

● RADIO

Saturday, February 10, 1951, 3:15-3:30 p.m., EST

"Adventures in Science" with Watson Davis, director of Science Service, over Columbia Broadcasting System.

Dr. Rome A. Betts, executive director, and Dr. John W. Ferree, director of public health, American Heart Association, will discuss "Heart Disease, America's No. 1 Health Problem."

PLANT EMBRYOLOGY: Embryogeny of the Spermatophyta—Donald Alexander Johansen—*Chronica Botanica*, 305 p., illus., paper, \$6.00. Dealing with the gymnosperms and the angiosperms.

PRACTICAL PHOTOGRAPHY—Robert A. McCoy—*McKnight*, 221 p., illus., \$4.00. A guide for the amateur.

PSYCHOLOGICAL BOOK PREVIEWS, Vol. I, No. 1—John W. French, Ed.—*Psychological Book Previews*, quarterly, 188 p., paper, \$4.50 per year, \$1.25 per issue. Authors write descriptive summaries of their new books in the field of psychology. A bibliography of psychological book reviews appearing in American and British journals is included.

PUBLIC OPINION 1935-1946—Hadley Cantril, Ed.—*Princeton University Press*, 1191 p., \$25.00. Presents public opinion polls made by 23 organizations in 16 countries from 1935 to 1946 and includes such subjects as the atom bomb, international cooperation, and many aspects of World War II. It was prepared by Mildred Strunk.

RADIATION MONITORING IN ATOMIC DEFENSE—Dwight E. Gray and John H. Martens—*Van Nostrand*, 122 p., illus., \$2.00. How to use standard radiation detectors and interpret the results. It considers some of the protective measures against atomic explosions. For civil defense workers and others.

REST AND PAIN—John Hilton—*Lippincott*, 6th ed., 503 p., illus., \$10.00. A new edition of a classic source book in surgery. Edited by E. W. Walls, Elliot E. Philipp and H. J. B. Atkins, this is a specially bound limited edition.

THE SMUT FUNGI: A Guide to the Literature, with Bibliography—George William Fischer—*Ronald*, 387 p., \$6.00. A guide to the literature on the biology and control of some 330 species of smut fungi and the diseases they cause. Includes an excellent bibliography.

BASIC HUMAN ENGINEERING HANDBOOK

A first book on the fundamentals of scientific human relations, in condensed, practical form. Immediately useful for teachers, physicians, scientists, industrialists, business men, husbands and wives, and others seeking scientific methods of better intercommunication, understanding and teamwork. Many diagrams and illustrations.

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Also available: A SALESMAN'S HANDBOOK
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GUTHRIE E. JANSSEN

Consultant on Human Relations

Lakeville, Connecticut

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TV MASTER ANTENNA SYSTEMS: Installation and Distribution—Ira Kamen and Richard H. Dorf—*Rider*, 356 p., illus., \$5.00. A working manual dealing with installation, maintenance, usage, manufacture and merchandising TV master antenna systems.

VITAMINS AND HORMONES: Advances in Research and Applications, Vol. VIII—Robert S. Harris and Kenneth V. Thimann, Eds.—*Academic Press*, 342 p., illus., \$6.80. This volume of this series includes such topics as The Physi-

ology of Relaxin by Hisaw and Zarrows, Interactions Between Estrogens and Progesterone by Courier and Steroid Configuration by Shoppee.

WET VENTING OF PLUMBING FIXTURES—John L. French, Herbert N. Eaton and Robert S. Wyly—*Gov't. Printing Office*, National Bureau of Standards report BMS 119, 27 p., illus., paper, 20 cents. Results of laboratory tests are given.

Science News Letter, February 3, 1951

POULTRY HUSBANDRY

Middle-Sized Eggs Needed

Major problem of poultrymen is to breed hens that will not give eggs of extreme size. Egg weight is highly heritable.

► UNLIKE many industries that strive to produce the most, the biggest, the tallest, or the smallest of their respective products, a goal of America's poultry industry is to produce an intermediate-sized egg.

This is the most profitable egg size, Dr. I. M. Lerner, associate professor of poultry husbandry in the University of California's College of Agriculture, found in a survey. Breeding hens which produce these intermediate eggs is a major problem to poultrymen.

Extreme egg sizes are undesirable. Eggs can be too small to be of much economic value and they can be too large to bring maximum net returns. The goal of a poultry breeder, therefore, is a bird which produces eggs of intermediate weights—averaging 24 to 26 ounces per dozen.

If a breeder starts with a flock of chickens characterized by too small eggs, he selects breeding stock which will produce larger sizes. After several generations he may find that he has overshot his mark, the result being that too many birds are laying jumbo-sized eggs.

In that event he is forced to reverse his selection standards to attain the desired optimum or intermediate size.

"The egg weight responds to selective breeding more rapidly than any other economic character of poultry," Dr. Lerner found.

Columbium is an important metal used in steel alloys to improve ability to withstand high temperatures.

Ammonia fumes are often prevalent in poorly ventilated poultry houses during the winter months and they are likely to cause eye lesions in chickens.

Many *ceramic* materials can withstand higher temperatures than metals, but ceramics are brittle and consequently their use has been very limited in engineering applications.

This high heritability of egg weight permits the breeder to use the principle of "disassortive" mating, or mating of unlike birds. Thus, he may consistently mate large-egg laying females to sires from small-egg families and females laying small eggs to sires from large-egg families instead of taking the risk of having to change direction of selection over a period of years.

Science News Letter, February 3, 1951

NEW ENLARGED REVISED "A Dipper Full of Stars"

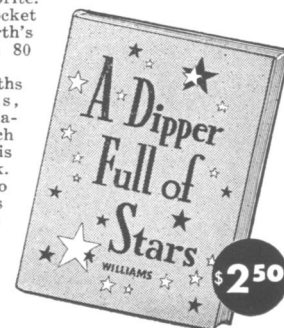
by Lou Williams

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