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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.

ACOUSTICS—Joseph L. Hunter—*Prentice-Hall*, 407 p., illus., \$8.50. For the student who has already covered general physics and calculus, including some partial differentiation.

ATOMIC RADIATION: Theory, Biological Hazards, Safety Measures, Treatment of Injury—*RCA Service Company*, 110 p., illus., paper, \$1.60. A manual for those working with radiation, indicating their responsibilities in avoiding injury.

AUTHORIZING LEGISLATION: Hearings Before the Subcommittee on Legislation of the Joint Committee on Atomic Energy, Congress of the United States—Carl T. Durham, Chairman—*Govt. Printing Office*, 654 p., paper, \$1.75. Hearings on the AEC's fiscal year 1958 reactor construction budget.

BIBLIOGRAPHY AND INDEX OF GEOLOGY EXCLUSIVE OF NORTH AMERICA: Volume 20—Marie Siegrist, Mary C. Grier and others—*Geological Society of America*, 768 p., \$8.00. An alphabetical author list is followed by a subject index to the papers cited. If a paper has titles in more than one language, all titles are usually given.

THE BIRDS OF ISLA COIBA, PANAMA—Alexander Wetmore—*Smithsonian*, 105 p., illus., paper, \$1.30. Listing 133 species and subspecies of birds from an island, the largest on the Pacific coast of Central America, covered with heavy virgin forest except along the lower courses of the larger streams where there are swampy woodlands.

THE CALIFORNIAN WILDLIFE REGION—Vinson

Brown—Naturegraph Co., rev. ed., 128 p., illus., paper \$2.00, cloth \$2.75. Telling about the animals and plants in relation to where they like to live. To help nature lovers identify what they see.

CHARTING STEEL'S PROGRESS: A Graphic Facts Book on the Iron and Steel Industry—*American Iron and Steel Institute*, 68 p., illus., paper, 50 cents. Presenting statistics of the industry in the form of graphs and charts.

CHEMISORPTION: Proceedings of a Symposium Held at the University College of North Staffordshire, Keele, Staffordshire—W. E. Garner, Ed.—*Academic*, 277 p., graphs, \$9.00. This symposium may be regarded as a continuation of those on "The Adsorption of Gases" at Oxford in 1932 and on "Heterogeneous Catalysis" in 1950.

THE CHEMISTRY OF ORGANOMETALLIC COMPOUNDS—Eugene G. Rochow, Dallas T. Hurd and Richard N. Lewis—*Wiley*, 344 p., diagrams, \$8.50. A brief and readable review of the subject useful to the student and also the more general reader with, however, a background of chemistry.

A CONFERENCE ON ATOMIC ENERGY IN NEW YORK STATE—*Industrial Liaison Office, University of Buffalo*, 57 p., paper, 10 cents. Record of the conference sponsored by the Governor's Council on the Use of Nuclear Materials, the University of Buffalo and the Buffalo Chamber of Commerce.

DOCTOR COURAGEOUS: The Story of Dr. Grantly Dick Read—A. Noyes Thomas—*Harper*, 218 p., illus., \$3.75. A biography of a pioneer in "natural childbirth."

EXCITED STATES IN CHEMISTRY AND BIOLOGY—C. Reid—*Academic*, 215 p., illus., \$7.50. Outlining some of the more important physical concepts concerning molecular excitation and interaction and applying them to a few chemical and biochemical situations.

FLAMMABLE LIQUID TRADE NAME INDEX, MAY 1957—*National Fire Protection Association*, rev. ed., 120 p., paper, \$1.50. Listing the flash points of 3,600 products and identifying each as to its principal uses, manufacturer and the source of information.

FREE AND INEXPENSIVE LEARNING MATERIALS—*Division of Surveys and Field Services, George Peabody College for Teachers*, 8th ed., 264 p., illus., \$1.00. This list contains some 4,255 items, none of which costs more than 50 cents.

GUIDED WEAPONS—Eric Burgess—*Macmillan*, 255 p., illus., \$5.00. Intended to introduce the reader to the fundamentals, both historical and technical, on which guided weapons are based.

AN ILLUSTRATED GUIDE TO FOSSIL COLLECTING—Richard Casanova, edited by Vinson Brown—*Naturegraph Co.*, 80 p., illus., paper, \$1.50. To help "rock hounds" recognize what they have found.

HANDBOOK ON MULCHES—Paul Frese, Guest Editor—*Brooklyn Botanic Garden, Plants & Gardens*, Vol. 13, No. 1, 79 p., illus., paper, \$1.00. Leading horticultural experts contribute to this booklet for the home gardener.

INTRODUCTION TO PSYCHOLOGY—Ernest R. Hilgard—*Harcourt, Brace*, 2d ed., 653 p., illus., \$6.50. Text for an introductory college course. One feature of this text is a discussion of unsettled problems inserted here and there to encourage students to do their own thinking and to realize that psychology is "an unfinished science."

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ISOTOPIC TRACERS IN BIOLOGY: An Introduction to Tracer Methodology—Martin D. Kamen—*Academic*, Volume 1 of Organic and Biological Chemistry, 3d ed., 474 p., illus., \$9.50. Since publication of the first edition, use of tracers in biological laboratories has become commonplace. Stable isotopes are now included and the chapters on nuclear physics and chemistry have been rewritten.

PURDUE RESEARCH FOUNDATION ANNUAL RESEARCH REPORT 1956—Frederick L. Hovde, president—*Purdue Research Foundation*, 32 p., paper, free upon request direct to publisher, Lafayette, Ind. Containing the annual report and a bibliography of publications of the Foundation staff.

SCIENTIFIC AND TECHNICAL TRANSLATING AND OTHER ASPECTS OF THE LANGUAGE PROBLEM—J. E. Holmstrom—*UNESCO (UNESCO Publications)*, 282 p., diagrams, paper, \$4.00. This discussion covers not only the problems of translators but that of scientists in learning languages other than their own and the need for publication in commonly read languages. There is a special discussion of auxiliary languages, including Interlingua.

SPELEO DIGEST 1956—John R. Dunn, William B. White, and H. Russell Howard, Eds.—*Pittsburgh Grotto Press, (National Speleological Society)*, illus., paper, \$2.00. A compilation of the most interesting articles from the newsletters of chapters of the National Speleological Society—news of new caves and new data on old caves and activities of splunkers.

SPHEROIDAL WAVE FUNCTIONS—Carson Flammer—*Stanford University Press, Stanford Research Institute Monograph*, 220 p., \$8.50. Intended to facilitate the use and calculation of spheroidal wave functions by the presentation of a detailed and unified account of the properties of these functions.

STATISTICAL SUMMARY OF EDUCATION 1953-54—Rose Marie Smith and W. Vance Grant—*Govt. Printing Office, Office of Education, Biennial Survey of Education, Chapter 1*, 86 p., paper, 35 cents.

THE THRIPS OF CALIFORNIA: Part 1, Suborder Terebrantia—Stanley F. Bailey—*University of California Press, Bulletin of the California Insect Survey, Volume 4, No. 5*, 78 p., illus., paper, \$1.50. Contains suggestions for collecting this tiny insect seldom collected by the average entomologist although well-known to the home gardener.

Science News Letter, August 10, 1957

GENERAL SCIENCE

**Government Studies
Money for Research**

► THE INCREASING awareness of the importance of basic scientific research has been reflected in the increasing amount of dollars spent on it in the United States, the National Science Foundation has reported.

In a study based on the total funds expended for basic research in the physical and life sciences for 1953, the most recent period for which figures are available, the Foundation found the expenditures are "one index of the nation's scientific progress."

In 1953 a total of \$435,000,000 was spent for basic research in the natural sciences. This figure, the Foundation noted was 8% of the estimated total of \$5.4 billion for research and development or about 0.1% of the gross national product of \$363 billion.

The study also showed the following:

1. Colleges and universities performed a good share of the basic research accounting for \$205,000,000 or 47% of the total. Indus-

try followed with 39%; the Federal Government, 11%; and private foundations, health agencies and academies of science, 3%.

2. Industry and the Federal Government paid most of the basic research bill, providing \$179,000,000 (41%) and \$158,000,000 (36%) respectively.

3. Of the total amount spent in 1953, 70% went for basic research in the physical sciences.

The Foundation defined research as "basic only if its primary aim was 'fuller knowledge' rather than 'a practical application'."

Science News Letter, August 10, 1957

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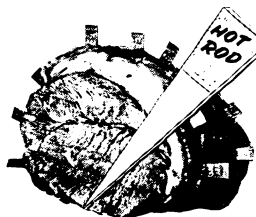


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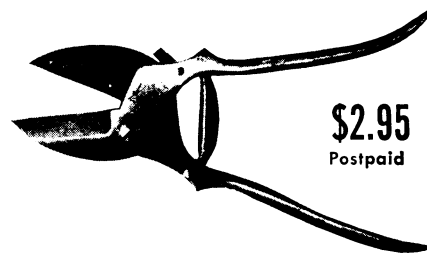
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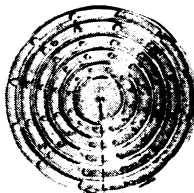
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