

Books of the Week

TO SERVE YOU: To get books, send us a check or money order to cover retail price. Address Book Dept., SCIENCE NEWS LETTER, 1719 N St., N. W., Washington 6, D. C. Ask for free publication direct from issuing organization.

THE APHID GENUS PERIPHYLLUS: A Systematic, Biological and Ecological Study—E. O. Essig and Frieda Abernathy—*University of California Press*, 166 p., illus., \$3.00. Pioneer work in the study of this genus, so fond of our maple trees.

BIRDS OF LA PLATA—W. H. Hudson with introduction by Richard Curle and Color Plates by S. Magno—*Penguin*, 28 p., illus., 95 cents. Extracts from the author's two-volume work of the same name. The naturalist Hudson spent the early part of his life in Argentina and writes here of birds he personally knew and loved.

CYBERNETICS: Circular, Casual and Feedback Mechanisms in Biological and Social Systems—Heinz Von Foerster, Ed.—*Josiah Macy, Jr. Foundation*, 240 p., \$4.00. Transactions of a conference intended to further the exchange of ideas and experiences in this new branch of science and to pave the way for better communication between scientists of the various disciplines.

DEVELOPMENT AND TESTING OF A HYDROGEN PEROXIDE ROCKET—David Elliott and Lee Rosenthal—with THE PROPERTIES OF HIGHLY CONCENTRATED HYDROGEN PEROXIDE—Donald Haldiman—*Reaction Research Society*, 24 p., illus., paper, \$1.15. Describing a small, simple rocket using 90 per cent hydrogen peroxide with a solid catalyst. Good for the amateur.

A DICTIONARY OF PSYCHOLOGY—James Drever—*Penguin*, 316 p., paper, 85 cents. Includes not only the technical terms of psychology itself but those of bordering sciences, the meaning of which psychologists need to know. The author, emeritus professor of psychology at the University of Edinburgh, died while the book was on the press.

FIRST SYMPOSIUM ON CHEMICAL-BIOLOGICAL CORRELATION—Chemical-Biological Coordination Center—*National Academy of Sciences—National Research Council*, 415 p., \$4.00. Papers discussing the relationships between chemical structure and various biological actions and effects.

FIVE SCIENCE FICTION NOVELS—Martin Greenberg, Compiler—*Gnome*, 382 p., \$3.50. Five

different novels each by a different author and representing distinct kinds of science fiction.

FLORA OF THE BRITISH ISLES—A. R. Clapham, T. G. Tutin, and E. F. Warburg—*Cambridge University Press*, 1591 p., illus., \$9.50. This handy-sized volume contains a tremendous amount of information on the plants of England useful to botanists and students, including amateur flower-lovers.

FROST ACTION IN ROADS AND AIRFIELDS: A Review of the Literature—A. W. Johnson—*Highway Research Board*, Special Report No. 1, 287 p., illus., paper, \$3.00. An abstract type of review which gives breadth to the concept of frost action and brings out the complexity of its effects.

GIFTS FROM THE FOREST—Gertrude Wallace Wall—*Scribner's*, 96 p., illus., \$2.50. The story, told in beautiful photographs by John Calvin Towsley, of how the great giants of our forests are made into lumber for our homes and how the trees are replaced by good lumbering practice.

HEAT—R. C. Brown—*Longmans, Green*, 547 p., illus., \$2.75. The second volume of a textbook on physics intended to prepare English students for their examinations. Does not require use of the calculus.

HOME-MADE ZOO—Sylvia S. Greenberg and Edith L. Raskin—*McKay*, 256 p., illus., \$3.00. A practical handbook on the care of animals in the home—how to obtain them, feed them, house them and keep them in good health, all within a limited budget.

KRISTA AND THE FROSTY PACKAGES—Helen D. Olds—*Messner*, 60 p., illus., \$1.50. A story for young children telling what happens inside a frozen food plant.

LET THERE BE BREAD—Robert Brittain—*Simon and Schuster*, 243 p., \$3.00. The engrossing account of how the "impossible" has been and is being accomplished to make barren land produce bountiful crops to feed the world's hungry mouths.

MERRILY WE ROLL ALONG—Mildred Luckhardt—*Messner*, 64 p., illus., \$1.50. This book for young children recounts some of the adventures encountered by truckers.

MOTHERS' OPINIONS OF FIBERS IN SELECTED ITEMS OF CHILDREN'S CLOTHING—Bureau of Agricultural Economics—*Govt. Printing Office*, Agriculture Information Bulletin No. 65, 196 p., paper, 40 cents. Cotton is still preferred for seven out of ten items of children's clothing; wool is liked better for snow suits.

PRINCIPLES OF GEOCHEMISTRY—Brian Mason—*Wiley*, 276 p., illus., \$5.00. A text for geology students and students of other sciences. It deals with the chemical make-up of the earth and our universe and the earth's geological history.

PUBLIC RELATIONS—Edward L. Bernays—*University of Oklahoma Press*, 374 p., \$5.00. This is not a book on tools or techniques but is intended to present the basic principles in-

volved, leaving it to the reader to work out their application to his own specific problems.

REGISTER OF NEW FRUIT AND NUT VARIETIES 1920-1950—Reid M. Brooks and H. P. Olmo with others—*University of California Press*, 206 p., \$3.00. Giving the origin, parentage, and most valuable characteristics of new varieties showing promise of becoming important commercially.

RESEARCH AND INDUSTRY: PARTNERS IN PROGRESS, ANNUAL REPORT 1951—*Stanford Research Institute*, 48 p., illus., paper, free upon request to publisher, Stanford, Calif.

SCIENCE NEWS 23—A. W. Haslett, Ed.—*Penguin*, 142 p., illus., paper, 50 cents. Presenting a new group of articles on current researches.

STEPS TOWARD PREVENTION OF CHRONIC DISEASE—*Commission on Chronic Illness*, 31 p., paper, 50 cents. Discussion of what can be done toward early detection and prevention of chronic illness.

A SURVEY OF THE SULPHUR AND SULPHURIC ACID POSITION—R. Ashton, A. L. Thorogood and D. Neville-Jones—*Her Majesty's Stationery Office*, 25 p., paper, 40 cents. In the present year world production is a million tons short of demand and in 1953 the shortage is expected to double. Here are various plans for conservation of this essential material.

THE TERPENES: Volume III, The Sesquiterpenes, Diterpenes and Their Derivatives—Sir John Simonsen and D. H. R. Barton—*Cambridge University Press*, 579 p., \$10.00. Literature has been consulted up to the close of 1949 and some references have been included for 1950. Addenda to Volumes I and II are presented.

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BOTANY

Scarce Minerals in Soil Affect Fruit Tree Growth

► SOIL ELEMENTS so minute in quantity that their presence can be determined only by the scientific device known as a spectrograph can have serious effect on the growth of citrus and possibly other fruit trees.

Dr. Albert P. Vanselow, chemist in the division of soils and plant nutrition at the University of California Citrus Experiment Station, Riverside, Calif., has determined that nickel in as small amount as 25 parts per million will reduce the growth of an orange seedling.

In soil containing nickel at 75 parts per million the trees grew only to 1/10th of normal size. At 150 parts the trees died.

"Nickel present in the average soil," Dr. Vanselow said, "will normally be in the form of very insoluble compounds, but if the soil is acidified to too high a degree the nickel will be made soluble and toxic to the plant."

Citrus leaves analyzed by spectrograph show a number of elements whose functions, if any, are unknown. Besides nickel there are aluminum, barium, cobalt, chromium, lead, silver, strontium and others.

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SCIENCE WORK CAMP

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