beings?

If men were advanced only 20 years beyond our present capabilities, the scientists said, no artificial probe approaching the earth would escape detection, destruction or, possibly, capture. Intelligent beings on Mars, assuming there are any, might already have this capability.

The two researchers stressed the importance of discovering whether the canals and satellites of Mars are artificial and the need to get telescopes above the earth's atmosphere to do this. The question of the canals, they stated, could be resolved with a stabilized earth satellite carrying a powerful telescope and a delicate aligning system along with a relatively simple radio transmission system.

But the problem of the Martian moons can be resolved only with a Mars probe containing a small telescope-viewing camera and a complex television transmitter. Transmission of television pictures from the area of Mars, about 50,000,000 miles away, is no simple task.

• Science News Letter, 78:125 August 20, 1960

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