

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.

THE BIOLOGY OF PARAMECIUM—Ralph Wichterman—*Blakiston*, 527 p., illus., \$9.00. A reference work for students and teachers giving the results of the author's 20 years of research on paramecium.

BIRDS OF WASHINGTON PARK, ALBANY, NEW YORK—Dayton Stoner and Lillian C. Stoner—*New York State Museum*, Bulletin Number 344, 268 p., illus., paper, \$1.60. Lists 122 species and subspecies observed by the authors in this park near the downtown area of the city.

FOUNDATIONS OF BIOLOGY: A Laboratory Handbook—Gairdner B. Moment and Helen V. Crouse—*Appleton*, 282 p., illus., paper, \$2.50. Intended to aid both the non-professional and the pre-professional students to gain competence in laboratory work so that every laboratory period will be memorable.

HEARING AIDS: Their Use, Care and Repair—Matthew Mandl—*Macmillan*, 158 p., illus., \$3.50. The user of a hearing aid, in order to make his life comfortable, must know how to select and wear his aid, how to adjust and maintain it. This book is for him and also for the serviceman.

LIVE LOADS ON FLOORS IN BUILDINGS—John W. Dunham, Guttorm N. Brekke and George N. Thompson—*Gout. Printing Office*, Building Materials and Structures Report 133, 27 p., illus., paper, 20 cents. Information on the amount of load carried by the floors in office buildings, stores, factories and warehouses.

MY BROTHER BILL: The Life of General "Billy" Mitchell—Ruth Mitchell—*Harcourt, Brace*, 344 p., \$4.00. A younger sister tells this intimate story of the life of the great protagonist of military aviation.

NEOMYCIN: Nature, Formation, Isolation, and Practical Application—Selman A. Waksman with the collaboration of Hubert A. Lechevalier and others—*Rutgers University Press*, 219 p., illus., \$4.00. Neomycin was isolated at the Department of Microbiology, Rutgers, in 1949 from a culture of *Streptomyces fradiae*, and was found to have marked activity against various bacteria.

NEXT MILLION YEARS—Charles Galton Darwin—*Doubleday*, 210 p., \$2.75. The grandson of the renowned author of the "Origin of Species" looks into the future and finds it gloomy. Man he portrays as a wild animal—wild and untamable and inherently incapable of producing a master breed.

OCCUPATIONAL DISEASES ASSOCIATED WITH THE IMPORTATION OF RAW MATERIALS—Daniel C. Braun and John F. Osterritter—*Mellon Institute*, 5 p., paper, free upon request direct to publisher, 4400 Fifth Ave., Pittsburgh 13, Pa. Discussing infections and infestations as well as articles producing allergic reactions.

PAVEMENT-MARKING MATERIALS—William H. Goetz, Chairman—*National Academy of Sciences-National Research Council*, Highway Research Board Bulletin 57, 128 p., illus., paper, \$1.80. Reporting research and tests of materials used for this purpose.

POSSUMS—Carl G. Hartman—*University of Texas Press*, 174 p., illus., \$6.00. Here beautiful photographs show just what the tiny immature opossum looks like at birth and when in the pouch. You can also see this odd animal hanging by its tail and can read the interesting folklore about it.

SMITHSONIAN INSTITUTION: Report of the Secretary and the Financial Report of the Executive Committee of the Board of Regents 1952—Alexander Wetmore, Secretary—*Smithsonian Institution*, 175 p., illus., paper, free upon request direct to publisher, Washington 25, D. C.

WHAT TO LISTEN FOR IN MUSIC—Aaron Copland—*New American Library*, 159 p., paper, 35 cents. A noted composer gives you the technical information you need in order to listen intelligently to good music.

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PUBLIC HEALTH

Atomic Age Dangers

► THE ATOMIC age is bringing increasing danger to industrial workers even if another atom bomb is never dropped. The danger comes from the use of radioactive substances in more and more industrial processes.

We need not, however, have another tragedy or series of them such as the one a generation ago when girls who painted watch dials died of radium poisoning. Exposure to radiation can be controlled and injury to health prevented, Saul J. Harris, physicist with the New York State Department of Labor, declared at the Congress on Industrial Health sponsored by the American Medical Association in Chicago. "The examination of welds and metal castings for flaws by the use of radium and X-ray has become routine in foundry operations in New York State. Radioactive cobalt is being used increasingly for this purpose. The use of betatrons for inspection purposes is also steadily gaining favor in industry," Mr. Harris said.

"The fluoroscope has not only made its way into retail shoe stores, but it is being used in industry as an inspection device—for the detection of misplaced nails in shoe manufacture, for example, or the detection of foreign bodies in packaged foods.

"Radioactive static eliminators are finding an increasing market in plants having potential fire hazards due to accumulations of static.

"Radioactive isotopes are stepping out of the expert hands of technical personnel in research laboratories and are now coming to be used by lay workers who are not familiar with the potential hazards to health or with the precautions which must be taken."

BIOLOGY

Normal Liver Proteins Differ From Cancerous

► THE LIVER of a normal, adult rat contains proteins which show distinct and consistent differences from proteins from a liver of a cancerous rat.

Thus report Dr. A. M. Schechtman and Howard Hoffman of the zoology department at the University of California at Los Angeles, who have recently completed a study of the livers of rats by electrophoresis.

Electrophoresis is a method of identifying molecules by measuring their speed as they are drawn by an electric current. The speed varies with different types of molecules.

Protein molecules from normal, young rats showed a resemblance to those of cancerous livers. This suggests that certain similar changes occur in the proteins of rapidly growing tissue, whether cancerous or not, Dr. Schechtman said.

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The effects of repeated exposure to radiation are cumulative, Mr. Harris warned. Individuals differ in their susceptibility. There may be a long latent period between exposure and signs of injury to health.

Exposure to radiation is particularly insidious because we do not have any senses, such as touch or smell, for perceiving radiation and so can be subjected to dangerous amounts without knowing it.

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ELECTRONICS

Research Produces Better Antenna

► MANY A short-wave radio enthusiast soon may fling his dits and dahs to remote points of the world from a sleeve-type antenna that has been improved through a joint Army-Navy-Air Force radio research project at Harvard University.

The antenna is said to be "more desirable" than the widely used, conventional dipole antenna because of its simplicity and ruggedness. It has a greater band width and can be matched with the transmitting equipment more easily than the usual dipole antenna.

Sleeve-type antennas are coaxial cables in which the inside rods extend beyond the outside cylinder. Until now they have not been widely used because the theoretical analysis which enables engineers to design such antennas for particular setups had not been highly developed.

But the research project resulted in ways to design the antennas by extending the same general principles that work in dipole antenna design.

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