

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.

ARCHAEOLOGICAL STUDIES IN THE PETRIFIED FOREST NATIONAL MONUMENT—Fred Wendorf and others—*Northern Arizona Society of Science and Art*, Museum of Northern Arizona Bulletin 27, 203 p., \$6.00. This region, because of its "fantastically eroded badlands and absence of permanent water" seemed an unlikely spot to look for remains of prehistoric man. Yet over 300 ruins were located.

THE ART AND ANTIQUE RESTORERS' HANDBOOK: A Dictionary of Materials and Processes Used in the Restoration and Preservation of All Kinds of Works of Art—George Savage—*Philosophical Library*, 140 p., \$4.75. Materials, tools and processes are listed alphabetically and their place in the restoration of art objects is described.

ATOMIC AND FREE RADICAL REACTIONS—E. W. R. Steacie—*Reinhold*, 2d ed., 901 p. (in 2 vols.), illus., \$28.00. Including all new work up to about June, 1953. A classic reference work for the shelves of chemists and physicists.

BIBLIOGRAPHIC SURVEY OF CORROSION 1948-1949: Publication No. 54-1. A Compilation of Corrosion Abstracts—*National Association of Corrosion Engineers*, 346 p., \$12.50. Containing 3,512 abstracts of the literature on corrosion and its prevention.

BIBLIOGRAPHY OF THE SUBMARINE 1557 TO 1953—Committee on Undersea Warfare, G. P. Harnwell, Chairman—*National Research Council-National Academy of Sciences*, Publication 307, 261 p., paper, \$1.50. Brief description of the contents is given for each entry where possible. In the case of foreign documents, titles have been translated.

CHANGING NAVAHO RELIGIOUS VALUES: A Study of Christian Missions to the Rimrock Navahos—Robert N. Rapoport—*Peabody Museum of American Archaeology and Ethnology*, Reports of the Rimrock Project Values Series, No. 2, 152 p., illus., paper, \$3.00. Describing the course of events associated with attempts of two different groups of Christian missionaries to convert members of a Navaho group, and the responsiveness of the Navaho people to Christian teaching.

COMPARATIVE ANATOMY OF THE VERTEBRATES—George C. Kent, Jr.—*Blakiston*, 530 p., illus., \$6.00. A text for a one-semester course.

DISCOVERING CONE-BEARING TREES IN THE SEQUOIA AND KINGS CANYON NATIONAL PARKS—Wayne B. Alcorn—*Sequoia Natural History Association*, 48 p., illus., paper, 60 cents. This booklet, with its fine photographs, will help you to identify the trees you see and thus make your visit to the parks more interesting.

THE ENERGETICS OF DEVELOPMENT: A Study of Metabolism in the Frog Egg—Lester G. Barth and Lucena J. Barth—*Columbia University Press*, 117 p., illus., \$3.00. An attempt to work toward unifying concepts in this field and to point out physiological problems that still need solution.

THE FIRST BOOK OF RHYTHMS—Langston Hughes—*Franklin Watts*, 63 p., illus., \$1.75. A book for young children in which a poet points out the rhythms of nature.

FOLK DANCE GUIDE—Paul Schwartz, Ed.—*Paul Schwartz*—4th annual ed., 16 p., paper, 50 cents. Contains a directory of folk dance instruction groups, a selected bibliography, and lists of current periodicals and special articles.

HOW TO HELP YOUR CHILD IN SCHOOL—Mary and Lawrence K. Frank—*New American Library*, 288 p., illus., paper, 35 cents. Here is help for the perplexed parents of a pre-school or young school child. Originally published in 1950 by Viking Press.

HOW TO SERVICE TAPE RECORDERS—C. A. Tuthill—*Rider*, 154 p., illus., paper, \$2.90. Containing the basic principles of magnetic recording as well as practical service information on many popular tape machines.

THE HUMAN ANIMAL—Weston LaBarre—*University of Chicago Press*, 372 p., illus., \$6.00. A cultural anthropologist makes excursions into other fields to secure this broad view of modern man.

HUMAN ENGINEERING GUIDE FOR EQUIPMENT DESIGNERS—Wesley E. Woodson—*University of California Press*, 252 p., illus., paper, \$3.50. Facts about the abilities and limitations of humans that can aid the designer in planning equipment for greatest usefulness.

INTRODUCTION TO ATOMIC PHYSICS—Otto Oldenberg—*McGraw-Hill*, 2d ed., 421 p., illus., \$6.00. A text stressing the relation between theory and observed fact and affording the student a chance to participate in investigation.

A LOOK AHEAD IN SECONDARY EDUCATION—Howard H. Cummings and others—*Govt. Printing Office*, Office of Education Bulletin 1954, No. 4, 105 p., paper, 35 cents. Because the machine age does not need the labor of youth, this period has now been added to childhood as a time for education.

MAJOR ACTIVITIES IN ATOMIC ENERGY PROGRAM, JANUARY-JUNE, 1954: Sixteenth Semi-annual Report of the Atomic Energy Commission—Lewis L. Strauss, Chairman—*Govt. Printing Office*, 137 p., paper, 45 cents. Reporting developments of the first half of the year.

THE MAMMAL GUIDE: Mammals of North America North of Mexico—Ralph S. Palmer—*Doubleday*, 384 p., illus., \$4.95. A pocket-sized book to help in identifying and classifying wild animals.

METALWORKING TOMORROW: A Study of New Concepts and Revolutionary Innovations in Metalworking Processes—Prepared for Georges F. Doriot by R. Lawrence Coughlin, Jr. and others—*Metalworking Tomorrow Group, Harvard Graduate School of Business Administration*, 136 p., illus., paper, ring binder, \$10.00. Including an evaluation of the potentialities of many new processes.

PSYCHOTHERAPY AND PERSONALITY CHANGE: Co-ordinated Research Studies in the Client-Centered Approach—Carl R. Rogers and Rosalind F. Dymond, Eds.—*University of Chicago Press*, 447 p., \$6.00. An objective evaluation of what happens to the person who seeks help with personal problems at a guidance clinic.

RIDER'S SPECIALIZED AUTO RADIO MANUAL: 5-A—Henry J. Hudson, Kaiser-Frazer, Nash, Packard, Studebaker, Willys—*John F. Rider*, 204 p., illus., paper, \$3.00. Service information.

STORIES FOR TOMORROW: An Anthology of Modern Science Fiction—William Sloane, Ed.—*Funk & Wagnalls*, 628 p., \$3.95. This selection was made on the basis of the excellence of the stories as fiction rather than on their intellectual intricacy.

TV FIELD SERVICE MANUAL: Vol. 2—Harold Alsberg, Ed.—*Rider*, 147 p., illus., paper, ring binder, \$2.40. To aid the technician in locating and eliminating troubles quickly.

TESTED APPROACHES TO CAPITAL EQUIPMENT REPLACEMENT—Melvin H. Baker and others—*American Management Association*. Special Report No. 1, 94 p., illus., paper, \$3.25. Intended to help with the difficult decision as to when equipment can be replaced most economically.

THE VOICE OF NEUROSI—Paul J. Moses—*Grune & Stratton*, 131 p., \$4.00. Intended to help fill the gap in the training of the psychiatrist who does not learn to analyze the voice and that of the laryngologist who does not understand the effect of emotional disturbances on the voice.

WAIT FOR THE SUNSHINE: The Story of Seasons and Growing Things—Glenn O. Blough—*Whittlesey House, McGraw-Hill*, 48 p., illus., \$2.25. Telling young children how they can learn about growing things by first-hand observation.

WHO'S WHO IN YOUR FAMILY—Jerrold Beim—*Franklin Watts*, 59 p., illus., \$2.50. A child's book explaining the different kinds of relationships in a large family, using the device of looking through an album of family snapshots.

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OCEANOGRAPHY

Will Use Submarines To Explore Mountains

► TO LEARN more about the earth's crust, scientists from the University of California at Los Angeles and the U. S. Navy are planning to explore undersea mountains with submarines.

The study will cover important features in the Pacific basin between the West Coast and Hawaii. It is directed by Dr. Louis B. Slichter of the university's Institute of Geophysics, assisted by Dr. Christopher Harrison of Cambridge University, England, and by Dr. Glenn Brown of the Institute of Geophysics.

The work has the support of the Navy's submarine fleet and of scientists at Scripps Institution of Oceanography.

"Although the earth's crust has been explored extensively beneath land masses, relatively little is known about that under the sea," Dr. Slichter said.

"To learn more about how features of the ocean floor such as undersea mountains and escarpments are constituted, precise measurements of gravity around them will be made from a submarine. Such measurements have not been satisfactory from surface vessels because the constant motion of the ocean affects the sensitive instruments used to measure changes in gravity. However, in calm ocean depths the submarine is a steady base for such instruments."

An important device used in such work is the Vening Meinesz pendulum apparatus, named for the Dutch scientist who designed it and who initiated the first gravity surveys at sea more than 30 years ago. He has loaned his original apparatus to the Institute of Geophysics. It measures minute changes in the force of gravity brought about by large masses in the earth's crust.

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