

Mortar, Concrete, Mineral Aggregates, Bituminous Materials, Soils—*Am. Soc. for Testing and Materials*, 1675 p., illus., \$21. A triennial publication, supplements will be published in 1962 and 1963.

OPERATION OF WASTEWATER TREATMENT PLANTS: Manual of Practice, No. 11—Subcommittee on Operation of Sewage Plants—*Water Pollution Control Federation*, 178 p., illus., paper, \$3. Training and reference volume with detailed outline, discussing all aspects of sewage plant operations.

OUTER SPACE: Prospects for Man & Society—Lincoln P. Bloomfield, Ed.—*Am. Assembly (Prentice-Hall)*, 202 p., paper, \$1.95. Non-partisan analysis of the complex issues and alternatives of the developing space age.

RHYTHMIC ACTIVITY IN ANIMAL PHYSIOLOGY AND BEHAVIOUR—J. L. Cloudsley-Thompson—*Academic Press*, 236 p., illus., \$6.80. Comprehensive review of present knowledge of animal rhythms among both vertebrates and invertebrates.

THE ROAD TO MODERN SURGERY: The Advances in Medicine and Surgery during the Past Hundred Years—Hugo Glaser, transl. from German by Maurice Michael—*Dutton*, 224 p., photographs, \$5.75. Physician reviews a period of revolutionary advance and discovery in medical science.

SCIENCE AND THE NATION: Policy and Politics—J. Stefan Dupre and Sanford A. Lakoff—*Prentice-Hall*, 181 p., \$3.95; paper, \$1.95. Examination and appraisal of the vital issues in areas where science, technology and political science interact in the interest of national affairs.

A SECOND COURSE IN NUMBER THEORY—Harvey Cohn—*Wiley*, 276 p., \$8. Second-semester course, gives historical development of number theory, with emphasis on quadratic fields and discussion of applications of ideal theory.

SEEING THE EARTH FROM SPACE: What the Man-Made Moons Tell Us—Irving Adler—*New Am. Lib.*, 144 p., illus. by Ruth Adler, photographs, paper, 60¢. Based in part on author's "Man-Made Moons," with new discoveries about radiation, magnetism, electric currents and other findings added.

SPACE GUIDE—Vincent F. Callahan, Jr., Ed.—

METEOROLOGY

Plan Weather Program

➤ A \$5 BILLION research program to conquer the atmosphere in the next decade was outlined at the American Meteorological Society meeting in New York by Dr. Sverre Pettersen, chairman of the department of geophysical sciences at the University of Chicago.

More than two-thirds of the funds will go for rocket and satellite experiments to probe the upper atmosphere and the fringe of space where physical and chemical processes are influenced directly by solar activity and cosmic rays. The remainder will go for studies of the lower atmosphere, motions and weather systems.

Reviewing the rapid progress in meteorological research in the past 30 years, Dr. Pettersen said, "An adequate description of the atmosphere by physically significant measurements is almost within our grasp." Automatic weather reporting stations plus the more recent advances in surveillance of the atmosphere by rockets and satellites promise the development of weather fore-

casting "on a firmer scientific basis, whereas such hopes even two decades ago would have been little more than an act of faith."

Highlights of the 10-year program include: A tripling of Federal expenditures for research in the atmospheric sciences, not including operation of meteorological services, from the present \$200,000,000 to more than \$600,000,000 a year by 1971;

Stimulating a three-fold increase in the number of active scientists, graduate students, and university faculty members in the atmospheric sciences;

Increasing the annual output of Ph.D.'s in the atmospheric sciences at least four times.

The vast undertaking to give man this understanding and control was planned by the National Academy of Sciences-National Research Council, Dr. Pettersen emphasized.

The plan is now in the hands of President Kennedy's Special Assistant for Science and Technology, Dr. Jerome B. Wiesner.

• *Science News Letter*, 81:92 February 10, 1962

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Callahan Publications, 2nd ed., 216 p., illus., paper, \$25. Up-to-date information on NASA organization, projects, procurement directory, contractors, subcontracting opportunities, ARPA and NBS programs.

A STUDY OF HISTORY, Vol. 1: Introduction. The Geneses of Civilizations, Part One. Vol. 2: The Geneses of Civilizations, Part Two. Vol. 3: The Growths of Civilizations—Arnold J. Toynbee—*Oxford Univ. Press*, 484 p., 452 p., 551 p., paper, \$2.45, \$2.35, \$2.75. First instalment of paper back edition of complete text of this work.

THE SUN AND ITS FAMILY—Irving Adler—*New Am. Lib.*, 126 p., illus. by Ruth Adler, paper, 60¢. Reprint of book first published in 1958, giving a short, readable review of our knowledge of the solar system.

TEXAS AND THE WAR WITH MEXICO—Fairfax Downey with Paul M. Angle—*Am. Heritage (Meredith)*, 153 p., illus., \$3.95. Fully illustrated with paintings of the period, this colorful book tells the story of the Mexican War, for young people.

THIS GREAT AND WIDE SEA: An Introduction to Oceanography and Marine Biology—R. E. Coker—*Harper*, 325 p., illus., paper, \$2.25. Reprint of book originally published in 1947, gives layman and student a grasp of the intricate relations of chemical, physical, dynamic and biological phenomena in the ocean.

TREES AND SHRUBS IN THE HEART OF DIXIE: Including Some Cultivated Plants and Common Vines—Blanche Evans Dean—*Coxe Pub. Co.*, 246 p., illus. by Forrest Bonner, \$7.50. An aid in learning to know the woody plants in all Southern states, except western Texas and southern Florida.

UNIVERSITY CALCULUS with Analytic Geometry—Charles B. Morrey, Jr.—*Addison-Wesley*, 754 p., diagrams, \$12.50. Textbook, emphasizing theory with the student required to prove many theorems as exercises, includes thorough treatment of limits and of differential.

VITAMINS AND HORMONES: Advances in Research and Applications, Vol. 19—Robert S. Harris and Dwight J. Ingle, Eds.—*Academic Press*, 366 p., \$13. Six of the chapters are concerned with hormones and two with vitamins.

INVENTORS NEEDED AT ONCE

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