

# 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.

**ADRENAL CORTEX:** Transactions of the Fourth Conference, November 12, 13, and 14, 1952—Elaine P. Ralli—*Josiah Macy Jr. Foundation*, 165 p., illus., \$3.50. This conference, under the auspices of the Foundation, was intended to promote the exchange of ideas between scientists of different disciplines with regard to the functioning of this important gland.

**ANDREW CARNEGIE**—Alvin F. Harlow—*Messner*, 182 p., \$2.75. Biography of a man who gave away more than \$350,000,000, all of which he collected during his lifetime, to found thousands of libraries and research institutions.

**THE ANT WORLD**—Derek Wragge Morley—*Penguin*, 191 p., illus., paper, 50 cents. Interesting facts about this most widespread and successful insect, dispelling many common myths.

**APPLIED ELECTRICITY**—H. Cotton—*Industrial Press*, 2d ed., 482 p., illus., \$4.50. Based largely on the London University course in Applied Electricity toward the B. Sc. degree in engineering.

**ARCTIC BIBLIOGRAPHY:** Prepared for and in Cooperation with the Department of Defense—Arctic Institute of North America, Henry B. Collins, Jr., Chairman, Directing Committee—*Govt. Printing Office*, 4,478 p., 3 volumes, \$12.75 per set. Bringing together in one comprehensive list all the many scattered works on the Arctic regions. An alphabetic register lists all authors' names. The subject geographic index contains some 100,000 entries under 18,000 headings. (See p. 264.)

**BALBOA OF DARIEN:** Discoverer of the Pacific—Kathleen Romoli—*Doubleday*, 431 p., illus., \$5.00. The romantic story of the famous "conquistador" and the colony he founded, as written by a girl from California who took up cattle ranching and historical research in the Republic of Colombia.

**THE BETRAYERS**—Ruth Chatterton—*Houghton Mifflin*, 310 p., \$3.50. In this novel, Miss Chatterton describes a demagogic Senator and his investigation of a young nuclear physicist. The heroine, a brilliant lawyer, decides to defend the physicist in spite of the fact that her Senator husband is chairman of the investigating committee.

**BROWNIE MAKES THE HEADLINES**—Ted Wear—*Messner*, 63 p., illus., \$1.60. A story, told for children, of a boy and his dog. It shows how a newspaper is made.

**CHYMIA:** Annual Studies in the History of Chemistry—Henry M. Leicester, Ed.—*University of Pennsylvania Press*, 217 p., illus., \$4.50. Including papers on the Origin of Alchemy, Madame Lavoisier, and Benjamin Rush, Chemist.

**THE COLEOPTERA OF THE GALAPAGOS ISLANDS**—Edwin C. Van Dyke—*California Academy of Sciences*, Occasional Papers No. XXII, 181 p., illus., paper, \$3.50. The coleoptera of these islands, about 600 miles from the west coast of South America, are definitely related to those of the barren grounds of South America and no doubt derived from them.

**THE COMPLETE BOOK OF CAT CARE**—Leon F. Whitney — *Doubleday*, 284 p., illus., \$3.95. This book, written by a veterinarian, is intended to complement, not replace the services of a veterinarian. Written in non-technical language for the pet owner.

**CONQUEST OF THE MOON** — Wernher von Braun, Fred L. Whipple and Willy Ley — *Viking*, 126 p., illus., \$4.50. This book is a sequel to the previous work, "Across the Space Frontier." In the first book we were told how man can reach beyond the atmosphere and establish a station in space. This volume tells of the next step, the voyage from space station to the moon.

**CURRENT RESEARCH ON VITAMINS IN TROPHOLOGY:** Proceedings of the Scientific Sessions of the Eighth Annual Meeting, the National Vitamin Foundation, Incorporated, New York City, March 4, 1953—W. F. Alexander and others—*National Vitamin Foundation*, 157 p., illus., paper, \$1.50.

**DESIGNING ELEMENTARY CLASSROOMS:** An Approach to the Problem of Classroom Design in Relation to the School Child and Program—James L. Taylor and others — *Govt. Printing Office*, 55 p., illus., paper, 35 cents. This booklet, produced by the School Housing Section and the Elementary Schools Section of the Office of Education, emphasizes that the elementary school classroom is a most important part of the school plant.

**EVOLUTION:** Symposia of the Society for Experimental Biology, Number VII—J. F. Danielli and R. Brown, Eds. — *Cambridge University Press (Academic Press)*, 448 p., illus., \$7.80. Papers read at a symposium of the Society for Experimental Biology held in collaboration with the Genetical Society at Oxford in July, 1952.

**EXPERIMENTS, THEORY, AND PROBLEMS IN GENERAL CHEMISTRY:** An Integrated Course—Hosmer W. Stone and James D. McCullough—*McGraw-Hill*, 352 p., illus., paper, \$6.00. More than a laboratory manual, this book presents all the essentials for a first semester course for chemistry majors as well as for premedical and engineering students.

**THE FIRST IRON WORKS RESTORATION**—*First Iron Works Association*, 30 p., illus., paper, 25 cents. Revised and up-to-date edition of "The Saugus Restoration," published in 1951. Describes how iron was processed in this colonial iron works in the 17th century.

**FLIGHT:** Today and Tomorrow—Margaret O. Hyde—*Whittlesey House*, 140 p., illus., \$2.50. A book for young people. Not science fiction, the author takes the reader on an imaginary flight through space, describing the event as scientists expect it to be.

**HIGH FIDELITY:** Design, Construction, Measurements—George Fletcher Cooper and others—*Gernsback*, 128 p., illus., paper, \$1.50. Intended for the audio man, or "audiophile," who prefers to design, construct and experiment with his own audio systems.

## PHILOSOPHICAL LIBRARY BOOKS

### ☐ NUCLEAR PHYSICS

By WERNER HEISENBERG

This new work, by one of the outstanding physicists of our time, begins with a short and fascinating history of the views about atoms in antiquity and also of the development of atomic theory.

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### ☐ HARWELL

This book presents the first connected story to be published of the work and problems of the British Atomic Energy Research Establishment, Harwell, from its inception in 1946 until the end of 1951. \$3.75

### ☐ PHENOMENA, ATOMS AND MOLECULES

By IRVING LANGMUIR

An approach to science that covers the human, sociological, and international aspects of modern science and atomic physics. \$10.00

### ☐ ATOMS, MEN AND GOD

By PAUL E. SABINE

This book is the work of a Protestant layman, a research physicist, who shares with many thoughtful people of similar religious background the problem of reaching rational religious beliefs in this "age of the atom." \$3.75

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**HOW TO FINISH YOUR ATTIC AND BASEMENT YOURSELF**—August G. Lockwood and Norman E. Stanton — *Barrows*, 279 p., illus., \$3.50. Step-by-step instructions on how to add living, sleeping or playing space to your home. Includes warnings on what not to attempt yourself.

**HOW TO USE SIGNAL AND SWEEP GENERATORS**—J. Richard Johnson—*Rider*, 144 p., illus., paper, \$2.10. Practical information for the radio and TV serviceman and student.

**HUMAN EMBRYOLOGY**—Bradley M. Patten—*Blakiston*, 2d ed., 798 p., illus., \$12.00. A textbook intended to present in simple and readable form those aspects of human embryology that are of especial interest to medical students and physicians.

**HUMAN LOCOMOTION AND BODY FORM: A Study of Gravity and Man**—Dudley J. Morton with the collaboration of Dudley Dean Fuller—*Williams and Wilkins*, 285 p., illus., \$5.00. The procedure man has followed in designing machines has long been employed by nature in fashioning the locomotor apparatus for her mobile forms of organic life. The mechanical laws underlying man's movement are here made clear.

**HUNTING AND FISHING IN NORTH AMERICA**—Michael Cramond — *University of Oklahoma Press*, 394 p., illus., \$5.95. Written for sportsmen by an author who loves hunting and fishing.

**INDIAN LEGENDS OF THE PACIFIC NORTHWEST**—Ella E. Clark—*University of California Press*, 225 p., illus., \$4.50. A lookout for the Forest Service has collected these ancient legends, mainly from the lips of Indian old people and the writings of pioneers. He has selected mainly the legends having to do with geographical features of the Northwest.

**IN SPITE OF: A Philosophy for Everyman**—John Cowper Powys—*Philosophical Library*, 312 p., \$5.00. The author, in his eightieth year, tells how to build your own private philosophy of life "in spite of" all obstacles and discouragements.

**THE LIMITS OF THE EARTH**—Fairfield Osborn—*Little, Brown*, 238 p., \$3.50. The author, a population expert, points out the importance and urgency of deciding how many the resources of our earth can support "for now, as we look, we can see the limits of the earth."

**THE LONELY CROWD: A Study of the Changing American Character**—David Riesman with Nathan Grazer and Reuel Denney—*Doubleday Anchor*, abridged by the authors, 359 p., paper, 95 cents. The thesis of the authors is that the typical American is changing from the strong, dominant individualist to a man chiefly dominated by his associates.

**MAKE WAY FOR WATER**—Eleanor Clymer—*Messner*, 63 p., illus., \$1.60. A story for children that tells how city people get the many gallons of water they need for daily use.

**ORCHIDS OF GUATEMALA**—Oakes Ames and Donovan Stewart Correll—*Chicago Natural History Museum*, 328 p., illus., paper \$4.00, cloth \$5.00. Botanical descriptions.

**ORGANIC CHEMISTRY**—Howard J. Lucas — *American Book*, 2d ed., 760 p., \$7.00. This meets the problem of covering an ever-expanding field by emphasizing some fundamental principles, so that the student can better understand the general relationships.

**PARENT AND CHILD**—James H. S. Bossard—*University of Pennsylvania Press*, 308 p., \$5.00.

**AN IDEA THAT PROVED ITSELF IN A SINGLE YEAR . . .**

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Based on research by the author, a sociologist, on the situations which are of basic importance in calling forth the behavior patterns of the members of the family group.

PROCEEDINGS OF THE WESTERN COMPUTER CONFERENCE—G. D. McCann, Chairman Conference Committee — *Institute of Radio Engineers*, 231 p., illus., paper, \$3.50.

REGULAS DE SELECTION PRO SPECTROS VIBRACIONAL DE MOLECULAS POLYATOMIC—Forrest F. Cleveland—*Instituto Technologic de Illinois*, 21 p., paper, 75 cents. Monograph on molecular spectra written in the new, practical, readable-at-sight international language, Interlingua.

SOME NEW AND NOTEWORTHY APHIDAE FROM WESTERN AND SOUTHERN SOUTH AMERICA (HEMIPTERA-HOMOPTERA)—E. O. Essig—*California Academy of Sciences*, Proceedings, Fourth Series, Vol. XXVIII, No. 3, 105 p., illus., paper, \$2.00. Little previous work has been done on collecting and describing the aphids of Chile.

STEWART'S SCIENTIFIC DICTIONARY—Jeffrey R. Stewart assisted by Frances Elizabeth Spicer—*Stewart Research Laboratory*, 4th ed., 788 p., \$10.50. For manufacturers and others concerned with the materials used by the various chemical process industries. The scope of this edition has been greatly widened.

THE THEORY OF THE LEISURE CLASS: An Economic Study of Institutions—Thorstein Veblen—*New American Library*, 261 p., paper, 35 cents. An inexpensive paper edition of a well-known classic of social science originally published in 1899 by *Macmillan*.

THIRTY-DAY FORECASTING: A Review of a Ten-Year Experiment—Jerome Namias—*American Meteorological Society*, 83 p., illus., paper, \$3.50. A summary of research results and operations.

A TREE IS A TREE—King Vidor—*Harcourt, Brace*, 315 p., illus., \$3.95. The autobiography of one of the pioneer directors of great films in Hollywood.

TREES OF THE WOODS—David S. Marx—*Leafprinters*, 52 p., illus., paper, \$2.00. Description of the flowers, fruit, leaves and wood of native trees illustrated by leaf prints.

TREES OF YOUR TOWN—David S. Marx—*Leafprinters*, 52 p., illus., paper, \$2.00. With the aid of this book, illustrated by leaf prints, you can identify the shade trees of your city streets.

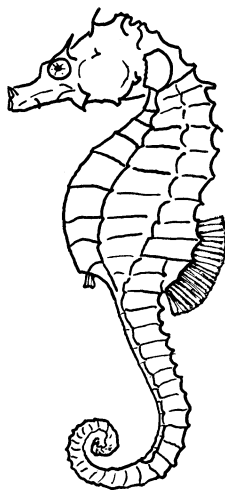
Science News Letter, October 24, 1953

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Sea Horse

► IN GREEK and Roman mythology, the sea horse was a fabulous creature, half horse and half fish, driven by sea gods and ridden by their daughters, the sea nymphs.

Medieval and even more modern writers put on a few trimmings: "The Sea Horse between Brittany and Norway is oft seen to have a head like a horse, and to neigh; but his feet and hoof are cloven like to a cow's; and he feeds both on land and in the sea. He is seldome taken, though he grows to be as big as an ox. He hath a forked tail."

Neptune's Pegasus is a queer enough little fish in its own right, without embellishments which make it a new form of sea monster. Only in Pacific waters where there is giant kelp in which to hide does the sea horse grow to as much as a foot in height; elsewhere it lives out its life only a few inches high.

It has no hoofs, cloven or otherwise. Its tail is neither forked nor actually a tail, but part of its body. It has a tough hide

stretched over a bony frame, which gives the impression that the sea horse wears a suit of armor.

Though the sea horse is really a fish, it acts like a monkey, coiling its posterior appendage around bits of eelgrass or seaweed and hanging there at anchor. The only difference is that the sea horse hangs head uppermost. The danger in the sea is not the chance of falling to the bottom but of falling upward to the surface.

Likewise the sea horse swims in a vertical position. Its gait is a series of short convulsive jerks—an elfin gallop hampered by blind staggers. Standing nearly upright in the water, it propels itself by a supple fin midway on its back which waves to and fro faster than the eye can see. There is a tiny fin beneath the sea horse's businessman paunch, and two others spotted where humans have ears. By waving these and bending its head, the fish goes uphill or down.

Some say the sea horse has a jet in the top of its head for sudden crash dives. A naturalist who lives in a sea horse country says, "I have seen sea horses near the surface squirt a jet of water three inches into air in their frightened efforts to submerge." But detailed studies of sea horse locomotion make no mention of such a blow-hole.

In the sea horse family, it is the male who brings up the children. In breeding season, the male develops a pouch like the pocket of a female kangaroo. The mother's eggs are laid in this pouch, and there the youngsters stay until they hatch and are old enough to swim. When they emerge, it looks exactly as if the father were giving birth.

Science News Letter, October 24, 1953

## ENGINEERING

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