

# 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 ATOM**—Sir George Thomson—*Oxford University Press*, 4th ed., 204 p., illus., \$1.00. This small book by a Nobelist, addressed to the layman, includes discussion of those aspects of the subject related to world politics.

**BIRD NAVIGATION**—G. V. T. Matthews—*Cambridge University Press*, 141 p., illus., \$2.50. The experiments and observations described here point to the sun as the guide for bird migration.

**THE BUSINESS ENTERPRISE AS A SUBJECT FOR RESEARCH**: Prepared for the Committee on Business Enterprise Research—Howard R. Bowen—*Social Science Research Council*, Pamphlet 11, 103 p., paper, \$1.25. Proposing the business enterprise, one of the most pervasive and influential institutions of our society, as offering rich and varied opportunities for research.

**CONSERVATION FOUNDATION ANNUAL REPORT FOR THE YEAR 1954**—Fairfield Osborn, President—*Conservation Foundation*, 27 p., paper, free upon request direct to publisher, 30 East 40th St., New York 16, N. Y. Development of research studies has been a major Foundation objective. Projects are here described.

**CONSULTING SERVICES**—*Association of Consulting Chemists and Chemical Engineers*, 15th ed., 110 p., paper, \$1.00. A directory with names classified by field of specialty.

**CULTURAL PATTERNS AND TECHNICAL CHANGE**: A Manual Prepared by the World Federation for Mental Health—Margaret Mead, Ed.—*New American Library*, 352 p., paper, 50 cents. This work was intended to answer the question raised by thinking people as to whether, in an attempt to abolish hunger, cold and want, the tractors imported in underprivileged places might not rip through the fabric of cultural life.

**CULTURE AND MENTAL DISORDERS**: A Comparative Study of the Hutterites and Other Populations—Joseph W. Eaton with Robert J. Weil—*Free Press*, 254 p., \$4.00. This study of a closely cohesive sect indicates that mental hygiene is no job for piecemeal social action. The home, the school, the place of work and other social institutions must work together to achieve any substantial results.

**DEVELOPMENTS IN THE SAMPLING OF AIRBORNE DUST**—Theodore Hatch—*Mellon Institute*, 6 p., paper, free upon request direct to publisher, 4400 Fifth Ave., Pittsburgh 13, Pa.

**DIGGING UP THE PAST**—Sir Leonard Woolley—*Crowell*, 2d ed., 125 p., illus., \$3.50. This new edition of a well-known book published 25 years ago required surprisingly little re-writing to bring it up to date. Location of sites by air photography and the dating of finds by the radiocarbon method are new techniques, but outside the scope of this book devoted to scientific digging.

**ELECTRICAL MONEY SAVING**—James A. McRoberts—*McRoberts*, 33 p., illus., paper, \$1.00. Useful hints on how you can save pennies on your electric light bills and at the same time have more efficient use of your lights and appliances.

**FIELD BOOK OF AMERICAN WILD FLOWERS**—F. Schuyler Mathews, completely revised and enlarged by Norman Taylor—*Putnam's*, 601 p., illus., \$5.00. A new and revised edition of a book originally published in 1902.

**FLOORING MATERIALS**—Ben John Small—*Small Homes Council, University of Illinois*, 8

p., illus., paper, 10 cents. Practical advice on the selection and care of home floors.

**GRASSLAND FARMING**—George H. Serviss and Gilbert H. Ahlgren—*Wiley*, 146 p., illus., \$2.96. How to provide most effectively the raw materials for meat and dairy products.

**HANDBOOK ON PESTS AND DISEASES**—Cynthia Westcott, Ed.—*Brooklyn Botanic Garden, Plants and Gardens*, Vol. 11, No. 1, 96 p., illus., paper, \$1.00. Giving the symptoms and control measures for 180 of the most common plant enemies.

**THE HUNTING WASP**—John Crompton—*Houghton Mifflin*, 240 p., \$3.00. A readable book about the ways of the huntress who paralyzes her prey so as to provide her young with live fresh meat.

**KEYSTONES OF GOOD INTERNAL ADMINISTRATION**—Ellsworth Tompkins and Galen Jones—*Govt. Printing Office, Office of Education Misc. No. 20*, 24 p., illus., paper, 15 cents. To help the administrator get things done effectively.

**LABORATORY EXPERIMENTS IN GENERAL CHEMISTRY**—J. A. Campbell and L. E. Steiner—*Macmillan*, 216 p., illus., paper, \$3.40. Describing experiments that will enable the student to discover new facts for himself rather than merely confirming what he already knows.

**THE NATURE OF LIVING THINGS**—C. Brooke Worth and Robert K. Enders—*New American Library*, 198 p., illus., paper, 35 cents. Presenting for laymen the pleasurable aspects of plants and animals as they exist in nature in fields and woods.

**ORIGINS OF RESISTANCE TO TOXIC AGENTS**: Proceedings of the Symposium Held in Washington, D. C., March 25-27, 1954 — M. G. Sevag, Roger D. Reid, and Orr E. Reynolds, Eds.—*Academic*, 471 p., illus., \$12.00. An attempt to develop an explanation of why the new drugs and insecticides sometimes lose their effectiveness.

**THE PITILESS JUNGLE**—John L. Brom, Translated by Oliver Coburn—*David McKay*, 309 p., illus., \$4.50. An attempt, the author says, to "recapture the strife and mystery, anguish and danger and beauty" of Africa in this true story of 8 people who traveled over 3,000 miles in shooting a film.

**A REVISION OF THE PSYCHODIDAE (DIPTERA) IN AMERICA NORTH OF MEXICO**—Larry W. Quate—*University of California Press*, 171 p., illus., paper, \$2.50. These fuzzy little gnats have attracted little attention from entomologists because of their small size and reclusive habits.

**SEASHORES: A Guide to Animals and Plants Along the Beaches**—Herbert S. Zim and Lester Ingle—*Simon and Schuster*, 160 p., illus., paper \$1.00, cloth \$1.95. To help you identify the treasures you find on the seaside vacation.

**THE STORY OF MOSSES, FERNS AND MUSHROOMS**—Dorothy Sterling, illus. by photographs by Myron Ehrenberg—*Doubleday*, 159 p., \$2.75. A book for children of all ages about those strange plants that have neither seeds nor flowers.

**A SYSTEMATIC STUDY OF THE GENUS APHYTIS HOWARD (HYMENOPTERA, APHELINIDAE) WITH DESCRIPTIONS OF NEW SPECIES**—Harold Compere—*University of California Press*, 49 p., illus., paper, 75 cents. These little creatures are important economically because they live as parasites on some of the most injurious pests.

**TEXTILES**—Norma Hollen and Jane Saddler—*Macmillan*, 197 p., illus., \$5.00. Text for a college course on textiles with emphasis on the properties that affect the care and use of the materials.

**TRAINING HIGHWAY DEPARTMENT PERSONNEL**—Howard E. Gerlaugh and Robley Winfrey—*Highway Research Board*, 16 p., paper, 45 cents. *Science News Letter*, June 25, 1955

## ENGINEERING

### Jet Fuel Developed Under German Process

► **DEVELOPMENT OF** a new jet fuel that does not break down into engine-clogging gums and sediments as readily as older fuels was announced at the Society of Automotive Engineers' meeting in Atlantic City, N. J.

For supersonic aircraft, the fuel's stability at high temperatures permit its use as an efficient cooling agent, carrying off the tremendous heat of jet engines. The fuel will resist "breaking down" at temperatures up to 500 degrees Fahrenheit.

Samples of the fuel are now being prepared for testing by the U.S. Air Force. Socony Mobil Oil Company, Inc., is the developer of the fuel.

A new process called "hydrocracking" makes possible the manufacture of the fuel. Raw petroleum is broken down at high pressures and temperatures in the presence of hydrogen.

The process was used by the Germans during World War II when supplies of conventionally made fuel became low. But the expense of the process until recently prevented its use in the U. S.

Two factors have lowered its cost. They are the development of new chemical agents that act on the raw petroleum at lower pressures and temperatures, and new methods of making hydrogen cheaply.

*Science News Letter*, June 25, 1955

## Questions

**ASTRONOMY**—Which star has a greenish hue? p. 407.

**BIOCHEMISTRY**—What part of the photosynthesis reaction is still not understood? p. 402.

**ENGINEERING**—Which tire slips first when a car skids off the road at a turn? p. 405.

**ENTOMOLOGY**—How are scientists testing how a bee tells time? p. 405.

**NEUROLOGY**—How do deep brain waves differ from surface waves? p. 402.

Photographs: Cover, Ontario Department of Lands and Forests; p. 403, General Electric Company; p. 405, B. F. Goodrich Company; p. 406, Hamilton Wright; p. 412, Bakelite Company.