

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.

AEROSPACE DICTIONARY—Frank Gaynor, introd. by Wernher von Braun.—*Philosophical Lib.*, 260 p., \$6. Reference on essential terminology in space exploration from "AAM" to "zip fuel," describes type and mission of guided missiles and satellites that achieved orbit.

THE ARTHRITIS HOAX: \$250,000,000 in Frauds and Fallacies—Ruth Walrad for Arthritis and Rheumatism Foundation—*Public Affairs Pamphlet*, #297, 20 p., illus., paper, 25¢, direct to publisher, 22 E. 38th St., New York 16, N. Y.

BASICS OF INDUCTION HEATING, 2 Vols.—Chester A. Tudbury—*Rider*, 132 p., 133 p., illus., \$8.90 per set; paper, \$7.80.

BIOCHEMISTRY OF STEROIDS—Erich Heftmann and Erich Mosettig—*Reinhold*, 231 p., \$6.90. Concise source of information on the biochemical aspects of steroid hormones.

COLLEGE ENTRANCE EXAMINATIONS—Louis K. Wechsler, Martin Blum and Sidney Friedman—*Barnes & Noble*, 305 p., illus., paper, \$1.95. Practice tests, exercises, aptitude and achievement tests for students preparing for college.

DESIGN FOR A BRAIN: The Origin of Adaptive Behaviour—W. Ross Ashby—*Wiley*, 2nd rev. ed., 286 p., \$6.50. Based on fact that the nervous system behaves adaptively and the hypothesis that it is essentially mechanistic, the author attempts in mathematical form to deduce what sort of mechanism it must be to behave so differently from any machine made so far.

THE DYNAMIC BEHAVIOR OF THERMOELECTRIC DEVICES—Paul E. Gray—*Wiley*, 136 p., \$3.50. This Technology Press Research Monograph investigates the small-signal dynamic behavior of thermoelectric devices.

EFFECTS OF TRAFFIC CONTROL DEVICES—Anthony J. Galotti and others—*Highway Res. Bd.*, Bull. 244, 97 p., illus., paper, \$1.80. On the effects of curb parking on intersection capacity, and other traffic experiments.

ELECTRICAL CONTACTS, 1959—W. L. R. Henderson and others—*Pa. State Univ., College of Engineering*, 129 p., illus., paper, \$5. Papers presented at the 1959 Engineering Seminar, in the areas of static, arcing, and sliding contacts.

ELECTROMAGNETIC ENERGY TRANSMISSION AND RADIATION—Richard B. Adler, Lan Jen Chu and Robert M. Fano—*Wiley*, 621 p., \$14.50. Treats electromagnetic waves and oscillations in one, two, and three space dimensions, using time-domain, complex-frequency-domain, and energy points of view.

EPIDEMIOLOGY AND MENTAL ILLNESS—Richard J. Plunkett and John E. Gordon—*Basic Bks*, 126 p., \$2.75. Sixth monograph of the Joint Commission on Mental Illness and Health.

THE ETIOLOGY OF SCHIZOPHRENIA—Don D. Jackson, Ed.—*Basic Bks.*, 456 p., illus., \$7.50. Leading specialists and practitioners present genetic, biochemical, dynamic, physiological, psychological and socio-cultural aspects of schizophrenia.

THE EXPLORATION OF THE SOLAR SYSTEM—Felix Godwin—*Plenum Press*, 200 p., illus., \$6.50. Nineteen-year-old British physics student outlines in detail future developments in astronautics, expeditions to moon, Mars and Venus, and discusses the potential work of interplanetary explorers. Experts consider the book a valuable contribution to the literature of astronautics.

THE HARVEY LECTURES, 1958-1959—Francois Jacob, V. B. Wigglesworth and others—*Academic*, 312 p., illus., \$7.50. On genetic control of viral functions, on metamorphosis and body form, and other research.

HEAT TRANSFER—Alan J. Chapman—*Macmillan*, 452 p., \$9. Textbook presenting the fundamental approach in a rigorous manner.

INDEX TRANSLATIONUM: International Bibliography of Translations, Vol. 11—*UNESCO*

(*Columbia Univ. Press*), 730 p., \$20.50; paper \$18.50. Lists 30,000 translations published in 64 countries in 1958; each national bibliography subdivided into ten classifications.

INTRODUCTION TO ATOMIC ENERGY—William G. Atkinson—*Rider*, 68 p., illus., paper, \$1.35. Short primer explaining fundamental terms.

INTRODUCTION TO COLLEGE PHYSICS—Rogers D. Rusk—*Appleton*, 2nd ed., 944 p., illus., \$8. Introductory textbook for the general student.

INTRODUCTION TO MODERN NETWORK SYNTHESIS—M. E. Valkenberg—*Wiley*, 498 p., \$11.75. Basic methods of network synthesis, including applications to communications and automatic control systems.

MAN AGAINST AGING—Robert S. de Ropp—*St. Martins*, 310 p., \$5. Biochemist reviews for the general reader the major findings of experimental research in the fields of the physiology and chemistry of the aging process.

MAYA CITIES—Paul Rivet, transl. from French by Miriam and Lionel Kochan—*Putnam*, 234 p., illus., \$5.95. Abundantly illustrated summarization of the essential facts known about the Mayan civilization.

MILK PRODUCTION AND PROCESSING—Henry F. Judkins and Harry A. Keener—*Wiley*, 452 p., illus., \$7.95. Orientation course in dairying.

MOVER OF MEN AND MOUNTAINS: Autobiography—R. G. LeTourneau—*Prentice-Hall*, 282 p., photographs, \$3.95. Personal story of the inventor of complex earth-moving machinery.

OPERATIONS RESEARCH AND SYSTEMS ENGINEERING—Charles D. Flagle, William H. Huggins and Robert H. Roy, Eds.—*Johns Hopkins Press*, 889 p., illus., \$14.50. Compendium on the meaning, use, and importance of the various disciplines concerned with the operation of total systems, human organization, man-machine systems, or complex physical systems.

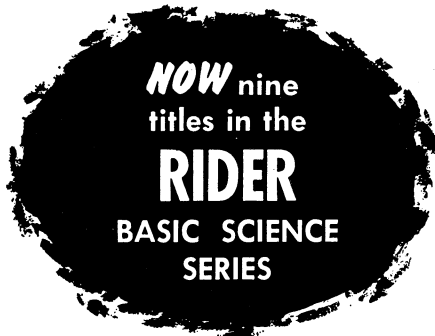
PHYSICS OF PRECIPITATION: Geophysical Monograph No. 5—Helmut Weickmann, Ed.—*Am. Geophysical Union*, 435 p., illus., \$12.50. Proceedings of the Second Cloud Physics Conference at Woods Hole, Mass., June 3-5, 1959.

POPULATION TRENDS IN EASTERN EUROPE, THE USSR AND MAINLAND CHINA: Proceedings of 36th Annual Conference, 1959—*Milbank Memorial Fund*, 336 p., paper, \$2. About demographic changes and manpower trends in Communist-controlled countries which account for about one-third of the world's population today. (See p. 393)

PROCEEDINGS OF THE 1960 HEAT TRANSFER AND FLUID MECHANICS INSTITUTE—D. M. Mason, W. C. Reynolds and W. G. Vincenti, Eds.—*Stanford Univ. Press*, 259 p., illus., paper, \$8.75. Preliminary edition of papers presented at 13th Institute, June 15-17, 1960, at Stanford.

THE RUSTY LIZARD: A Population Study—W. Frank Blair—*Univ. of Texas Press*, 185 p., illus., \$4.50. Intensive study of the dynamics of a lizard population on a ten-acre tract, readable for the layman, and a significant contribution to ecology.

SCIENTISTS IN GOVERNMENT—Earl W. Lindveit, foreword by Edward A. Meyerhoff—*Public Affairs Press*, 84 p., \$3.25. Called a "diagnostic anatomical guide to science and engineering in Washington." Covers policy formation, training, recruitment and retention of scientists, and the climate for scientific research.



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NEW—

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THE SEARCH FOR NEW ANTIBIOTICS: Problems and Perspectives—G. F. Gause—*Yale Univ. Press*, 97 p., illus., \$4.75. Based on Trends in Science lecture at Yale, December 1959, by the Director of the Institute of Antibiotics of the Academy of Medical Sciences, Moscow.

THORACIC SURGERY BEFORE THE 20TH CENTURY—Lew A. Hochberg, foreword by Edward D. Churchill—*Vantage*, 858 p., illus., \$15. The history of chest surgery, from the beginnings in Egypt, through Greek, Roman, Arabian, European and American precursors of today's thoracic surgeons.

THE TRUE BOOK ABOUT MAN—Patrick Moore—*Muller (Sportshef)*, 142 p., illus. by P. Cullen, \$2.75. Short history of earth and man. For young people.

VISTAS IN ASTRONOMY, Vol. 3—Arthur Beer, Ed.—*Pergamon*, 345 p., illus., \$18. International coverage of contemporary astronomical research, emphasizing new techniques and methods and their interactions with theoretical developments.

VOYAGE INTO DARKNESS: To Alaska with Bering—W. J. Granberg—*Dutton*, 190 p., \$3. Story of an expedition, for young people.

YOUNG SCIENTIST TAKES A RIDE: Guide to Outdoor Observations from a Car Window—George Barr—*Whittlesey House*, 160 p., illus. by William D. Hayes, \$3. Directs attention to many thought-provoking sights, sounds and other observations by those riding in a car.

Science News Letter, June 18, 1960

ORNITHOLOGY

African Cattle Egret Seen in Missouri

A CATTLE EGRET, a native African bird rare in the United States, has been sighted for the first time in the Trimble Wildlife area, Clinton County, Mo. Ted Pucci, regional reporter for the National Audubon Society, identified the rare bird, which is smaller than the American egret and has different coloring. The cattle egret has been spreading its range to South America and northward into the U. S. in recent years.

Science News Letter, June 18, 1960

ICHTHYOLOGY

Huge Shrimp Harvest Neglected in Indonesia

SMALL AND LARGE shrimps are so plentiful in Indonesian waters that experts estimate that more than one million pounds per month could be harvested, but the industry is so underdeveloped that fishermen catch only about twice as much as they can eat themselves. The U. S. Department of the Interior reports there are no foreign companies engaged in shrimp fishing in Indonesia, nor are there any facilities either for increasing the catch or for its efficient marketing.

Science News Letter, June 18, 1960

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ENTOMOLOGY

Wasps May Control Pests

AN INSECT rearing technique developed at Riverside, Calif., may lead to bombarding a major citrus pest with millions of its enemies.

If grower organizations can raise natural enemies cheaply and in great numbers, they may be able to control the pest for the same cost as insecticide—but without harmful side effects.

The pest is California red scale, worst of all the insects attacking California oranges, lemons and grapefruit.

The "good" insect is a tiny wasp imported by the University of California from China. It is called *Aphytis lingnanensis*.

Success of the scheme hinges on getting 4,000 female wasps a year into each citrus tree, Dr. Paul DeBach explains in a new University of California publication, "Commercial Mass Culture of the California Red Scale Parasite," Bulletin Number 770.

Written with technician Ernest White, also of the Citrus Experiment Station, Riverside, the bulletin gives full instructions on rearing and releasing of the parasitic wasp. *Aphytis* stings the scale and lays its eggs on it. Hatching *Aphytis* larvae then eat and kill the scale.

In coastal areas of moderate climate, *Aphytis* wasps are usually able to control the scale unaided if insecticides are not used. In intermediate climatic areas, periodic release of the wasp has worked well in test plots.

In more rigorous climates farther inland, Dr. DeBach cautions, insectaries would have to distribute new colonies of wasps each month to boost their effectiveness, using a better-adapted strain, tolerant to greater variations of temperature.

Such a wasp has been developed by the Riverside scientists. It is currently undergoing field tests for possible use by growers.

Already the principal insect pest in most California citrus areas, red scale has spread in recent years to the Central Valley, mainly in Tulare, Fresno, and Kern Counties. In Ventura County, where the scale is becoming more serious, a growers' cooperative insectary is going into mass production of *Aphytis*.

Upwards of 4,000 red scales can infest a single fruit. Several million of the sucking insects may attack a tree, severely injuring leaves, twigs, and branches, and ruining the appearance of fruit.

To combat scale, tremendous numbers of parasites must be used. A two-man insectary can produce 176,000,000 female parasites a year for release over a nine-month period.

Colonization is fairly simple. A half-pint carton containing 4,000 females is set in a tree in the center of each nine-tree block in the orchard. When the lid is removed the parasites rapidly disperse through the tree and fly to adjacent trees until they occupy all scale-infested trees.

Total cost per year to run the insectary would be \$17,000, the Riverside scientists estimate. This includes the expense of placing parasites in the orchard.

Science News Letter, June 18, 1960



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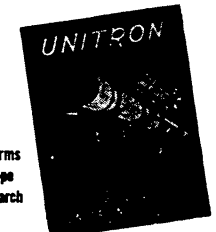
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