

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.

CLOUDS, RINGS AND CROCODILES: By Space-ship Round the Planets—H. Percy Wilkins—*Little, Brown*, 148 p., illus. by drawings by Anne Marie Jauss, \$3.00. A British astronomer takes us on an imaginary trip in space and tells us much that is known of the planets and stars. He speculates that Venus has plant and animal life like that on earth during the age of reptiles.

EXPERIMENTAL PHYSICAL CHEMISTRY — Farington Daniels and others—*McGraw-Hill*, 5th ed., 482 p., illus., \$6.50. Intended to train in careful experimentation and to encourage ability in research.

GERMAN-ENGLISH MATHEMATICAL VOCABULARY — Sheila Macintyre and Edith Witte with grammatical sketch by Lilius W. Brebner—*Oliver and Boyd (Interscience)* 95 p., \$1.55. This small volume should enable the reader to understand most mathematical texts in German. It will also serve the more advanced linguist as a compact book of reference.

HAY FEVER AND WHAT YOU CAN DO ABOUT IT—Samuel M. Feinberg and others—*American Foundation for Allergic Diseases*, 16 p., illus., paper, 25 cents ordered direct from publisher, 274 Madison Ave., New York 16, N. Y. One in every 20 Americans are battling this allergy. The booklet includes an up-to-date ragweed pollen index.

HOW TO BECOME A RADIO AMATEUR—*American Radio Relay League*, 15th ed., 108 p., illus., paper, 50 cents, plus postage. Information on how to build a radio receiver and a transmitter and how to get a license. There is also a chapter on the fundamentals of radio.

THE LITTLE OXFORD ATLAS—*Oxford University Press*, 60 p., illus., \$1.55. Maps printed in the "photo-relief technique," having a striking three-dimensional effect.

MANAGEMENT OF EMOTIONAL PROBLEMS IN MEDICAL PRACTICE—Samuel Liebman, Ed.—*Lippincott*, 152 p., \$5.00. Nine physicians contribute to this book directed to the general practitioner and advising on what to do to handle emotional problems and psychiatric emer-

gencies that may arise among his patients. Such conditions as suicidal threats or attempts, violence, depression and anxiety are discussed.

MAN'S ROLE IN CHANGING THE FACE OF THE EARTH—William L. Thomas, Jr., Ed.—*University of Chicago Press* for the *Wenner-Gren Foundation for Anthropological Research* and the *National Science Foundation*, 1193 p., illus., \$12.50. Summarizing man's exploration and exploitation of his planet and anticipating what may occur in the future. It is pointed out that uranium may be simply recovered from granite with an energy gain equivalent to 25 tons of coal for every ton of granite processed.

PLANNING AND MANAGEMENT OF ROADSIDE VEGETATION: An Analysis of Principles—*Highway Research Board*, Special Report 23, 48 p., illus., paper, \$1.05. The principles presented are applicable to all kinds of highways, including parkways and arterial routes, both old and new and in all kinds of situations.

THE POTENTIALS ABOUT A POINT ELECTRODE AND APPARENT RESISTIVITY CURVES FOR A TWO-, THREE-, AND FOUR-LAYERED EARTH—Harold M. Mooney and W. W. Wetzel—*University of Minnesota Press*, 146 p., text \$4.50, set of curves \$15.00, text with curves \$18.00. By the electrical resistivity method it is sometimes possible to obtain information about what lies under the earth's surface without drilling.

SMALL ARMS AND AMMUNITION IN THE UNITED STATES SERVICE—Berkeley R. Lewis—*Smithsonian*, Miscellaneous Collections, Volume 129, 338 p., illus., \$8.00. A history of the development of weapons from the muskets of the first colonists.

A STUDY OF THE ULTIMATE STRENGTH OF COAL AS RELATED TO THE ABSOLUTE SIZE OF THE CUBICAL SPECIMENS TESTED—Frank L. Gaddy—*Virginia Polytechnic Institute*, Bulletin, Engineering Experiment Station Series No. 112, 27 p., illus., paper, 25 cents. Reporting the relation between the strength of a three-inch cube of coal and that of a mine pillar. Throwing light on conditions likely to result in disastrous cave-ins.

TELEVISION SERVICING — Matthew Mandl — *Macmillan*, rev. ed., 460 p., illus., \$6.50. Intended as a textbook for technical schools and vocational high schools.

Science News Letter, September 1, 1956

TECHNOLOGY

Westinghouse Dedicates Electrical Laboratories

► THE most modern research laboratories in the electrical industry will be dedicated in Pittsburgh, Pa., this month by the Westinghouse Electric Corporation.

Plans for the dedication, which will begin on Sept. 12 and 13 with a press preview, were announced by Dr. J. A. Hutcheson, vice-president in charge of engineering.

The new laboratories will be staffed by more than 700 research workers engaged in both basic and applied scientific studies. At the dedication, Westinghouse scientists will take the wraps off several research projects and developments now underway at the laboratories.

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BIOCHEMISTRY

Radioactive Wastes Cleaned by Tiny Animals

► MILLIONS of minute plants and animals can be used to clean the world's waterways of dangerous radioactive wastes.

Experiments showing that certain microscopic marine organisms extract fission products from the water in which they live are described by three Japanese scientists in *Science* (Aug. 17).

The scientists explain the use of the living cleaners in this way.

A tiny marine organism known as *Aphanocapsa koordersii* has been found in the laboratory to be able to remove radioactive particles from the water and store them in its body. A second tiny sea animal called *Brachionus plicatilis* feeds on *Aphanocapsa* and, when it does, it absorbs not only the *Aphanocapsa's* radioactive stockpile, but similarly, that of the surrounding water too.

Based on their experiments, the scientists say these two organisms could be transplanted into contaminated waterways and clean them up.

They point out that other minute marine life around Bikini Atoll in 1954 were found to have contained 1,000 times more radioactivity than the water in which they lived.

The scientists making the report are Drs. Giichi Yoshii, Norimitsu Watabe and Yai-chiro Okada of the Prefectural University of Mie, Japan.

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BIOLOGY

Tiny Organism Helps Drug Resistance Research

► HOW CERTAIN ORGANISMS develop a resistance to drugs may be learned from a tiny animal with a taste for salts and alcohol.

The tiny animal is the *Chilomonas*, a microscopic organism, the subject of drug experiments by Dr. Richard P. Hall of New York University, visiting professor of zoology at the University of California at Los Angeles this summer.

The *Chilomonas* normally uses as its food source acetic acid and various salts, Dr. Hall said. However, it can also thrive on alcohol if it does not overindulge.

Dr. Hall is interested in learning how the organism develops resistance to sulfa drugs. Initially, the *Chilomonas* is overwhelmed by the drug, but succeeding generations develop a resistance that enables them to carry on normally in the drug's presence. The resistance is apparently the result of certain chemical changes in the organism's life processes.

The *Chilomonas* is not a disease-causing organism, Dr. Hall noted, but if the chemistry by which it becomes resistant to sulfa drugs can be determined, it may help scientists understand how disease organisms develop drug resistance, although the processes may not necessarily be the same.

Science News Letter, September 1, 1956

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