

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 ALLERGIC CHILD—Harry Swartz—*Coward-McCann*, 297 p., \$3.95. In the United States some five million children under 14 suffer from some one or more allergies. A physician provides information on the subject in a book written for parents.

AMARYLLIS: and How To grow Them — Peggie Schulz—*Barrows*, 128 p., illus., \$2.95. A book for enthusiasts for this showy and satisfying flower.

CHILDREN FOR THE CHILDLESS: A Concise Explanation of the Medical, Scientific, and Legal Facts About Conception, Fertility, Sterility, Heredity and Adoption—Morris Fishbein, Ed.—*Doubleday*, 223 p., illus., \$2.95. How to have children of your own or to adopt them. Contributed by nine specialists.

CONTRIBUTIONS TO AMERICAN ANTHROPOLOGY AND HISTORY: Volume XI, Numbers 52-56—Howell Williams and others—*Carnegie Institution of Washington*, 236 p., illus., paper \$6.75, cloth \$7.50. These contributions include studies of some ancient human footprints found in the long-ago solidified mudflow from a volcano, a burial mound in Guatemala and ball courts where prehistoric athletes competed.

EACH ONE TEACH ONE: Frank Laubach, Friend to Millions—Marjorie Medary—*Longmans, Green*, 227 p., \$3.00. Concerning the life and work of an enthusiast for bringing literacy to the world's millions who cannot read or write.

FLOWER SHOW GUIDE: Complete Directions for Exhibiting, Staging, Judging—Anne Wertner Wood—*Barrows*, 207 p., \$3.00. An authoritative book for flower lovers and amateur and professional gardeners.

FRESH WATER FROM THE OCEAN: For Cities, Industry, and Irrigation—Cecil B. Ellis and members of the staff of Nuclear Development Associates—*Ronald Press*, 217 p., illus., \$5.00. Investigating the possibilities of extracting fresh water from the ocean on a large scale and at low cost. Undertaken under the sponsorship of the Conservation Foundation.

THE GARDENER'S ABC OF PEST AND DISEASE—A. W. Dimock—*Barrows*, 191 p., illus., \$2.95. A practical book for the home gardener.

HERE COME THE BEARS!—Alice E. Goudey—*Scribner's*, 93 p., illus., \$2.25. An animal story for children.

THE HOUR OF INSIGHT: A Sequel to Moments of Personal Discovery—R. M. MacIver, Ed.—

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Institute for Religious and Social Studies (Harper), Religion and Civilization Series, 145 p., \$2.00. Anthropologist Dorothy D. Lee, biochemist Hudson Hoagland and neurologist Harold G. Wolff are among the authors who here tell of a flash of insight that provided a turning point for their lives.

INTERLINGUA A PRIME VISTA — Alexander Gode—*Storm*, 79 p., illus., \$2.00. Interlingua is a new, or rather derived language for international use, easy to read at sight because it is made up of elements commonly occurring in the western languages. Here it is presented with pictures in a way that makes it easy to master.

MAN IN SOCIETY: Preface to Sociology and the Social Sciences—George Simpson—*Doubleday, Doubleday Short Studies in Sociology*, 90 p., paper, 95 cents. The first of a series of some twenty studies intended as an introduction to sociology for students just beginning its study.

NOT ONLY FOR DUCKS: The Story of Rain—Glenn O. Blough—*McGraw-Hill*, 48 p., illus., \$2.25. A book for children telling them how important rain is for all living things in both city and country.

PRINCIPLES OF NUMERICAL ANALYSIS—Alston S. Householder—*McGraw-Hill*, 274 p., \$6.00. A textbook for graduate students and mathematicians on the principles of computation useful in planning routines for high-speed digital computers.

REPORT OF COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS 1953—C. M. Ferguson, director, Extension Service—*Govt. Printing Office*, 53 p., illus., paper, 20 cents. Each extension agent now offers help to 1,100 farmers, and 1,600 farm families look to each home demonstration agent.

SAIPAN: The Ethnology of a War-Devastated Island—Alexander Spoehr—*Chicago Natural History Museum, Fieldiana: Anthropology*, Volume 41, 383 p., illus., paper, \$5.00. Results of field research among the Chamorros and Carolinians of Saipan, "handsome tropical island" in the Marianas.

THERAPEUTIC ABORTION: Medical, Psychiatric, Legal, Anthropological and Religious Considerations—Harold Rosen, Ed.—*Julian Press*, 348 p., \$7.50. Twenty specialists discuss the many aspects of this controversial problem.

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WATER SUPPLY AND POLLUTION CONTROL—Richard D. Hoak—*Mellon Institute*, 12 p., paper, free upon request direct to publisher, 4400 Fifth Ave., Pittsburgh 13, Pa.

Science News Letter, March 6, 1954

ELECTRONICS

Machine Unscrambles Flight Data on Missiles

► AN ELECTRONIC machine with a taste for music has been devised that, in two days, can whiz through guided missile flight data radioed back to earth during tests, unscramble the facts and figures and make order out of chaos.

Before the unscrambler was perfected, this job took weeks, Lockheed Aircraft Corporation research engineers in Burbank, Calif., report. Now the task is completed faster and with less chance of error.

During the flight test, transmitters squeezed into the missile broadcast messages fed to them by scores of delicate test instruments. Each instrument's reading is radioed to the ground as a sound closely resembling a violin note. Variations in pitch mean changes in instrument readings.

As many as 30,000 a minute of these readings are decoded by the musical-eared machine. From a master recording tape, it transposes high A's into speed readings and F-sharps into heat, stress, steering information, engine performance or whatever the F-sharp represents.

These readings come out on punched cards for electronic computation. The cards are fed into an automatic plotting machine.

The machine then produces a graph, charting the data as curves. Engineers study the graphs to learn what they can about the missile's performance.

Science News Letter, March 6, 1954

U. S. industry now has one engineer for every 60 employees compared to a ratio of one to 250 in 1900.

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