

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.

ABBREVIATIONS DICTIONARY: Abbreviations, Contractions, Signs & Symbols Defined—Ralph de Sola—*Duell*, 177 p., \$4. Includes Greek alphabet, radio alphabet, Roman numerals, ship's bell time signals, international civil aircraft markings.

THE AIR OVER LOUISVILLE: Summary of a Joint Report—Special Air Pollution Study of Louisville and Jefferson County, Kentucky, 1956-1957—*Public Health Service, Robert A. Taft Sanitary Engineering Center*, 57 p., illus., paper, free upon request direct to publisher, Cincinnati 26, Ohio.

AIR PHOTO AND SOIL MAPPING METHODS: Appraisal and Application—Preston C. Smith and others—*Highway Res. Bd.*, 38 p., illus., paper, 80¢. Contains state by state index of geologic mapping investigations in the U. S.

BASICS OF DIGITAL COMPUTERS, Vols. I, II, and III—John S. Murphy—*Rider*, 416 p., illus., paper, \$2.50 per volume, 3 vol. set, \$6.95, cloth \$7.95. Picture-book course of the development and basic theory of computer arithmetic, discusses elements, circuits and magnetic cores. Vol. III discusses types of memory, control system, and input-output equipment.

A BIBLIOGRAPHY OF DIFFUSION OF GASES, LIQUIDS AND SOLIDS IN SOLIDS: 1890 to 1955—Frank E. Jaumot, Jr.—*AEC Technical Informa-*

tion Service Extension, (Office of Technical Services), 314 p., paper, \$3.50.

CATALOGUE OF THE TYPE SPECIMENS OF REPTILES AND AMPHIBIANS IN CHICAGO NATURAL HISTORY MUSEUM—Hymen Marx—Chicago Natural Hist. Mus., 87 p., paper, \$1.25.

CHEMISTRY PROBLEMS—Joseph F. Castka—*Holt*, 344 p., paper, \$2.16. A work-text and source book for the high school student seriously interested in chemistry, deals mainly with mathematical chemistry. Features type problems helpful for the self-teaching gifted student.

CONCEPTS OF CLASSICAL OPTICS—John Strong—*Freeman*, 692 p., illus., \$9.50. Textbook intended for an intermediate course in optics, running through either one or two terms.

CONCRETE FOR RADIATION SHIELDING: Compilation No. 1—Edwin J. Callan and others—*Am. Concrete Institute*, 132 p., illus., paper, \$4. Papers on use of concrete for shielding nuclear radiation and the calculation of proportions and properties of various heavy concretes.

CONSTRAINT AND VARIETY IN AMERICAN EDUCATION—David Riesman—*Doubleday*, 2nd ed., 174 p., 95¢. The author feels that the cause of improved higher education would be enormously aided if some impartial yet fearless agency could issue candid reports on colleges of the sort Consumers Union publishes on commodities.

THE CONSTRUCTION OF INFLUENCE LINES WITH A MECHANICAL INTERFEROMETER—D. H. Pletta and J. H. Sword—*Va. Polytechnic Institute*, 12 p., illus., paper, 25¢. Experimental results obtained agree closely with results of theoretical investigations.

DICTIONARY OF MILITARY TERMS: English-German and German-English—Friedrich Kroll-

mann—*Philosophical Lib.*, 780 p., \$10. Incorporates the great changes in military terminology of the past decade.

ELECTROCARDIOGRAPHY—Michael Bernreiter—*Lippincott*, 134 p., illus., \$5. Outlines for medical students the fundamental aspects of cardiography as they are encountered in everyday practice.

ELECTROSTATICS—Alexander Schure, Ed.—*Rider*, 64 p., illus., paper, \$1.35. A text on the behavior of electrical charges at rest, both in practical and theoretical situations.

THE EXPLORATION OF SPACE BY RADIO—R. Hanbury Brown and A. C. B. Lovell—*Wiley*, 207 p., illus., \$6.50. Describes some of the results and possibilities of the investigation of the universe by radio methods.

FUNCTION FLUCTUATION—Charles C. Anderson—*Cambridge Univ. Press*, 104 p., paper, \$4. In psychological testing the risk of error is considerable because the function (ability, trait, attitude, preference) being measured fluctuates from day to day.

GOLDFISH IN YOUR HOME—Herbert R. Axelrod and William Vorderwinkler—*Sterling*, 144 p., illus. with photographs, \$2.95. Contains data on care and feeding, treatment of fish diseases, water conditions, necessary for the owner of goldfish.

H. A. HARTLEY'S AUDIO DESIGN BOOK—H. A. Hartley—*Gernsback*, 224 p., illus., hard cover, \$5., paper, \$2.90. Offers the hi-fi fan the practical design data he needs.

HOME CARE FOR THE EMOTIONALLY ILL—Herman S. Schwartz—*Sessions*, 234 p., \$5. Discusses the instances in which family care, under a doctor's guidance, can help the emotionally distressed, the alcoholic, aged, or chronic patient.

HOW AND WHERE TO LOOK IT UP: A Guide to Standard Sources of Information—Robert W. Murphey, foreword by Louis Shores—*McGraw-Hill*, 721 p., \$15. Discusses reference works and their use, basic types of reference sources and includes specific sources of information. Subject matter and title index.

ILLUSTRATED PREOPERATIVE AND POSTOPERATIVE CARE—Philip Thorek—*Lippincott*, 98 p., illus. by Carl T. Linden, \$5. A monograph of lectures on the subject.

INSECTS AND MITES OF WESTERN NORTH AMERICA—E. O. Essig—*Macmillan*, rev. ed., 1050 p., illus. \$18. Incorporates the many revolutionary changes in entomology since the book first appeared in 1926 under the title of *INSECTS OF WESTERN NORTH AMERICA*.

INTRODUCTION TO DIFFERENCE EQUATIONS with illustrative examples from Economics, Psychology, and Sociology—Samuel Goldberg—*Wiley*, 260 p., \$6.75. For social scientists.

LATE ANCIENT AND MEDIEVAL POPULATION—J. C. Russell—*Am. Philosophical Soc.*, 152 p., paper, \$4. A demographic study of the European-Mediterranean population from the late Roman Empire until A.D. 1200.

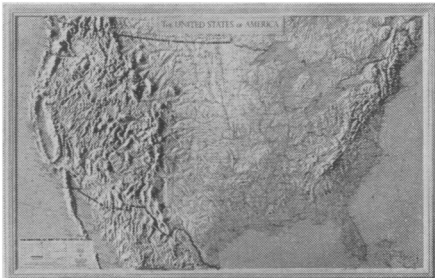
THE NEUTRINO—James S. Allen—*Princeton Univ. Press*, 168 p., illus., \$4.50. Surveys all the information now available on the neutrino, including also the new post-parity experiments.

A NEW COURSE OF PLANTS AND ANIMALS: Book II—M. A. Grigg—*Cambridge Univ. Press*, 232 p., illus., \$1.75. A guide in nature study with experiments for junior high school students. Includes British bibliography.

NUMERICAL ANALYSIS—D. R. Hartree—*Oxford Univ. Press*, 2nd ed., 302 p., \$6.75. For those who want to know about numerical methods for the purpose of applying them in practice. Contains bibliography.

PHYSICAL GEOLOGY—L. Don Leet and Sheldon Judson—*Prentice-Hall*, rev. ed., 502 p.,

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illus., \$7.50. Includes glossary, scale of sizes and distances, and tables comparing common minerals.

THE PRINCIPLES OF NOISE—J. J. Freeman—Wiley, 299 p., \$9.25. A textbook providing a framework for understanding the principles and techniques used in the analysis of noise.

THE PURSUIT OF EXCELLENCE: Education and the Future of America—Panel Report V of the Special Studies Project—Rockefeller Brothers Fund (Doubleday), 49 p., graphs, paper, 75¢. On the ability of a free people to identify, nurture and wisely use its own talents.

SCIENTIFIC GLASSBLOWING—E. L. Wheeler, preface by G. Ross Robertson—Interscience, 478 p., illus., \$9.75. The modern glassblower of special types of glass, fancy fractioning columns, standard taper ware, and numerous high-vacuum devices, has become the research chemist's co-worker.

SUMMARY OF ADDRESSES, DISCUSSIONS AND RECOMMENDATIONS: Proceedings of Southern Regional Conference on Aging, 1958—Council of State Governments, 84 p., paper, \$1.50. Evaluations of a working conference of state officials.

TABLE OF RADIOISOTOPES ARRANGED ACCORDING TO HALF-LIFE—compiled by Elaine Daniels—Brookhaven Nat'l Lab. (Office of Technical Services), 58 p., paper, \$1.75. Data taken from the General Electric Chart of the Nuclides, 5th ed.

TEACHING HIGH SCHOOL SCIENCE: A Book of Methods—Paul F. Brandwein, Fletcher G. Watson and Paul E. Blackwood—Harcourt, 568 p., illus., \$6.50. Seeks to help the science teacher in the varied situations in which he may find himself.

TEACHING HIGH SCHOOL SCIENCE: A Sourcebook for the Biological Sciences—Evelyn Morholt, Paul F. Brandwein and Alexander Joseph—Harcourt, 506 p., illus., \$6.75. Incorporates tested teaching procedures of high school students, of different levels of ability, in general science, biology and health science.

TELEVISION IN SCIENCE AND INDUSTRY—V. K. Zworykin, E. G. Ramberg and L. E. Flory—Wiley, 300 p., illus., \$10. Explores the function of television as an extension of human sight, variously called closed circuit or industrial television.

WHAT DINOSAUR IS IT?—Anna Pistorius—Follett, 29 p., illus., with paintings by the author, \$2.25. For young children, contains pronunciation guide.

Science News Letter, July 19, 1958

METEOROLOGY

Science Foundation to Begin Atmospheric Study

► THE NATIONAL Science Foundation is going to do something about the weather.

The Foundation revealed that it is establishing a Program for Atmospheric Sciences under the direction of Dr. Earl G. Droessler. The Program is an outgrowth of recommendations by the President's Committee on Weather Control and the Committee on Meteorology of the National Academy of Sciences-National Research Council.

In addition to the "more conventional type of meteorological research," the Program will also be concerned with energy transfer processes between earth, sea and air; turbulent flow of gaseous fluids; heat exchange processes; upper atmosphere studies; atmospheric chemistry; and general circulation problems of the atmosphere and oceans.

Attention will also be given to the field of cloud physics, especially the physics of precipitation, about which the Foundation says, "much basic research must be pursued before the possibilities of controlling or modifying weather can be evaluated."

Dr. Droessler was formerly with the Office of Science, Department of Defense.

Science News Letter, July 19, 1958

ASTRONOMY

Halley's Comet First Recorded by Chinese

► CHINESE astronomers spotted Halley's comet in 66 A. D.

This is the first recorded report of the comet, which comes close to the earth every 75 years. The information that Chinese astronomers spotted the comet nearly two millennia ago, and again in 684 and 837 A.D., is contained in a compendium and translation of ancient Chinese astronomical observations by Dr. Hsi Tze-tung of the Academia Sinica of Peking. The compendium has been published by the Smithsonian Institution, Washington, D.C.

Following the Chinese observations, the next recording was made in Europe in 1305. The recurrent comet was last seen in 1910, at which time, the Institution says, it caused "predictions that its tail might lash to earth, perhaps bring an end to all life."

Science News Letter, July 19, 1958

MEDICINE

Thirsty Mice Drink Themselves to Death

► A SPECIAL strain of experimental mice that drink themselves to death has been discovered.

Both sexes of a STR/N strain of mice indulge in heavy water drinking. The females, however, seem to be able to handle their water better than the males who drink themselves to death, research scientists at the National Institute of Arthritis and Metabolic Diseases, Bethesda, Md., have reported.

The thirsty mice were originally obtained for arthritis research but soon became the subjects of a research project in themselves when it was noticed that large quantities of water were disappearing from their

cages. Some of the mice were gulping down as much as five times their body weight in water every day.

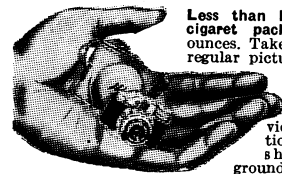
Within 16 months, 88% of the males developed hydronephrosis, a condition in which the bladder and kidneys become bloated with urine and the animals die.

Pathological studies showed the males developed a mass in the urethra which plugged the flow path of urine. The females did not develop this plug and lived their normal life span, apparently unharmed by their abnormal drinking capacity.

It was also found that the thirsty mice could get along without their water supply. When they received no water except the lesser amount needed for their diet, all of them survived. Thus, it appears that the mice do not have to drink, they just like to over-indulge.

Science News Letter, July 19, 1958

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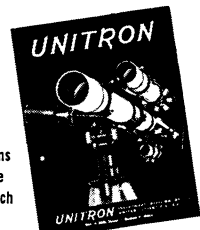
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