

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 AMERICAN SOUTHWEST: A Guide to the Wide Open Spaces—Natt N. Dodge and Herbert S. Zim—*Simon and Schuster*, a Golden Regional Guide, 160 p., illus., cloth \$1.95, paper \$1.00. Information for visitors on the plants, animals, geography and prehistory of the region.

AUTORADIOGRAPHY IN BIOLOGY AND MEDICINE—George A. Boyd—*Academic*, 399 p., illus., \$8.80. Written for the researcher who has never before done autoradiography. Techniques are presented in "cook-book" style.

BASIC LUBRICATION PRACTICE—Allen F. Brewer—*Reinhold*, 286 p., illus., \$6.75. Serving as a text for trade school students and presenting information of value to the operator of industrial and power plant machinery.

CURRENT TRENDS IN PSYCHOLOGY AND THE BEHAVIORAL SCIENCES—John T. Wilson and others—*University of Pittsburgh Press*, 142 p., illus., \$4.00. A series of six lectures under the auspices of the Department of Psychology in the College of the University of Pittsburgh.

THE ELEMENTS OF ASTRONOMY: A Non-mathematical Textbook for Use as an Introduction to the Subject in Colleges, Universities, etc., and for the General Reader—Edward Arthur Fath—*McGraw-Hill*, 5th ed., 369 p., illus., \$5.50. Presenting the main facts of the subject together with necessary physical concepts and methods involved in modern astronomy.

AN ESSAY ON RACIAL TENSION—Philip Mason—*Royal Institute of International Affairs*, 149 p., \$1.50. An attempt at a detached view of the problem by an author whose personal experience has been in India.

FRAMEWORK FOR ATOMIC INDUSTRY: A Commentary on the Atomic Energy Act of 1954—Herbert S. Marks and George F. Trowbridge—*Bureau of National Affairs*, 119 p., plus 5 appendices, paper, spiral binding, \$12.50. Describing the changes which this act makes in prior law, especially as the changes affect the opportunity for private interests to take a larger part in the development of atomic energy.

GENERAL PHYSICS—Oswald Blackwood and William Kelly—*Wiley*, 2d ed., 704 p., illus., \$6.75. A text for college students whose preparation in mathematics stopped short of calculus.

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A GUIDANCE PROGRAM FOR RURAL SCHOOLS—Glyn Morris—*Science Research Associates*, Practical Ideas in Education Series, 46 p., illus., paper, \$1.00. A reference booklet for all educators who work with rural youth.

HI-FI MANUAL—Donald Hoefler—*Arco*, The Do-It-Yourself Series, 142 p., illus., \$2.00. For enthusiasts about a very popular hobby.

MAN IN A COLD ENVIRONMENT: Physiological and Pathological Effects of Exposure to Low Temperatures—Alan C. Burton and Otto G. Edholm—*Edward Arnold (Williams & Wilkins)*, 273 p., illus., \$6.75. Discussing acclimatization to cold as well as the pathology of cold injury and resuscitation.

MANPOWER RESOURCES IN THE BIOLOGICAL SCIENCES: A Study Conducted Jointly by the National Science Foundation and the United States Department of Labor, Bureau of Labor Statistics—Solomon Shapiro, Joseph Schuster and Helen Wood—*Govt. Printing Office*, 53 p., illus., paper, 40 cents. Biological scientists are an older group than physical and earth scientists; the average age is 39.

MEASUREMENT AND EVALUATION IN PSYCHOLOGY AND EDUCATION—Robert L. Thorndike and Elizabeth Hagen—*Wiley*, 575 p., illus., \$5.50. Developed from a course at Teachers College, Columbia, this text is a practical one for the person who is going to use and interpret tests.

PROCEEDINGS OF THE EASTERN JOINT COMPUTER CONFERENCE: Theme: Design and Application of Small Digital Computers—C. W. Adams and others—*American Institute of Electrical Engineers*, 92 p., illus., paper, \$3.00.

RESEARCH COUNCIL OF ALBERTA THIRTY-FIFTH ANNUAL REPORT 1954—G. E. Taylor, Chairman—*Research Council of Alberta*, 47 p., illus., paper, free upon request direct to publisher, University of Alberta, Edmonton, Canada. Reporting "encouraging progress" on various research projects.

RESERPINE IN THE TREATMENT OF NEUROPSYCHIATRIC, NEUROLOGICAL, AND RELATED CLINICAL PROBLEMS—Fredrick F. Yonkman, Frank L. Mohr, and Jock L. Graeme, Conference Co-Chairmen—*New York Academy of Sciences, Annals*, Volume 61, Art. 1, 280 p., illus., paper, \$3.50.

SOFT WATER IN MODERN USE: A Factual Presentation Based on a Comprehensive Study—Cornelia A. Tyler—*Water Conditioning Research Council*, 42 p., illus., paper, \$2.50. Describing the principal methods for softening water.

TEA: A Symposium on the Pharmacology and the Physiologic and Psychologic Effects of Tea—Henry J. Klaunberg, Ed.—*Biological Sciences Foundation*, 64 p., paper, \$1.00. Describing the physiological, psychological and medical benefits to be derived from a "spot of tea."

TRENDS IN LAND ACQUISITION—David R. Levin, Chairman—*Highway Research Board, Bulletin* 101, 82 p., paper, \$1.50.

YOUR CAREER IN PHYSICS—Philip Pollack with an introduction by Marsh W. White—*Dutton*, 127 p., illus., \$2.75. Describing for high school students the opportunities available in this field and the training necessary to take advantage of them.

Science News Letter, June 4, 1955

MEDICINE

90% Lung Cancer Cases Found by Sputum Test

► LUNG CANCER can be detected in more than 90% of the cases by microscopic examination of the sputum, Drs. Seymour Farber and David A. Wood of the University of California School of Medicine found in a study of more than 1,000 lung cancer patients.

Operation to remove the cancer might be performed in time to save life in many more cases if this examination were made whenever there is even a suspicion of lung cancer.

The doctors point out that the examination is relatively accurate, easy for an experienced pathologist to perform and sufficiently inexpensive for use whenever cancer is even a remote possibility. They strongly suggest that it should be made a routine part of the semi-annual check-up of men over 40, since this is the group which appears most liable to lung cancer.

Directions from the California doctors are that sputum should be collected first thing in the morning if possible and prepared for examination within a few hours, before it has a chance to dry. Five such sputum samples must be collected on five different days if a high degree of accuracy is to be maintained.

In the 1,036 patients they examined, the most common early signs of cancer were 1. a persistent wheeze, 2. a cough that "hangs on," 3. a "cold I cannot shake off," 4. frequent bouts of pneumonia, 5. chest pain, even of a minor nature, 6. blood-streaked sputum and 7. intermittent fever due to no known cause.

Science News Letter, June 4, 1955

Questions

AERONAUTICS—How is a searchlight used to direct air traffic? p. 359.

ELECTRONICS—What does the scanner do in the new TV color pickup system? p. 355.

GEOPHYSICS—The central part of the Arctic Ocean bottom resembles that of what other body of water? p. 358.

MEDICINE—What is the new suggested treatment for bronchitis? p. 354.

PHYSICS—Why should a model of space look like Swiss cheese? p. 361.

Photographs: Cover, Chas. Pfizer and Co.; p. 355, Allen B. DuMont Laboratories, Inc.; p. 357, General Motors Research Laboratories; p. 359, Westinghouse Electric Corporation; p. 362, Fremont Davis; p. 368, E. I. du Pont de Nemours and Co., Inc.

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