

# 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.

ASTM STANDARDS ON PAINT, VARNISH, LACQUER, AND RELATED PRODUCTS: With Related Information—Committee D-1—*American Society for Testing Materials*, 9th ed., 848 p., illus., paper, \$6.00. Some 60 standards in this publication have been approved as Federation Standards.

THE ACCIDENT—Dexter Masters—*Knopf*, 406 p., \$4.00. A novel that tells the dramatic story of the development of the atomic bomb and the men responsible for this achievement and of an accident that cost the life of one of them.

AERO MECHANIC'S QUESTIONNAIRE: Practical Questions & Answers for Airframe & Powerplant Mechanics with Explanatory Notes—Ralph Rice—*Aero Publishers*, 3d ed., 206 p., paper, \$5.00.

THE AMERICANA ANNUAL: An Encyclopedia of the Events of 1954—Lavinia P. Dudley and John J. Smith, Eds.—*Americana Corporation*, 865 p., illus., \$10.00. The biography of an important year.

APPARATUS FOR MEASUREMENT OF THE WATER VAPOR PERMEABILITY OF PACKAGING MATERIALS—P. P. Templin, J. J. Kaufman and R. G. Capell—*Mellon Institute*, 2 p., illus., paper, free upon request direct to publisher, 4400 Fifth Ave., Pittsburgh 13, Pa. A small humidity cabinet employing acid solutions to control humidity has been found good for routine testing and also research.

BASIC VACUUM TUBES AND THEIR USES—John F. Rider and Henry Jacobowitz—*Rider*, 204 p., illus., paper \$3.00, cloth \$4.50. An elementary book for the general reader and elementary technical student.

THE BLACK FLIES (DIPTERA, SIMULIDAE) OF GUATEMALA AND THEIR ROLE AS VECTORS OF ONCHOCERCIASIS—Herbert T. Dalmat—*Smithsonian*, 425 p., illus., paper, \$5.00. This parasitic disease is transmitted by man to the black fly that bites an infected person and in turn transmitted by the fly to another person. Spread is aggravated by migratory workers and itinerant salesmen and by people who walk to their work in the fields when flies are active.

CASIMIR FUNK, PIONEER IN VITAMINS AND HORMONES—Benjamin Harrow—*Dodd, Mead*, 209 p., illus., \$4.00. The scientist whose life is here recounted is credited with invention of the

word "vitamin" and with the isolation of nicotinic acid, later found to be an anti-pellagra factor.

COMMUNISM, CONFORMITY, AND CIVIL LIBERTIES: A Cross-section of the Nation Speaks Its Mind—Samuel A. Stouffer—*Doubleday*, 278 p., illus., \$4.00. Report of a poll showing that when people move about freely, as Americans do, this tends to make them familiar with and tolerant of values and attitudes different from those they learned in youth.

THE CRIME OF GALILEO—Giorgio de Santilana—*University of Chicago Press*, 339 p., illus., \$5.75. In this day when some scientists are again being involved in controversy, and when trials such as that of Galileo are common throughout the world, it is interesting to read this review by a historian of science of the events leading up to Galileo's trial, his "confession" and what followed it.

ECHOES OF THE RED MAN: An Archaeological and Cultural Survey of the Indians of Southern Illinois—Irvin M. Peithmann—*Exposition Press*, 134 p., illus., \$3.00. Everyone who, as a child, picked up an Indian "arrowhead," will have interest in this account of the prehistoric Indian.

ELECTRONS, ATOMS, METALS AND ALLOYS—William Hume-Rothery—*Iliffe (Philosophical Library)* rev. ed., 387 p., illus., \$10.00. Presented for industrial readers in the form of an informal conversation which may give the American reader the impression that he is listening in on the talk of English scientists.

FLIGHT HANDBOOK: The Theory and Practice of Aeronautics—Maurice A. Smith, Ed.—*Iliffe (Philosophical Library)*, 5th ed., 282 p., illus., \$6.00. This handbook produced by the staff of the British journal "Flight," is completely rewritten and greatly enlarged.

FORBIDDEN LANDS—Gordon Cooper—*Philosophical Library*, 165 p., illus., \$4.75. In spite of the immense strides made in transportation, more of the world is now closed off from the traveler than ever before in time of peace. The author took advantage of the time between two world wars to travel in some of these forbidden places and inaccessible spots.

HIGHLIGHTS OF SCIENCE—Harry Bates Brown—*Vantage*, 213 p., \$3.50. A general book on science for the beginning student and the general reader rushed for time.

THE HORSE IN BLACKFOOT INDIAN CULTURE: With Comparative Material From Other Western Tribes—John C. Ewers—*Govt. Printing Office*, Bureau of American Ethnology, Bulletin 159, 374 p., illus., \$2.75. Indians did not know the horse until the white man came to America, but the horse reached the Blackfoot country before the white man. After this early introduction, this nomadic, buffalo-hunting tribe speedily adopted the horse as its own.

HOW TO HELP YOUR HANDICAPPED CHILD—Samuel M. Wishik—*Public Affairs Committee*, Public Affairs Pamphlet No. 219, 28 p., illus., paper, 25 cents. Describing what can be done to remedy physical defects and to insure the development of a healthy personality.

HOW TO WATCH BIRDS—Roger Barton—*McGraw-Hill*, 229 p., illus., \$3.50. The newspaper writer, author of a Nature column, here gives useful information to the bird watcher and the person who is ready to set out a feeder and wants to know what visitors to expect.

## Questions

AERONAUTICS—How does the pilot of the new "flying platform" steer the device? p. 258.

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ANTHROPOLOGY—How long ago did Natchez Man live? p. 264.

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ASTRONOMY—What is the newly determined distance of the Andromeda nebula? p. 262.

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MEDICINE—What device was used to amplify squeaks in bone joints? p. 263.

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PHYSIOLOGY—How does the Air Force "map" the curves of the human head? p. 261.

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Photographs: Cover, Parke, Davis and Co.; p. 258, U. S. Navy; p. 261, Lt. Frank P. Saul; p. 263, McMath-Hulbert Observatory; p. 268, Admiral Corporation; p. 272, Bakelite Co.

AN INTRODUCTION TO STOCHASTIC PROCESSES: With Special Reference to Methods and Applications—M. S. Bartlett—*Cambridge University Press*, 312 p., \$6.50. Of interest to statisticians as well as to engineers, biologists and other scientists.

INTRODUCTORY APPLIED PHYSICS—Norman C. Harris and Edwin M. Hemmerling—*McGraw-Hill*, 729 p., illus., \$6.75. Material for a course intended to train technicians in the junior college.

JUSTIFYING THE PERSONNEL PROGRAM: Costs—Budgets—Evaluation—Walter H. Powell and others—*American Management Association*, Personnel Series, Number 160, 51 p., paper, \$1.75.

MARK TRAIL'S BOOK OF NORTH AMERICAN MAMMALS—Ed Dodd—*Hawthorn*, 242 p., illus., \$1.95. Followers of the author's newspaper strip will recognize the style in these nature drawings.

MATHEMATICAL FOUNDATIONS OF QUANTUM MECHANICS—John von Neumann, translated from the German by Robert T. Beyer—*Princeton University Press*, 445 p., paper, \$6.00. The translated manuscript has been carefully revised by the author.

MECHANISMS OF MICROBIAL PATHOGENICITY: Fifth Symposium of the Society for General Microbiology Held at the Royal Institution, London, April 1955—G. C. Ainsworth and others—*Cambridge University Press*, 333 p., \$5.00. Dealing with a range of bacteria, protozoa and fungi pathogenic to man, animals and plants.

OUR NATIONAL FORESTS—Bernard Frank with foreword by William O. Douglas—*University of Oklahoma Press*, 238 p., illus., \$4.00. The national forests, the author points out, are more than just beautiful, unspoiled picnic grounds; under public control they stand guard over our treasure of natural resources.

PARKING REQUIREMENTS IN ZONING ORDINANCES: A Supplement to Bulletin 24—David R. Levin—*Highway Research Board*, Bulletin 99, 55 p., paper, 75 cents.

PERSONNEL MANAGEMENT IN A COMPETITIVE ECONOMY: With a Section on Employee Education and Community Relations—John E. Martin and others—*American Management Association*, Personnel Series 159, 56 p., paper, \$1.75.

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**THE PILTDOWN FORGERY**—J. S. Weiner—*Oxford University Press*, 214 p., illus., \$3.50. Reporting an investigation into how the Piltdown hoax was perpetrated on the scientific world. By one of the scientists who exposed the forgery.

**PROTECTIVE COATINGS FOR METALS**—R. M. Burns and W. W. Bradley—*Reinhold*, 2d ed., 643 p., illus., \$12.00. A description of modern advances and a review of historical developments in the field, beginning with earliest records.

**REMEMBERING MADE EASY**—Arthur L. Logan—*Arco*, 94 p., illus., \$2.50. You must first want to remember, but if you have the desire the author offers you several systems of repetition and association to use as crutches to support your memory.

**ROALD AMUNDSEN: A Saga of the Polar Seas**—J. Alvin Kugelmass—*Messner*, 191 p., illus., \$3.00. A newspaper and magazine writer tells the dramatic story of the life of the explorer.

**THE ROCKET PIONEERS ON THE ROAD TO SPACE**—Beryl Williams and Samuel Epstein with foreword by Andrew G. Haley—*Messner*, 241 p., illus., \$3.75. The story of the pioneers from 18th century William Congreve and his war rocket to the developers of the V-2.

**THE SAGA OF THE GREY SEAL: Introducing the Natural History of the Grey Seal of the North Atlantic**—R. M. Lockley—*Devin-Adair*, 149 p., illus., \$4.00. The adventurous story of a trip by tiny Irish-built curragh, or long canoe, to the secret breeding place of the seals.

**SLIM GREEN**—Louise Dyer Harris and Norman Dyer Harris—*Little, Brown*, 53 p., illus., \$2.00. A child's story book that tells of the ways of a little green snake.

**A SYSTEMATIC METHOD FOR LOCATING INSTANT CENTERS**—Willard C. Lyford and Leo A. Padis—*Virginia Polytechnic Institute*, Engineering Experiment Station Series No. 97, 21 p., illus., paper, 25 cents. A method to aid the mechanical engineer in locating these centers and a presentation of the theory on which this method is based.

**TV REPAIR QUESTIONS AND ANSWERS ON FRONT ENDS**—Sidney Platt—*Rider*, 122 p., illus., paper, \$2.10. A practical book for the technician.

**THE TREE OF CULTURE**—Ralph Linton—*Knopf*, 692 p., illus., \$7.50. The author intended this book to express the concepts and data he had acquired during his 40 years of work in the field. The work was nearly completed when Dr. Linton died in 1953, and his wife completed it from his notes and lectures.

**TUMOR-HOST STUDIES: The Physiological and Pharmacological Action of an Iodide-trapping Substance Formed in Tumor-bearing Animals**—Kenneth G. Scott and Chin-Tzu Peng—*University of California Press*, Publications in Pharmacology, Volume 2, No. 22, 31 p., illus., paper, 75 cents. A study of abnormal iodine metabolism and its relation to tumor growth.

Science News Letter, April 23, 1955

justified by his deceptively robin-like appearance. And, since he is frequently mistaken for an oriole, he might well be called a "ground oriole," too, though he is not.

The other name by which this bird is commonly known is "chewink." The two names, towhee and chewink, are intended to represent the bird's characteristic call—an interesting illustration of how differently two people can hear the same syllables.

Other names by which he is known include swamp robin, joree, bush-bird and turkey sparrow.

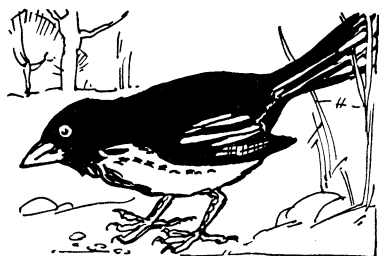
Like many another bird of the forest edges, the towhee is a useful servant of man in his destruction of insects and their larvae. The towhee gets in his good work at the strategic moment, for his scratching about in the dead leaves of springtime turns up the six-legged destroyers by the dozen and hundreds, just at the beginning of insect breeding time and before they have a chance to lay their eggs. Thus parent insect and brood are destroyed at one gulp, and a stitch in time saves many times nine.

The towhee's way of scratching on the ground is peculiar, and an aid in distinguishing it from other birds. The towhee scratches by using his feet alternately, after the manner of hens. Another unusual characteristic of the towhee that some bird watchers have noted is an apparent non-chalance when his nest is approached.

It could be that this is the bird's way of deceiving the intruder—a deliberately assumed role!

Science News Letter, April 23, 1955

The *hornbill*, an African bird, walls herself up with mud inside a hollow tree at nesting time, leaving only a small hole through which her mate feeds her and the young.



**Towhee**

► HE IS dodging in and out among the undergrowth, and if you do not get a good look at him, you will surely call him a robin. For his back and tail and head are dusky, and the sides of his breast are the terra-cotta red of the American robin's. And he has a brisk, cheerful, tail-flicking way of hopping about that makes you think of that most familiar of our birds of spring.

But if you look a little closer, you can see that his duskiness above is deeper than that of a robin, and that the red does not run all over his breast, but gives way to a wide apron or bib of white underneath. Along his wings also, when they are folded, is a betraying line of white that marks him as not a robin.

The towhee is a bird of many aliases. "Ground robin" is a popular name, and

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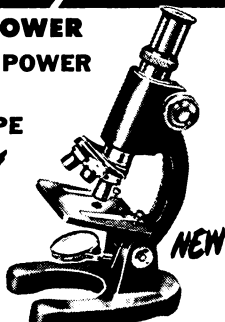
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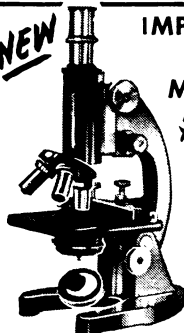
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