

# 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.

**ADVANCES IN PSYCHIATRY: Recent Developments in Interpersonal Relations**—Mabel Blake Cohen, Ed.—*Norton*, 314 p., \$4.95. Selected articles which have appeared in the journal *Psychiatry* in the last twenty years.

**ANATOMY AND PHYSIOLOGY, Vol. 1: Cells, Tissues, Integument, Skeletal, Muscular and Digestive Systems, Blood, Lymph, Circulatory System**—Edwin B. Steen and Ashley Montagu—*Barnes & Noble*, 332 p., illus., paper, \$2.50. College Outline textbook.

**ATTITUDES OF CERTAIN HIGH SCHOOL SENIORS TOWARD SCIENCE AND SCIENTIFIC CAREERS**—Hugh Allen, Jr.—*Teachers College*, 53 p., paper, \$1.25. Analysis of responses to questionnaire, seeking to identify some of the factors which resulted in the various attitudes.

**AVIATION FACTS AND FIGURES 1959**—Rudolf Modley and others, Ben S. Lee, Ed.—*Am. Aviation Publications*, 147 p., illus., paper, \$2. Good reference guide on production, research and development, guided missiles, manpower, finance, airlines and transportation, and aviation exports.

**BASICS OF MISSILE GUIDANCE AND SPACE TECHNIQUES, Vol. I and II**—Marvin Hobbs—*Rider*, 144 and 146 p., illus., 2 vols. in single cloth binding \$9, paper, each \$3.90. Picture-book course for technical personnel and the general reader.

**A BRIEF TEXT IN ASTRONOMY**—William T. Skilling and Robert S. Richardson—*Holt*, rev. ed., 353 p., illus., \$8.50. Explains in simple terms some of the recent discoveries of radio astronomy, nuclear physics and artificial satellites.

**A CLEAR WATER STREAM**—Henry Williamson—*Washburn*, 229 p., \$3.50. Author tells of his

experiences and observations, living beside a trout stream in England.

**CODFISH, CATS AND CIVILIZATION**—Gary Webster—*Doubleday*, 263 p., \$3.95. Informal story of some of the animals, birds, fish and insects, which have helped or hindered man's progress.

**COMPENDIUM OF WATER POLLUTION LAWS, Water Pollution Abatement Manual W-5**—Carl E. Geuther—*Manufacturing Chemists' Assn*, 53 sheets, paper, \$5. State-by-state analysis of working laws and regulations as they pertain to water pollution abatement.

**CONTROL ENGINEERING**—Gordon J. Murphy—*Van Nostrand*, 385 p., \$7.50. Text covering modern automatic control theory at the intermediate level, suitable in a strong, science-oriented engineering curriculum.

**DIVE: THE COMPLETE BOOK OF SKIN DIVING**—Rick and Barbara Carrier—*Funk, W.*, 294 p., illus., \$4.95. Systematic study of the techniques and equipment for skin diving, a sport with opportunities for exploration, for salvage and research in the depth of the sea.

**THE EARTH BENEATH THE SEA**—Francis P. Shepard—*Johns Hopkins Press*, 275 p., illus., \$5. A submarine geologist tells of what is known about the ocean floor, in non-technical language. A wealth of information for the general reader and the scientist in other fields.

**FAMILIES IN TREATMENT: From the Viewpoint of the Patient, the Clinician and the Researcher**—Erika Chance, foreword by Norman Reider—*Basic Bks*, 234 p., \$5.50. Based on a five-year study of families in ongoing treatment. By combining clinical and research descriptions, the study facilitates the understanding of the pathogenic family.

**FAMILY PLANNING, STERILITY AND POPULATION GROWTH**—Ronald Freedman, Pascal K. Whelpton and Arthur A. Campbell—*McGraw*, 515 p., \$9.50. Sociological study of how Americans plan the growth of their families, the success of their plans, and the consequences for the growth of the American population.

**GENERAL HOMOGENEOUS COORDINATES IN SPACE OF THREE DIMENSIONS**—E. A. Maxwell—*Cambridge Univ. Press*, 169 p., paper, \$2.75. Reprint of 1951 edition.

**GEOLOGY**—Catherine E. Orr and M. Vere DeVault—*Steck*, 47 p., illus. by Ralph White, \$1.75. Explains some fundamentals of earth science with simple experiments for the young reader.

**HANDBOOK OF DIET THERAPY**—Dorothea Turner—*Univ. of Chicago Press*, 3rd ed., 222 p.,

\$5. Includes new chapters on diet during pregnancy, adolescence and old age; energy expenditure; fatty acid modifications; and phenylalanine restrictions.

**THE HANDBOOK OF PRIVATE SCHOOLS: An Annual Descriptive Survey of Independent Education**—*Sargent*, 40th ed., 1344 p., illus., \$10. Includes 3300 U. S. schools, new section on Canadian schools and expanded section on foreign schools.

**MATHEMATICAL PUZZLES OF SAM LOYD**—Martin Gardner, Ed.—*Dover*, 167 p., illus., paper, \$1. Selected puzzles from original *Cyclopedia of Puzzles* (1914), edited for accuracy and clarity.

**MAYA: The Riddle and Rediscovery of a Lost Civilization**—Charles Gallenkamp—*McKay*, 240 p., photographs by author, illus. by John Skolle, \$5.50. An archaeologist's book for the general reader, reconstructing Mayan civilization from archaeological finds in the forests of Yucatan, Guatemala and Honduras.

**THE MEANING OF POISON**—Lloyd G. Stevenson—*Univ. of Kan. Press*, 53 p., \$2. Lecture dealing with two aspects of poison—as cause of disease and as a tool of research in physiology and pharmacology.

**MEMO TO A COLLEGE TRUSTEE: A Report on Financial and Structural Problems of the Liberal College**—Beardsley Ruml, Part 4: "Achievement of the Possible" by Donald H. Morrison—*McGraw for The Fund for the Advancement of Education*, 94 p., paper, \$1. Deals with possible internal improvements of faculties, curricula, facilities and finances of American liberal colleges.

**MENTAL HEALTH MANPOWER TRENDS**—George W. Albee—*Basic Bks*, 361 p., \$6.75. A detailed analysis of mental health needs in the United States and the trained manpower available to meet them. Monograph No. 3 of the Joint Commission on Mental Illness and Health.

**THE MODERN SLIDE RULE: A New and Easy Method for its Use**—Stefan Rudolf—*William-Frederick Press*, 69 p., illus., paper, \$5. Instructional manual with drill problems and answers.

**NATIVE TREES of the San Francisco Bay Region**—Woodbridge Metcalf—*Univ. of Calif. Press*, 72 p., illus. by Mary B. and Fred Pomerooy and Eugene Murman, paper, \$1.50. Pocket guide to help identify 52 native tree species.

**PESTICIDE HANDBOOK 1959**—Donald E. H. Frear, Ed.—*College Science Pubs.*, 11th ed., 250 p., \$3.25, paper, \$1.75. Fully revised edition, lists names, active ingredients and manufacturers of more than 7,000 insecticides, fungicides, rodenticides, herbicides and other agricultural chemicals.

**PHYSICAL CLIMATOLOGY**—Helmut Landsberg—*Gray*, 2nd ed., 446 p., illus., \$6. Elementary textbook, fully revised, with guides to further reading.

**PHYSIOLOGY**—Jessie Helen Haag and M. Vere DeVault—*Steck*, 47 p., illus. by Marjorie Hart, \$1.75. Explains for young children some principles of physiology with simple demonstrations the child can do.

**PIGMENT CELL BIOLOGY: Proceedings of the**

## THE BEGINNER'S BOOK OF Oil Painting

BY ADRIAN HILL

Three things this book will not do: It will not turn anyone into a Michelangelo in 10 easy lessons. Nor in 99. Not even into a very primitive Gauguin.

Some things it will do: It will provide inspiration and instruction on a self-teaching basis, to get you launched on the exciting and rewarding pastime of painting in oils. It will do so in a relaxed yet effective way. You will not be harassed with rigid rules, nor expected to follow a prescribed "style." Rather you will be encouraged to "invite your soul," to experiment, to test your abilities, to follow your natural impulses and see where they lead. . . . Ultimately a technique peculiarly your own is likely to evolve.

Famed artist-teacher Adrian Hill will provide the ground rules. He will make you acquainted with the "tools"—palette, brushes, paints, etc.—and tell you how to use them. You will be shown their potentials—also their limitations. You will see "wrong/right" examples that illustrate key points. You will be made aware of the pitfalls that abound. The possible range and arrangement of subject matter will be explored, as well as light and shade effects. Always you will be urged to "learn-by-doing."

You can readily find out if this is the book for you. Order it and use it for 10 days. If not delighted with results, return it for full refund of purchase price. Fair enough?

"An excellent book for the art library and invaluable to the amateur at home."—*Arts & Crafts Education*.

11 full-color and 95 black-and-white illustrations

ORDER NOW!

\$2.95 Postfree • 10-Day Money-Back Guarantee  
EMERSON BOOKS, Inc., Dept. 733-L  
251 W. 19th Street, New York 11

## GIANT 10 FOOTERS \$1.00

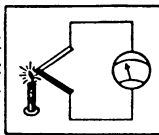


Great Fun for Kids and Adults at Beach, Playground or Water Sport. Inflate to Giant 10 ft., 33 ft. Round, with air or Gas. Flying Advt. visible for miles. Terrific for attracting crowds at Openings, Fairs, Roadside Stands, Gas Stations, Sport Events. Use as Water Markers and Buoys. Made of genuine Neoprene Rubber for extra durability. Never Used. Sold at fraction of cost. \$1 each. Add 10¢ Dozen \$10. Colossal No C.O.D.'s.

handling cost each. 6 for \$5.  
30 ft., \$5.00 each. No C.O.D.'s.  
NOVEL MFG. 33 2nd Ave., Dept. G-2971  
New York 3, New York

### THERMO-ELECTRONICS

Successor to thermo-electricity. Change heat to electricity DIRECTLY—no acids, liquids, chemicals, moving parts or sunlight! Build or buy a thermo-electronic battery. Mail 25¢ today for information and sample thermo-electronic alloy.



HERMON E. COTTER Dept. H. 15788 Blackstone, Detroit 23, Mich.

Fourth Conference on the Biology of Normal and Atypical Pigment Cell Growth—Myron Gordon, Ed.—*Academic*, 647 p., illus., \$13.50.

PLAIN TALK FROM A CAMPUS—John A. Perkins—*Univ. of Delaware Press (Univ. Pubs.)*, 195 p., \$4. The president of the University of Delaware gives his views on how to cope with ever-increasing enrollments, "shoestring" financing and the confusion over educational aims.

THE PLANT KINGDOM: A Laboratory Manual—Paul C. Lemon and Norman H. Russell—*Mosby*, 176 p., illus., paper, \$3.25. Considers the plant kingdom from an evolutionary viewpoint, for use with advanced courses.

RADIOACTIVE WASTE DISPOSAL INTO ATLANTIC AND GULF COASTAL WATERS—Working Group of the Committee on Oceanography, NAS-NRC, Dayton E. Carritt, Chmn.—*Nat. Acad. of Sciences-Nat. Res. Council*, 37 p., illus., paper, \$1.

RESEARCH TECHNIQUES IN HUMAN ENGINEERING—Alphonse Chapanis—*Johns Hopkins Press*, 316 p., illus., \$6. Practical handbook of operational methods of human engineering, of interest to those engaged in industrial engineering, operations research, systems engineering, experimental psychology and scientific management.

ROCKET SCIENCE FOR AMATEURS—L. E. Lewis, Jr.—*Sooner Science Pubs.*, preliminary ed., 50 p., illus., \$2. Written by the director of the Oklahoma City Rocket Research Club, to meet the needs of teachers and amateur rocketeers, stressing safety and scientific principles.

SOME TROPICAL SOUTH PACIFIC ISLAND FOODS: Description, History, Use, Composition and Nutritive Value—Mary Murai, Florence Pen and Carey D. Miller—*Univ. of Hawaii Press*, 159 p., illus., paper, \$2. Joint project supported by the Pacific Science Board, the U. S. Department of Agriculture and the Foods and Nutrition Department of the Hawaii Agricultural Experiment Station.

STRESS EFFECTS OF ABRASIVE TUMBLING—H. R. Letner—*Mellon Institute*, 19 p., illus., paper, free upon request direct to publisher, 4400 Fifth Ave., Pittsburgh 13, Pa.

TECHNOMETRICS: A Journal of Statistics for the Physical, Chemical and Engineering Sciences, Vol. I, No. 1—J. Stuart Hunter, Ed.—*Am. Soc. for Quality Control and Am. Statistical Assn.*, 100 p., paper, \$2, quarterly, annual subscription \$8.

A TREATISE OF THE ANALYTICAL DYNAMICS OF PARTICLES AND RIGID BODIES with an Introduction to the Problem of Three Bodies—E. T. Whittaker—*Cambridge Univ. Press*, 4th ed., 456 p., \$4.95. Reprint of 1947 edition.

THE URBAN FRONTIER: The Rise of Western Cities, 1790-1830—Richard C. Wade—*Harvard Univ. Press*, 360 p., \$6. Traces the growth of Pittsburgh, Cincinnati, Louisville, Lexington and St. Louis during their first decades.

THE WHITE DESERT—Noel Barber—*Crowell*, 205 p., illus., \$4.50. An English newspaperman tells the dramatic story of the scientific expedition which trekked 2220 miles across Antarctica, led by Dr. Vivian Fuchs, thus accomplishing the first successful crossing of this subcontinent.

WHY SHOULD YOU STUDY PHYSICS IN HIGH SCHOOL?—Franklin Miller, Jr.—*Am. Inst. of Physics*, 16 p., illus., paper, single copies free upon request direct to publisher, 335 E. 45th St., New York 17, N. Y. Written to encourage boys and girls in the eighth and ninth grades to plan to study physics.

YOU WILL GO TO THE MOON—Mae and Ira Freeman—*Beginner Bks. (Random House)*, 62 p., illus., by Robert Patterson, \$1.95. A book for six-year-olds, conveying concepts of space travel in the simplest terms.

Science News Letter, July 4, 1959

## CONSERVATION

# Urge Pesticide Study

MILLIONS of dollars to study the effects of the hundreds of millions of dollars worth of pesticides being used throughout the nation, this is what the conservationists have been urging.

Now the Department of the Interior has endorsed legislation to increase the amount of money that its U. S. Fish and Wildlife Service can spend on pesticide research. On the basis of what is already known of the harmful effects of current practices in the use of pesticides on wildlife, Ross L. Leffer, assistant secretary of the Interior, said the money is needed for a greatly increased research program.

Pointing to the large-scale use of insecticides in the U. S. Department of Agriculture's fight to control the imported fire ant and the gypsy moth, conservationists have been demanding more research into the effects of these toxic substances on wildlife. They have cited proof of the harmful effects in the elimination of fish from lakes and streams, reduced fertility in game birds and in fewer songbirds. Spraying with "recommended" doses of insecticide for mosquito and Dutch elm disease control have also taken a toll among wildlife.

Governmental officials responsible for the control programs have said that when used as suggested, the insecticides are not dangerous to wildlife. In evidence they point to the large areas treated, with no reported deaths.

Legislation up before Congress—H.R. 5813 and S. 1575—is aimed at increasing pesticide research funds. The funds authorized for research would be raised from \$280,000 to \$2,565,000 a year. This does not mean that the Fish and Wildlife researchers will get their money, however. The Appropriations Committee still would have to pass on the amount.

The four major objectives of the proposed pesticide research are: 1. to determine the toxicities of some 200 basic pesticidal chemicals now marketed plus those being developed; 2. to analyze plant and animal tissue to detect pesticide residues, develop diagnostic procedures and to measure toxic conditions in wildlife habitats; 3. to carry out field studies of long-range and immediate effects of pest control on wildlife populations; 4. to make results of this research available to all those interested.

Science News Letter, July 4, 1959

## CHEMISTRY

# New Chemical Weapons

THE UNITED STATES is totally unprepared to wage modern chemical warfare. Soviet troops in East Germany and Poland are equipped to unleash a crippling chemical attack at a moment's notice.

This unbalance of specialized military power was revealed by Lt. Gen. Arthur G. Trudeau, Army chief of Research and Development, in testimony before the House Science and Astronautics Subcommittee on Research and Development.

Gen. Trudeau said 15% of the Russian arsenal in the two Iron Curtain nations consists of chemical weapons.

He told SCIENCE SERVICE: "The figure is based on U.S. intelligence reports, but I do not know exactly what kinds of weapons they are."

By contrast, he pointed out, the U.S. has no stockpiles of chemicals except for those made during World War II. Our only modern chemical weapons (such as the psychochemicals described to the subcommittee) are in various stages of research and development.

In his testimony, Gen. Trudeau regarded a repugnant attitude of Americans toward chemical warfare as a hindrance to our defense capabilities.

"They are more horrified by the thought of chemical warfare than they are about the ability of a nuclear bomb to burn a million people. Yet, they see the gas chamber as the most humane way of executing criminals. And what is the gas but a lethal chemical!"

He emphasized to the subcommittee that

the Army's most urgent problem in chemical and other weapon development is "lead time." This is the amount of time required from concept of a new weapon to research, development, production, and finally to distribution among troops. The lead time in the U.S., he said, is eight to ten years while in Russia it is four to five years.

The frightening difference is mainly due to the bureaucracy inherent in our Governmental and military systems, Gen. Trudeau charged.

Science News Letter, July 4, 1959

## Earth Probe Continues

(Continued from p. 10)

IGY and IGC-1959 is being sent to world data centers. In the U. S., the center actually consists of 12 archives located at institutions known for their work.

Also in the U. S., a special committee of scientists trained to use their brains and pencils in attacking problems has been set up to study and analyze the geophysical data collected under the international programs. Because the world itself is the laboratory for geophysicists, these scientists are specialists in various fields from cosmic to seismology.

One unexpected result of the world-wide cooperation has been a surge of interest among young persons in the many problems of geophysics. This has occurred not only in the U. S., but in Russia and virtually every country in the world.

Science News Letter, July 4, 1959