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# 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.

**ADVENTURES WITH THE MISSING LINK**—Raymond A. Dart with Dennis Craig—*Harper*, 255 p., illus., \$5. The full story of the discovery of "Dart's Baby," the Taungs Skull, and the subsequent findings and deductions about Australopithecus, the South African ape-man.

**ALL ABOUT ARCHAEOLOGY**—Anne Terry White—*Random House*, 148 p., illus. by Tom O'Sullivan, photographs, \$1.95. Conveys to the young reader an understanding of how archaeological discoveries link the world of the ancients with the world of today.

**ALL ABOUT THE ICE AGE**—Patricia Lauber, foreword by William L. Donn—*Random House*, 151 p., illus. by John C. Wonsetler, photographs, \$1.95. Scientific story for children about the evidence and causes of the last Ice Age.

**ANGLO-AMERICA: A Regional Geography**—Earl B. Shaw, cartography by Jameson Mac Farland—*Wiley*, 480 p., illus., \$7.75. Textbook showing the relationship between regional land use and actual geographic environment on the continent of North America.

**ATOMIC MEDICINE**—Charles F. Behrens, Ed.—*Williams & Wilkins*, 3rd ed., 705 p., illus., \$15. Extensively revised reference volume, with new chapters on skin lesions from fallout, and on the results to the body of radio isotopes which gain internal access.

**BEFORE AND AFTER DINOSAURS**—Lois and Louis Darling—*Morrow*, 95 p., illus. by authors, \$2.95. Amply illustrated story of amphibians and land animals that lived millions of years ago.

**BIOLOGICAL AND ENVIRONMENTAL EFFECTS OF NUCLEAR WAR: Summary-Analysis of Hearings**—Jt. Committee on Atomic Energy, U. S. Congress—*Govt. Print. Off.*, 58 p., illus., paper, \$1.25. Contains fallout pattern charts, see story SNL July 4, 1959, p. 5.

**BOILING WATER REACTORS: An Annotated Bibliography of Selected Literature**—James M. Jacobs, AEC Technical Information Service—*Off. of Tech. Serv.*, 48 p., paper, \$1.50.

**A BOOK TO BEGIN ON WEATHER**—Leslie Waller—*Holt*, unpag., illus. by Tom Funk, \$2.50. Tells the how and why of weather for the very young reader.

**COMMAND DECISIONS**—Office of the Chief of Military History, Dept. of the Army, Ken Roberts Greenfield, Ed., introd. by Hanson W. Baldwin—*Harcourt*, 481 p., maps, \$5.95. Concise history of U. S. Army's participation in World War II, based both on our own and our Allies' records, and on enemy documents.

**CONTEMPORARY GEODESY: Proceedings of a Conference Held at the Harvard College Observatory-Smithsonian Astrophysical Observatory, Cambridge, Mass., Dec. 1-2, 1958**—Charles A. Whitten and Kenneth H. Drummond, Eds.—*Am. Geophysical Union, Monograph No. 4*, 95 p., illus., \$5.50. On geodetic fundamentals and problems of modern and space geodesy.

**CURIOUS NATURALISTS**—Niko Tinbergen—*Basic Bks.*, 280 p., illus., \$5. Study of the behavior of animals in their natural environment, an autobiographical account of the joys of biological field work.

**THE FOUNDATIONS OF HUMAN EVOLUTION**—Sir Wilfrid E. Le Gros Clark—*Oregon State System of Higher Educ.*, 74 p., illus. by Christine Court, paper, \$1. Condon Lecture, interpreting the present position of the theory of

natural selection with reference to human evolution.

**THE GOLDEN BOOK OF WILD ANIMAL PETS**—Roy Pinney—*Golden Press*, 68 p., photographs by author, \$1.95. Tells boys and girls how to find and care for animals of the wood, field and stream.

**HISTORICAL ATLAS AND GAZETTEER: A Study of History, Vol. XI**—Arnold J. Toynbee and Edward D. Myers—*Oxford Univ. Press*, 257 p., 73 maps, \$12.50. Reference volume, contains among others maps of the Nomad, Sumeric, Egyptian, Minoan and Mayan civilizations.

**HYPOTHERMIA**—A. Cecil Taylor, Ed.—*N. Y. Acad. of Sciences, Annals Vol. 80, Art. 2*, 265 p., illus., paper, \$3.50. Recent findings of the properties of the hypothermic state, at both physiological and biochemical level.

**INVENTIONS, PATENTS, AND THEIR MANAGEMENT**—Alf K. Berle and L. Sprague de Camp—*Van Nostrand*, 602 p., illus., \$12.50. Intended to serve as a guide to the inventive, legal, and commercial procedure involved in developing an idea into a profitable product, illustrated by 44 actual cases.

**JOURNAL OF RESEARCH: A. Physics and Chemistry, Vol. 63A, No. 1**—National Bureau of Standards, U. A. Fano, Ed.—*Govt. Print. Off.*, 100 p., paper, 70¢, annual subscription (6) \$4. Initiates NBS's separate section covering the science of measurement, fundamental constants and properties of matter.

**THE KENNECOTT LECTURE SERIES 1959-1960**—L. V. Berkner and others, foreword by Richard A. Harvill—*Univ. of Ariz. Press*, 103 p., paper, single copies free upon request direct to publisher, Tucson, Ariz. Four lectures on the impact of science on contemporary civilization.

**LECTURES ON FOURIER INTEGRALS with Author's Supplement on Monotonic Functions, Stieltjes Integrals and Harmonic Analysis**—Salomon Bochner, transl. by Morris Tenenbaum and Harry Pollard—*Princeton Univ. Press*, 333 p., paper, \$5.

**MEN AND ATOMS: The Discovery, the Uses and the Future of Atomic Energy**—William L. Laurence—*Simon & Schuster*, 302 p., \$4.50. The history of the atom, written by the science editor of the N. Y. Times, who witnessed the first atomic bomb test and the bomb dropped on Nagasaki.

**METAMORPHOSIS: On the Development of Effect, Perception, Attention and Memory**—Ernest G. Schachtel, *Basic Bks.*, 344 P., \$6. Psychoanalyst shows that, side by side with regressive tendencies stressed by Freud, the newborn infant also tends toward the world, attracted by stimuli, enjoying the exercise of his growing capacities.

**MINERALOGY: Concepts, Descriptions, Determinations**—L. G. Berry and Brian Mason—*Freeman*, 612 p., illus. by Roger Hayward, photographs, \$8.75. Undergraduate course.

**MODES AND NATURAL FREQUENCIES OF SUSPENSION-BRIDGE OSCILLATIONS**—D. B. Steinman—*N. Y. Acad. of Sciences, Annals, Vol. 79, Art. 4*, 33 p., paper, \$2.50. Tested formulas required in studies of aerodynamic stability, with numerical examples based on computations for the Mackinac Bridge.

**NATIONAL RESEARCH COUNCIL OF CANADA, 1958-59, 42nd Annual Report**—E. W. R. Steacie, Pres.—*Nat. Res. Council*, 74 p., paper, single copies free upon request direct to publisher, Ottawa, Canada. English and French.

**A NATURAL HISTORY OF NEW YORK CITY: A Personal Report after Fifty Years of Study & Enjoyment of Wildlife within the Boundaries of Greater New York**—John Kieran—*Houghton*, 428 p., illus. by Henry Bugbee Kane, \$5.75. A wealth of scientific facts of plant and animal life, of dry land and marsh, of pond and sea, within the limits of a huge city inhabited by millions.

**ORGANIC CHEMISTRY: A Brief Course**—Ray Q. Brewster and William E. McEwen—*Prentice-Hall*, 2nd ed., 401 p., illus., \$10. Completely revised textbook for one-semester course.

**OUT OF THE SKY: An Introduction to Meteoritics**—H. H. Nininger—*Dover*, 336 p., illus., paper, \$1.85. For the general reader, reprint of 1952 first edition.

**THE PHYSICS OF ELECTRICITY AND MAGNETISM**—William Taussig Scott—*Wiley*, 635 p., illus., \$8.75. Text for juniors, seniors and first-year graduate students, presenting a balance between theory and experiment, using modern atomic approach to present phenomena.

**PRISMS AND LENSES**—Jerome S. Meyer—*World Pub. Co.*, 64 p., illus. by John Polgreen, \$2.50. Explains for young readers the principles of light and the practical application of prisms and lenses.

**PURCHASE GUIDE FOR PROGRAMS IN SCIENCE, MATHEMATICS, MODERN FOREIGN LANGUAGES**—Council of Chief State School Officers—*Ginn*, 336 p., paper, \$3.95. First of its kind, a guide designed to assist in the wise and economical purchase of equipment and materials for public instruction.

**THE ROSCOE B. JACKSON MEMORIAL LABORATORY, Bar Harbor, Maine 1929-1959: Thirtieth Annual Report 1958-1959**—Earl L. Green, Dir.—*Roscoe B. Jackson Memorial Laboratory*, 111 p., illus., paper, single copies free upon request direct to publisher, Bar Harbor, Maine. Reports on research projects under way.

**THE SCIENCE OF MECHANICS IN THE MIDDLE AGES**—Marshall Clagett—*Univ. of Wis. Press*, 711 p., illus., \$8. Presents, mainly in the author's translation, documentary material basic to the study of medieval statics, kinematics and dynamics in the period before Galileo.

**SKID PREVENTION RESEARCH 1959**—T. E. Shelbourne and others—*Highway Res. Bd.*, Bull. 219, 73 p., illus., paper, \$1.40. Summary reports of papers presented at 38th annual meeting.

**SKY SENTRY: A SAC Crewman in Service**—Arnold Brophy, foreword by Col. O. F. Lassiter, USAF—*Dodd*, 95 p., photographs, \$2.75. Popularly told story of the Strategic Air Command.

**SOLID STATE PHYSICS: Advances in Research and Applications, Vol. 9**—Frederick Seitz and David Turnbull, Eds.—*Academic*, 548 p., illus., \$14.50. Articles on electronic spectra, polar semiconductors, static electrification of solids and other aspects of solid state physics.

**SOURCE BOOK OF THE NEW PLASTICS**—Herbert R. Simonds, Ed.—*Reinhold*, 354 p., illus., \$10. Includes improvements in established materials, producers' new materials, federal-sponsored research and brief patent survey.

**SPACE AGE DICTIONARY**—Charles McLaughlin, Ed.—*Van Nostrand*, 128 p., illus., \$5.95. Concise handbook of basic information on rockets, satellites and space flight in non-technical language, including missile data up to July 1959.

**STUDIES OF HIGHWAY DEVELOPMENT AND GEOGRAPHIC CHANGE**—William L. Garrison and others—*Univ. of Wash. Press*, 291 p., maps, \$7.50. Findings of research on the changes in urban development and the extent of land utilization in response to highway improvements.

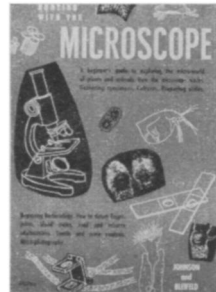
**THE SUN, THE MOON AND THE STARS**—Mae and Ira Freeman—*Random House*, 84 p., illus. by Rene Martin, \$1.95. Covers basic material in simple language young children can understand.

(Continued on page 244)

## ADVENTURE, RESEARCH, EXPLORATION— BOOKS FOR YOUNG SCIENTISTS

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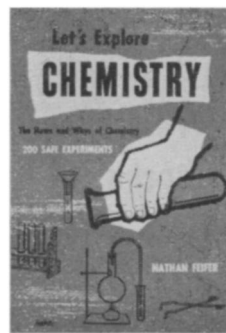
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This is a handbook designed to assist educators and public minded citizens to inaugurate and promote the science fair movement. The authors believe that the promotion of science fairs around the country will re-establish and stimulate the students' interest in science. "Your Science Fair" includes many illustrations of organizational charts and student exhibits and is an excellent guide for the promotion of a successful fair.

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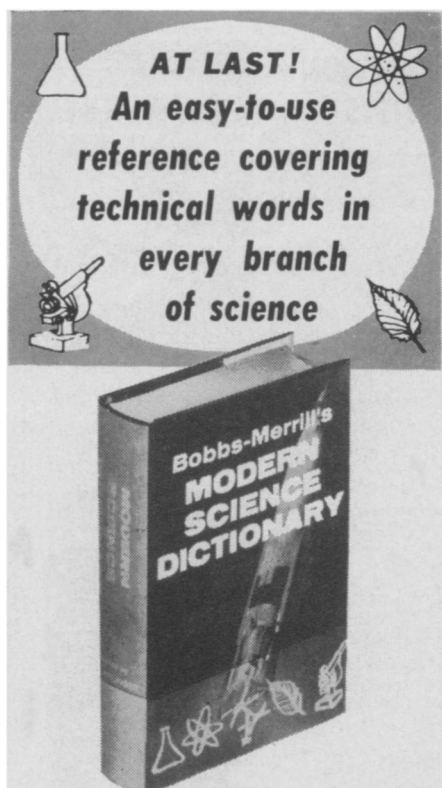
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**Books of the Week**

(Continued from page 243)

**TEACHING THE THIRD R: A Comparative Study of American and European Textbooks in Arithmetic**—Charles H. Schutter and Richard L. Spreckelmeyer, introd. by Max Beberman—*Council for Basic Education*, 46 p., paper, \$1.

**THE THIRTEEN STEPS TO THE ATOM: A Photographic Exploration**—Charles-Noel Martin, transl. from French by B. B. Rafter—*Watts, F.*, 256 p., 118 photographs, \$4.95. Shows objects of increasing minuteness from snowflakes to electrons, with concise scientific text.

**THIS IS NATURE: Thirty Years of the Best from Nature Magazine**—Richard W. Westwood, Ed.—*Crowell*, 214 p., illus. by Walter W. Ferguson, 100 photographs, \$5.95. Editor's selection of the fifty finest nature stories published since 1923.

**THIS WORLD OF LIVING THINGS**—Paul Griswold Howes—*Duell*, 232 p., illus. by author, \$4.50. Naturalist shares with the reader his observations about widely diversified creatures, showing nature's complexities and refinements, in simple language the general reader will enjoy.

**TOO MANY ASIANS**—John Robbins—*Double-day*, 215 p., \$3.95. A journalist's account of the current population explosion in India, China and 17 other Asian countries he visited.

**TROPHOBLAST AND ITS TUMORS**—William B. Ober, Ed.—*N. Y. Acad. of Sciences, Annals*, Vol. 80, Art. 1, 284 p., illus., paper, \$3.50. Papers on fundamental concepts of trophoblastic growth, hydatidiform moles and aspects of choriocarcinoma in men and women.

**UNDERSTANDING TRANSISTORS: Allied's Handbook of Transistor Fundamentals**—Milton S. Kiver, Ed.—*Allied Radio Corp.*, 64 p., illus., paper, 50¢. Basic theory and concise introduction to transistor electronics.

**UNITED STATES FOREIGN POLICY, Study No. 2: Possible Nonmilitary Scientific Developments and Their Potential Impact on Foreign Policy Problems of the United States**—Stanford Research Institute—*Senate Committee on Foreign Relations*, 100 p., paper, single copies free upon request direct to publisher, U. S. Congress, Washington 25, D. C. Explores U. S. scientific developments of the next decade.

**VANISHING CRAFTS AND THEIR CRAFTSMEN**—Rollin C. Steinmetz and Charles S. Rice—*Rutgers Univ. Press*, 160 p., photographs, \$4.75. Portrays craftsmen who still prosper in our time in spite of assembly-line competition, such as the lime burner, the potter and the one-room school teacher.

**THE WHALES GO BY**—Fred Phleger—*Beginner Bks. (Random House)*, 62 p., illus. by Paul Galdone, \$1.95. A true story for the youngest readers.

**WHAT DOES A SCIENTIST DO?**—Harry Zarchy—*Dodd*, 64 p., photographs, \$2.50. Shows scientists at work in laboratory, observatory, factory and field.

**WHAT MAKES A SCIENTIST?**—George H. Waltz, Jr.—*Doubleday*, 142 p., illus., \$2.95. Twelve informal biographies of American-born and American-educated scientists, among them Selman Waksman, Glenn Seaborg, Fred Whipple and James Van Allen.

**WONDERS OF THE REPTILE WORLD**—Helen Gere Cruickshank—*Dodd*, 64 p., illus. by Lon Ellis, \$2.95. Stories of fossils and living reptiles, from brontosaurus to the garter snake.

**THE YOUNG INVENTORS' GUIDE**—Raymond F. Yates—*Harper*, 104 p., illus., \$2.50. Addressed to young readers interested to apply themselves as improvers in the fields of technology and science, explaining the process of patenting inventions.

**ZULU JOURNAL: Field Notes of a Naturalist in South Africa**—Raymond B. Cowles—*Univ. of Calif. Press*, 267 p., photographs, \$6. Com-

pilation of selected materials based on the author's technical journals prepared during two field trips, capturing the mood of the country, its seasons and people.

Science News Letter, October 10, 1959

**Questions**

**AGRICULTURE**—What effect did irrigation with sewage water have on crop yield? p. 237.

**PLANT PHYSIOLOGY**—What is the probable name of a new growth inhibitor in peach buds? p. 234.

**ROCKETS AND MISSILES**—How far up above the earth was the satellite from which the cloud cover photograph was taken? p. 229.

**SURGERY**—For how long a time did a dog's heart survive without a blood supply? p. 230.

Photographs: Cover, National Aeronautics and Space Administration; p. 229, California Institute of Technology Jet Propulsion Laboratory; p. 246, The Camp Co., Inc.

**PALEONTOLOGY**

**Fossil Plants Clues To Ancient Climate**

FOSSIL PLANTS are jigsaw puzzle clues to the climate, vegetation and geologic structure of Nevada as it existed from 15,000,000 to 30,000,000 years ago.

Since 1936, Dr. Daniel I. Axelrod, professor of geology at the University of California, Los Angeles, has studied plant remains preserved in the rocks of the Far West, trying to fill a large gap in the geological history of the region.

By comparing the fossil plants with their modern relatives, he has constructed a map of ancient Nevada in which the present deserts were covered with luxuriant pine-fir forests, the climate was humid, summer rains abundant, and today's 10,000- to 14,000-ft-high Sierra Nevada range was only a gentle 2,000-foot slope.

Over millions of years, as the oceans gradually chilled, the continents grew drier, and mountains and glaciers rose, the summer rains decreased and some of the old plants died out.

Dr. Axelrod has mainly studied the plants and trees of the Pliocene epoch during past years, making annual field trips to the Great Basin, which takes in most of Nevada and neighboring parts of California, Oregon, Idaho, Utah and Arizona.

During the next three years, supported by a \$20,000 National Science Foundation grant, he will go even further back into the history of the Basin. The UCLA geologist will investigate the plant fossils of the Miocene epoch, reconstructing the topography and flora of the area some 15,000,000 to 30,000,000 years ago.

Science News Letter, October 10, 1959