

Wild Turkey

► OF ALL the birds which hunters seek over fields, woods or water, one of the most toothsome is the wild turkey. It is also a very large bird, slow and flopping in flight, an easy and inviting target since the days of the Pilgrims' blunderbusses. The fact that turkeys graced the first Thanksgiving table in Plymouth was not a compliment to the accuracy of those old guns. There were a lot of turkeys in the woods in those plentiful days. To hit one roosting in a tree was more a matter of spraying the whole tree with a full charge of shot.

Hunted out of existence in New England, its numbers pitifully thinned even in the mountains of the South, the turkey today has an understandable hesitancy to take to the air. If surprised while feeding in the stubble of an open field, it would much prefer to make a run for the woods than to fly. Once the thickets are reached, it can disappear against a background of autumn leaves like a phantom, for its dark-brown plumage, highlighted by green, gold and bronze, is a perfect camouflage.

Both the wild turkey and his plumper domesticated cousin are natives of North America. But as it happened, the tame turkey came to the American colonies from Mexico by way of Europe. Cortez and his

Spanish conquerors found turkeys being grown by the Aztecs in the early 1500's and took them back to Europe. A century later, when the Pilgrims came to New England, the domesticated Mexican turkey came with them. The New England wilderness was already full of the wild Eastern variety.

Once common as far north as Canada, today the wild turkey is not found north of Pennsylvania. In the mountains of the Virginias and Carolinas, Tennessee and Kentucky there are larger flocks today than there were 30 years ago, when rigid protection by state laws and active endeavor to increase their numbers began. Colorado, reintroducing the once abundant large Mer-

riam's turkeys, had the first open season on turkeys in 50 years last October.

In its natural habitat, the turkey is one of the shyest birds known. In the summer the mating calls give their presence away in the mountains, as the big toms gather their wives (normal complement for a strong male is at least three). This marital unbalance seems to make family life somewhat strained among the turkeys. When the hens go off to lay their eggs, they take great pains to hide the nest from the gobbler. He will break the eggs or kill the young birds if he comes upon a nest.

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Books of the Week

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ALASKA FISHERY AND FUR-SEAL INDUSTRIES: 1947—Seton H. Thompson—*Gov't. Printing Office*, U. S. Dept. of the Interior Stat. Digest No. 20, 78 p., illus., 25 cents.

THE ART OF SCIENTIFIC INVESTIGATION—W. I. B. Beveridge—*Norton*, 171 p., illus., \$3.00. The author turns to look at research itself and examines basic principles and mental techniques that are common to most types of investigation.

BASIC ELECTRICAL MEASUREMENTS—Melville B. Stout—*Prentice-Hall*, 504 p., illus., \$7.75. An undergraduate text presenting the more important methods for obtaining measurements.

CHEMICAL THERMODYNAMICS: Basic Theory and Methods—Irving M. Klotz—*Prentice-Hall*, 369 p., illus., \$6.00. A textbook designed primarily for chemists.

A COLLECTION OF BIRDS FROM BOLIVAR, COLOMBIA, Part VII: Colombian Zoological Survey—Rodolphe Meyer de Schauensee—*Academy of Natural Sciences of Philadelphia*, 28 p., paper, 85 cents. The author records 125 species which he found in Bolivar during 1949.

COMPARATIVE ANIMAL PHYSIOLOGY—C. Ladd Prosser, Ed.—*Saunders*, 888 p., illus., \$12.50. An advanced college text.

EFFECTS OF DIVERTING SEDIMENT-LADEN RUN-OFF FROM ARROYOS TO RANGE AND CROP LANDS—D. S. Hubbell and J. L. Gardner—*Gov't. Printing Office*, U. S. Dept. of Ag. Tech. Bull. No. 1012, 83 p., illus., paper, 25 cents.

ELECTROMAGNETIC WAVES AND RADIATING SYSTEMS—Edward C. Jordan—*Prentice-Hall*, 710 p., illus., \$10.50. An advanced college text.

ENCYCLOPEDIA ON CATHODE-RAY OSCILLOSCOPES AND THEIR USES—John F. Rider and Seymour D. Uslan—*Rider*, 982 p., illus., \$9.00. A description of many types of cathode-ray oscilloscopes and synchroscopes manufactured between 1940 and 1950.

EVOLUTIONARY THOUGHT IN AMERICA—Stow Persons, Ed.—*Yale University Press*, 462 p., illus., \$5.00. Essays on nineteenth-century theories of organic evolution in American economics, sociology, literature, architecture and many other fields.

FERTILITY DATA IN POPULATION CENSUSES—Department of Social Affairs—*United Nations* (U. S. Distributor: Columbia University Press), Population study no. 6, 31 p., paper, 30 cents.

THE GOOD RAIN—Alice E. Goudey—*Aladdin Books*, 30 p., illus., \$1.75. A child's book telling what the lack of rain might mean to the city and country child. Illustrated by Nora S. Unwin.

GREAT AMERICAN NATURE WRITING—Joseph Wood Krutch, Selector and Commentator—*Sloane*, 444 p., illus., \$5.00. An anthology. Among the works presented are those of Thoreau, Devoe, Austin, Beebe and Wheeler.

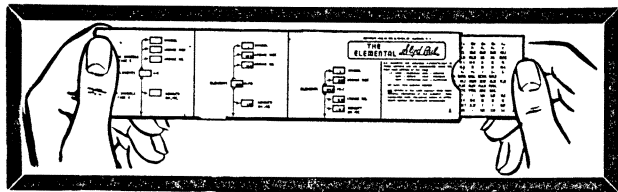
A LABORATORY MANUAL OF ELEMENTARY CHEMICAL ANALYSIS—Thomas H. Whitehead—*Ginn*, 64 p., illus., paper, \$1.25. A well-arranged laboratory manual for qualitative analysis.

LATIN TREATISES ON COMETS BETWEEN 1238 and 1368 A.D.—Lynn Thorndike, Ed.—*University of Chicago*, 274 p., \$5.00. The Latin text of a number of treatises and passages on comets is presented. The editor has written a brief introduction to each.

LIFELONG BOYHOOD: Recollections of a Naturalist Afield—Loye Miller—*University of California Press*, 226 p., \$2.75. A collection of the author's memoirs which trace the development of a naturalist.

MEDICAL CARE FOR SEAMEN: The Origin of Public Medical Service in the United States—Robert Straus—*Yale University Press*, 165 p., \$3.75. The author traces the evolution of public medical services for American seamen

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MEDICAL JURISPRUDENCE AND TOXICOLOGY—John Glaister—*Williams and Wilkins*, 9th ed., 755 p., illus., \$7.00. A basic reference brought up-to-date. Of British origin.

THE MICROTOMIST'S VADE-MECUM (Bolles Lee): A Handbook of the Methods of Animal and Plant Microscopic Technique—J. Bronte Gatenby and H. W. Beams, Eds.—*Blakiston*, 11th ed., 753 p., illus., \$8.50.

NOTES ON SOME ASIATIC NUTHATCHES AND CREEPERS—Charles Vaurie—*American Museum of Natural History*, 39 p., illus., paper, 25 cents. A report on these birds collected by Dr. Koelz in Iran, Afghanistan and India.

NOTES ON THE CUTTHROAT AND RAINBOW TROUTS WITH THE DESCRIPTION OF A NEW SPECIES FROM THE GILA RIVER, NEW MEXICO—Robert Rush Miller—*University of Michigan Press*, 42 p., illus., paper, 50 cents.

PERSONALITY AND PSYCHOTHERAPY: An analysis in Terms of Learning, Thinking, and Culture—John Dollard and Neal E. Miller—*McGraw-Hill*, 488 p., illus., \$6.50. Hypotheses to explain what happens in psychotherapy in terms of behavior theory.

PRINCIPLES OF INTENSIVE PSYCHOTHERAPY—Frieda Fromm-Reichmann—*University of Chicago Press*, 245 p., \$3.75. Formulated on the basis of the application of Freud's concepts and Sullivan's operational interpersonal relations.

RATES AND AMOUNTS OF RUNOFF FOR THE BLACKLANDS OF TEXAS—Ralph W. Baird and William D. Potter—*Gov't. Printing Office*, U. S. Dept. of Ag. Tech. Bull. No. 1022, 23 p., illus., paper, 10 cents.

SAFETY IN THE MINING INDUSTRY—D. Harrington, J. H. East, Jr. and R. G. Warncke—*Gov't. Printing Office*, Dept. of Mines Inf. Circ. 7485, 157 p., illus., paper, 40 cents. A statistical study.

THE SEA AND ITS MYSTERIES—John S. Colman—*Norton*, 261 p., illus., \$3.75. An introduction to the science of the sea. The geography of the ocean floor, the chemistry of the sea and the circulation of the water, currents, waves and tides are discussed.

SEVEN SCIENCE FICTION NOVELS OF H. G. WELLS—*Dover*, 1013 p., \$3.95. Among the novels included are *The First Men in the Moon*, *The Invisible Man*, and *The Time Machine*.

SEX AND TEMPERAMENT IN THREE PRIMITIVE SOCIETIES—Margaret Mead—*New American Library*, 218 p., paper, 35 cents. A pocket book edition of a work appearing in 1935.

SIR THOMAS BROWNE: A Doctor's Life of Science and Faith—Jeremiah S. Finch—*Schuman*, 319 p., illus., \$3.50. A biography of a famous 17th century doctor.

SNOW MELTING: Design, Installation and Control of Systems for Melting Snow by Hot Water Coils Embedded Beneath Walks, Roads, or Other Areas Where Snow is an Obstruction or Hazard—T. Napier Adlam—*Industrial Press*, 224 p., illus., \$4.50.

SPIDERS OF THE RHOICININAE (PISAURIDAE) FROM WESTERN PERU AND ECUADOR—Harriet Exline—*American Museum of Natural History*, 13 p., illus., paper, 25 cents.

STEROID HORMONES AND TUMORS: Tumorigenic and Anti-tumorigenic Actions of Steroid Hormones and the Steroid Homeostasis Experi-

mental Aspects—Alexander Lipschutz—*Williams and Wilkins*, 309 p., illus., \$6.00. A study on how steroids may interfere in the dynamics of cancer.

TOOL ENGINEERING: Analysis and Procedure—Lawrence E. Doyle—*Prentice-Hall*, 499 p., illus., \$6.35.

ULTRAHIGH FREQUENCY ENGINEERING—Thomas L. Martin, Jr.—*Prentice-Hall*, 456 p. illus., \$8.00. A college text intended for senior students in electrical engineering or physics.

VIRUSES 1950—M. Delbruck, Ed. *California Institute of Technology*, 147 p., illus., \$2.50. Proceedings of a conference on the similarities and dissimilarities between viruses attacking animals, plants and bacteria, respectively. Held at the California Institute of Technology, March 20-22, 1950.

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ENGINEERING

Devise New Technique For Measuring Paint

► THE THICKNESS of paint and varnish coatings and how rust and tarnish form on metals are among the subjects being studied with new techniques described at a special symposium of the New York Academy of Sciences.

Dr. Jean-Jacques Trillat, director of the X-ray and Electronics Laboratory of the French National Scientific Research Center, described these new methods as well as a new apparatus devised to help in the measurement of coating thicknesses.

Use of X-rays and photoelectrons (charged particles thrown out from a surface by the action of light or other radiation) to study the surfaces of metals, alloys and minerals is one of the techniques. Another method is to use X-rays to analyze thin surface film on paper and biological objects. Still another method is to use X-rays that have been diffracted, or changed from their original path, to study corrosion and lubrication.

The new apparatus measures the angles between X-rays and the films at which the X-rays are directed. From them can be calculated the thickness of such substances as paint and varnish. The method also can be used to study the oxidation, or rusting, process; to identify alloys and to learn about the effects of surface polishing of metals.

Another technique described to the New York Academy of Sciences makes it possible to prepare a metal surface in a vacuum. This surface can then be machined in the vacuum at any desired temperature, thus permitting new research into the study of metal surfaces. It further allows the scientists to distinguish the physico-chemical factors such as adsorption and chemical affinity from the structural factors.

This new method helps laboratory study of the fresh, clean surfaces of solids, of the measurement of surface temperatures, of the results of machining metals and of how rust and tarnish form.

Dr. Trillat is a professor at the Sorbonne and an officer of the French Academy.

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ENGINEERING

Want To Aid Europe Without Losing Secrets

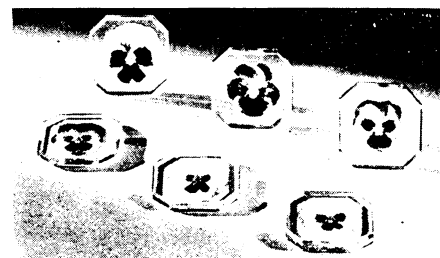
► ONE KNOTTY problem today is how to help European industries produce defense materials without handing them patents and "know-how" that can be used in commercial war on the United States.

Acknowledging that arming of the North Atlantic Treaty countries has been delayed by reluctance of U. S. industry to export their industrial and technological secrets without safeguards, one meeting of industrial and government representatives has been held in Washington.

In some of the countries that would be most helpful in making defense and military equipment, the concerns ready to do so are the world rivals of the American companies producing the needed materials in this country. If hard-won production methods are handed over to their European rivals, the American companies are fearful that their own know-how will be used to compete with them commercially as well as to equip the fighting forces.

Writing into governmental and commercial agreements safeguards to prevent abuses is being discussed further.

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