

Books of the Week

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ACTIVITY PERIOD IN PUBLIC HIGH SCHOOLS—Ellsworth Tompkins—*Govt. Printing Office*, 17 p., paper, 15 cents. Information and statistics on how high schools organize the time devoted to the activity period. Bulletin No. 19 of the Office of Education.

AIR WAR AND EMOTIONAL STRESS: Psychological Studies of Bombing and Civilian Defense—Irving L. Janis—*McGraw-Hill*, 280 p., \$5.00. Results of research by the Rand Corporation for the Air Force including evaluation of the psychological effects of bombing at Hiroshima and Nagasaki and suggestions of what can be done toward education for survival.

THE ALGEBRA OF VECTORS AND MATRICES—Thomas L. Wade—*Addison-Wesley*, 189 p., \$4.50. Text for a first course in modern algebraic theory.

ANIMAL TOOLS—George F. Mason—*Morrow*, 94 p., illus., \$2.00. Describing such tools as the drills of insects, the cleaning kit carried by bees, the gyroscope of the fly and the powder puff and comb of the biter.

ARIZONA FLORA—Thomas H. Kearney, Robert H. Peebles, and others—*University of California Press*, 1032 p., illus., \$7.50. To afford means for identifying the approximately 3,370 species growing wild in Arizona.

ARTHRITIS: What You Can Do About It—Robert D. Potter—*Dodd, Mead*, 239 p., \$2.75. To tell patients and their families what medical science has to offer for this extremely painful illness. By a science writer.

BEGINNER'S GUIDE TO ATTRACTING BIRDS—Leon A. Hausman—*Putnam's*, 127 p., illus., \$2.00. With directions for making at home bird baths, houses, feeding stations and other devices for attracting feathered visitors to your garden.

BRITISH AIRCRAFT: A Pictorial Survey—*British Information Services*, 35 p., illus., paper, free upon request to publisher, 30 Rockefeller Plaza, New York 20, N. Y. Excellent photographs of the jets and other latest-type planes made in Britain.

CAREERS IN FORESTRY—Forest Service—*Govt. Printing Office*, USDA Misc. Pub. No. 249.

22 p., illus., paper, 15 cents. One third of the United States is forest land. The job of the forester is the management of wild lands so that they will be permanently and continuously productive.

CALCULUS AND ANALYTIC GEOMETRY—George B. Thomas, Jr.—*Addison-Wesley*, 685 p., \$6.00. The reader is expected to know high school algebra, plane and solid geometry and trigonometry.

CONSUMER'S STAKE IN TEXTILE PROCESSING—Jules Labarthe, Jr.—*Mellon Institute*, 3 p., illus., paper, free on request to publisher, 4400 Fifth Avenue, Pittsburgh 13, Pa. Discussing the demands made by the consumer on textile finishes.

THE DEPARTMENT OF STATE TODAY—Department of State—*Govt. Printing Office*, 33 p., illus., paper, 15 cents. Describing the organization and functions of the State Department, including the working of the Marshall Plan and Point Four.

FUNDAMENTALS OF ELECTRONICS—F. H. Mitchell—*Addison-Wesley*, 242 p., illus., \$4.50. As instrumentation grows in importance, electronics penetrates more and more into other branches of science. This text lays a foundation for electronics students and shows others how electronics can be applied in other branches.

FUNDAMENTALS OF SEMIMICRO QUALITATIVE ANALYSIS—Erwin B. Kelsey and Harold G. Dietrich—*Macmillan*, rev. ed., 328 p., illus., \$4.00. Designed to provide correlation of theory with actual laboratory practice.

GARDEN SPIDER—Mary Adrian—*Holiday House*, 38 p., illus., \$2.00. A simple account for children of the life cycle of an interesting garden resident. Attractive illustrations in color.

HOW TO HAVE A BABY: Techniques for Fertile Marriage—Robert A. Klein and B. J. Schuman—*Hermitage*, 224 p., \$2.50. Suggestions to the estimated 4,500,000 childless couples for whom parenthood is possible on what they may do to overcome their lack of fertility.

HOW TO STUDY, HOW TO SOLVE, ARITHMETIC THROUGH CALCULUS—H. M. Dadourian—*Addison-Wesley*, 121 p., illus., paper, 60 cents. Intended to overcome the fear and mystification associated with advanced mathematics.

THE HUMAN SIDE OF INDUSTRY—*Industrial Hygiene Foundation*, 102 p., illus., paper, \$2.00. The transactions of the 15th annual meeting of the Foundation.

AN INTRODUCTION TO ACOUSTICS—Robert H. Randall—*Addison-Wesley*, 340 p., illus., \$6.00. A textbook for the student who has completed a general college course in physics. Includes chapters on musical instruments.

IODINE: Its Properties and Technical Applications—*Chilean Iodine Educational Bureau*, 74 p., paper, free upon request to publisher, 120 Broadway, New York 5, N. Y. Describing important uses of iodine in organic chemistry and industry.

LABORATORY MANUAL FOR GENERAL ZOOLOGY—Tracy I. Storer—*McGraw-Hill*, 2nd ed., 150 p., illus., \$2.50. Includes instructions for making dissections.

MAGNETIC RESULTS FROM HUANCAYO OBSERVATORY, PERU—P. G. Ledig and others—*Carnegie Institution of Washington*, 127 p., illus., paper, 75 cents, cloth, \$1.50. Presenting data from this observatory 11,000 feet above sea level.

MAGNETIC RESULTS FROM WATHEROO OBSERVATORY, WESTERN AUSTRALIA—W. C. Parkinson and others—*Carnegie Institution of Washington*, 127 p., illus., paper, 75 cents, cloth, \$1.50.

MATHEMATICS OF FINANCE—Albert E. May—*American Book*, 264 p., \$3.00. Giving a foundation in theory with a few simple, important formulas which can be adapted to many types of problems.

MIDDLE CAMBRIAN STRATIGRAPHY AND FAUNAS OF THE CANADIAN ROCKY MOUNTAINS—Franco Rasetti—*Smithsonian*, 277 p., illus., paper, \$2.50. Describing an area famous for the great development, high fossil content and splendid exposures of the entire Cambrian system.

THE MUSEUM: New Jersey Minerals in the Museum Collection—Harold R. Magnuson—*Newark Museum Association*, 16 p., illus., paper, 50 cents. Historical notes on man's use of minerals, especially in New Jersey.

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RESIDENCE AND MIGRATION OF COLLEGE STUDENTS, 1949-50—Robert C. Story—*Govt. Printing Office*, Misc. No. 14, Office of Education, 61 p., paper, 35 cents. In the past 20 years, there has been practically no change in the proportion of students going outside their states to college.

THE SOUTH AMERICAN HANDBOOK 1951—*Trade and Travel Publications (H. W. WILSON)*, 770 p., maps, \$1.50. Travel information, including climate, transportation, hotel facilities, politics and food.

TRANSACTIONS OF CHEMICAL-ENGINEERING CONFERENCES: Fifteenth Annual Meeting—*Industrial Hygiene Foundation*, 45 p., illus., paper, 75 cents.

WHAT'S THE WORLD COMING TO? Science Looks at the Future—A. M. Low—*Lippincott*, 214 p., illus., \$3.00. A British scientist and inventor dips into the future and foresees an amazing world. Published in England under the title "It's Bound to Happen."

Science News Letter, October 6, 1951

Hens exposed to invisible ultraviolet light lay from 10% to 19% more eggs than birds under normal conditions.

STOP SAYING THAT TRAVEL IS TOO EXPENSIVE

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PHYSIOLOGY

Moving Makes You Shiver

➤ SCIENTISTS HAVE not made up their minds yet whether you are better off just sitting still when you are cold, or whether you ought to get up and move about a little.

One thing is certain, though; you're more likely to shiver if you do move about. This has been shown by two Cambridge University scientists, Drs. E. M. Glaser and R. V. Holmes, who report some experiments they did on shivering in THE JOURNAL OF PHYSIOLOGY.

The doctors collected nine healthy men ranging between 20 and 37 years in age and got them to sit with their feet and legs in tubs containing about 15 inches of water cooled down to between 45 and 55 degrees Fahrenheit.

As long as the men just sat quietly they did not shiver, even after an hour and one-half of the cold foot baths, but they all shivered within 4 to 17 minutes after the cooled limbs were exercised, regardless of how long they had been cooled.

The doctors explain this as due to the fact that the blood flow through cooled

muscles is cut way down, so that the amount of cold blood flowing up through the legs into the body is small while the legs are cool. However, exercise of the muscles greatly speeds up the flow of blood and the cold blood which then pours from the legs into the general circulation would seem to stimulate a shivering reflex center.

Drs. Glaser and Holmes say: "It would be tempting to conclude now that slow exercise in a cold place is also a bad thing because it increases the blood flow to cold extremities. Mild exercise, however, causes shivering, and this may more than counteract the augmented loss of heat."

The latter is the case because the work done by the muscles in shivering generates heat so that, as the doctors put it, "it cannot, thus, be predicted whether a person who is cold would gain or lose heat if he moved about a little."

Of one thing they are certain: that hard exercise "is certainly an advantage during severe cooling."

Science News Letter, October 6, 1951

ENTOMOLOGY

Set Up Insect Ellis Island

➤ A WEST Coast "Ellis Island for Insects" has been set up at Albany, Calif., to handle the safe importation of beneficial insects.

The imported "bugs that fight bugs" are liberated to fight against the agricultural pests which have reached California from foreign countries, having left their natural enemies behind.

For nearly 30 years the University of California's Division of Biological Control has maintained quarantine quarters at Riverside in the southern part of the state.

The establishment of the Albany unit provides additional facilities to test insects that may control agricultural pests in central and northern California. The location is close to steamship and air terminals at San Francisco.

Opened recently, the quarantine laboratory has already received collections from all over the world: parasites of the olive scale from India and Pakistan, parasites of the elm scale and fig scale from France, a small ladybird beetle from Australia which preys on mites.

The quarantine material is handled by the University's College of Agriculture through agreement with the United States and the California State Departments of Agriculture. It is the only state institution in the United States granted quarantine privileges because of its trained personnel and especially-designed facilities for quarantine work.

The new Albany quarantine building is absolutely insect-proof with double windows, smooth walls and ceiling, doors with gasket sealing and an entry system through an ante-room. The quarantine wing is locked at all times and access is restricted.

The facilities at Albany are designed to speed up or retard the rate of development of insects by individual temperature controls in each room. At times this is a factor in handling insects from the southern hemisphere which are conditioned to seasons just the opposite of those in California. Temperature controls for growth-regulating are also useful in breeding insects with complex life histories.

Science News Letter, October 6, 1951

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