

Books of the Week

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AMERICAN POLYDESMOID MILLIPEDES OF THE GENUS *SIGMORIA*, WITH NOTES ON DISTRIBUTION—Richard L. Hoffman—*American Museum of Natural History*, 7 p., paper, 25 cents.

THE AMSTERDAM NATURALIST, Vol. I, No. 1: Bulletin of the Zoological Museum Amsterdam—H. Engel and J. J. Hoedeman, Eds.—*De Regenboog*, monthly, 33 p., illus., \$2.15 per year. A periodical containing reports on Dutch biological activities in English.

THE BASIS OF A DEVELOPMENT PROGRAM FOR COLOMBIA: A Report of a Mission—*International Bank for Reconstruction and Development*, 76 p., illus., paper, 50 cents. A summary of a more detailed report of Colombia's economic potentialities. Dr. Lauchlin Currie headed the mission.

BIG BOOK OF SCIENCE FICTION—Groff Conklin, Ed.—*Crown*, 545 p., \$3.00. Thirty-two stories of science to come, atomic power, interstellar space, thought transfer and four dimensional adventures. Among the authors included are Lewis Padgett, Waldemar Kaempffert, Ray Bradbury and Murray Leinster.

BIOLOGY OF DROSOPHILA—M. Demerec, Ed.—*Wiley*, 632 p., illus., \$10.00. The anatomy, histology and development of the vinegar fly so widely used in laboratories.

THE DEVELOPMENT OF A POLICY FOR INDUSTRIAL PEACE IN ATOMIC ENERGY—Donald B. Straus—*National Planning Association*, 104 p., paper, \$1.00. The author discusses labor problems and labor relations in the atomic energy industry.

EDUCATION FOR A LONG AND USEFUL LIFE—Homer Kempfer—*Gov't. Printing Office*, 32 p., illus., paper, 20 cents. A bulletin primarily concerned with the problems of education for the aging.

ESSENTIALS OF MEDICINE: The Basis of Nursing Care—Charles Phillips Emerson, Jr. and Jane Elizabeth Taylor—*Lippincott*, 16th ed., 815 p., illus., \$4.00. A basic handbook brought up-to-date.

THE FIRST ANESTHETIC: The Story of Crawford Long—Frank Kells Boland—*University of Georgia Press*, 160 p., illus., \$3.00. The author writes a biography of the man he believes first used a surgical anesthesia.

THE FLOWER ARRANGEMENT CALENDAR 1951—Helen Van Pelt Wilson—*Barrows*, approx. 106 p., illus., paper, \$1.00. A record book for day by day engagements. Well illustrated with black and white floral arrangements.

THE GENERA COLIBRI, ANTHRACOTHORAX, KLAIS, LOPHORNIS, AND CHLORESTES: Studies of Peruvian Birds. No. 57—John T. Zimmer—*American Museum of Natural History*, 28 p., paper, 25 cents. A brief report.

A NEW *SIGANUS* FROM THE GREAT BARRIER REEF, AUSTRALIA—Otis Barton—*American Museum of Natural History*, 2 p., paper, 25 cents. A brief description of a coral reef fish.

NEW TRINIDAD MYRMICINAE, WITH A NOTE ON *BASICEROS* SCHULZ (HYMENOPTERA, FORMICIDAE)—Neal A. Weber—*American Museum of Natural History*, 6 p., illus., paper, 25

cents. A brief report on the finding of some archaic ants in the British West Indies.

NUCLEAR PHYSICS: A Textbook—Francis Bitter—*Addison-Wesley*, 200 p., illus., \$5.50. A textbook intended for students who have had a course in atomic theory in addition to the usual introductory physics course. (Due to typographical error, price incorrectly listed *SNL*, Aug. 26, p. 143.)

PHOTOGRAPHY IN ASTRONOMY—E. W. H. Selwyn—*Eastman Kodak*, 112 p., illus., \$2.75. An introduction to astronomical photography.

PHYSICAL CHEMISTRY FOR PREMEDICAL STUDENTS—John Page Amsden—*McGraw-Hill*, 2nd ed., 317 p., illus., \$4.25. A college text brought up-to-date.

PRINCIPLES OF COLOR SENSITOMETRY—C. F. J. Overhage, Ed.—*Society of Motion Picture and Television Engineers*, 72 p., illus., paper, \$1.00. A basic text.

PROCEEDINGS VOLUME OF THE GEOLOGICAL SOCIETY OF AMERICA FOR 1949—*Geological Society of America*, 274 p., illus., paper, \$1.50. Contains the proceedings of the annual meeting, reports of memorials and various committees of the Society.

PROCESS AND UNREALITY: A Criticism of Method in Whitehead's Philosophy—Harry Kohlsaat Wells—*King's Crown Press*, 211 p., \$3.00. A discussion of the interrelations of Whitehead's natural philosophy and speculative system.

THE TRUTH ABOUT YOUR EYES—Derrick Vail—*Farrar, Straus*, 180 p., \$2.50. A discussion of human eyes and how to protect them. For the layman.

VARIATION AND EVOLUTION IN PLANTS—G. Ledyard Stebbins, Jr.—*Columbia University Press*, 643 p., illus., \$8.00. A general account of some of our latest findings in plant evolution.

Science News Letter, September 2, 1950

BACTERIOLOGY

Bacteria, Like Body Cells, Divide by Mitosis

➤ BACTERIA, one-celled microscopic organisms that can be both friend and foe to man, apparently divide by the same complex process, called mitosis, that human cells go through in dividing to make more of their number.

What is believed "the first clearcut evidence for mitosis in bacteria" was presented by Drs. Edward D. DeLamater and Stuart Mudd of Philadelphia at the Fifth International Congress of Microbiology in Rio De Janeiro.

The meaning of this fundamental discovery in terms of practical application cannot well be foreseen at present.

One-celled animals, such as amoebae and paramecia, are known to divide by the process of mitosis. Cells of larger plants, as well as larger animals, also undergo mitosis. But until now the nucleus of a

one-celled plant has never been shown to do this. In fact, it is only within recent years that scientists were at all sure bacteria even had nuclei.

Chromosomes, at first elongated into delicate beaded threads and later shortened, condensed and thickened, were seen by the Philadelphia scientists in the nucleus of a microorganism called *Bacillus megatherium*.

At the metaphase stage of mitosis, the chromosomes were seen as two dense round bodies and a bar, giving a chromosomal number of three. Later they again appeared in beaded threads.

New techniques for staining and fixing the bacterial cells, including a quick freezing process, enabled the scientists to see the chromosomes and watch their behavior through the stages of mitosis.

Science News Letter, September 2, 1950

AGRICULTURE

Enough Fertilizer For Entire World

➤ WITHOUT fertilizer, the world would be a lot hungrier than it is. But this summer, the Food and Agriculture Organization of the United Nations reports, a vital postwar corner was turned. A record amount of fertilizer is being produced—enough, for the first time since World War II, to satisfy world demand.

For the fiscal year ending June 30, nearly 13,000,000 metric tons of fertilizer was produced, an all-time record. Russia was the only major country not included in the FAO statistics.

In the coming year—barring effects of the Korean conflict—FAO commodity experts predict fertilizer output and consumption will go up another seven percent. "Because countries can now plan crop production programs on a broader base of available fertilizer supply, their agronomic needs can be better satisfied," the report states. In terms of a hungry world can better understand, the outlook for more food is good.

Science News Letter, September 2, 1950

A LOWER COST WAY TO TRAVEL

Life at sea—on a freighter—is a wonderful world of its own. True, there's none of the plush of the floating hotels. Neither are there crowded decks, bustling dining rooms, or unwanted noise.

Instead, you are one of the family. You get privileges impossible on a liner. You dine with the ship's officers, make the ship your own, and often steam into ports the liners never enter.

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