



Rejected Rainbow

EXCEPT for man and some of his nearest relatives among the primates, most mammals seem to be color-blind. Birds, on the contrary, are clearly able to distinguish between colors. Principal exceptions are noctural birds such as owls, and crepuscular or twilight birds like whippoorwills; these distinguish colors either badly or not at all.

Not only are most birds able to tell colors apart, but they will hesitate to take food if it is of the "wrong" color. This was first noticed years ago when an effort was made to control the numbers of English sparrows by scattering poisoned grain. The birds would not pick up grain that had been soaked in Paris green or London purple, seemingly because it just didn't look right.

Now this reluctance to eat "off-color" grain is being used in reverse, to save useful song and game birds from being killed by poisoned grain baits intended for prairie dogs, ground squirrels and other rodent pests. The method was worked out by a biologist of the U. S. Fish and Wildlife Service, E. R. Kalmbach, at the field laboratory in Denver.

After the grain has been impregnated with poison it is dyed bright green,

SCIENCE FILMSTRIPS

PHYSICS **GENERAL SCIENCE** CHEMISTRY BIOLOGY MICROBIOLOGY ATOMIC ENERGY LAB SAFETY, ETC.

Made by Teachers for Teachers VISUAL SCIENCES

599-S

SUFFERN, N. Y.

saffron yellow, staring purple or flaming red. A spoonful is dropped at the mouth of each rodent burrow, and in 24 hours it is usually all cleaned up. But birds very rarely touch it.

Mr. Kalmbach has run scores of tests, offering grain (unpoisoned, of course) in its natural color and in rainbow hues to a wide variety of birds, from barnyard fowl to sparrows and doves. The birds regularly pick up the naturalcolored grain and let the dyed grain lie, even when the choice means rejecting perfectly wholesome though strange-colored food. Rats and other grain-eating rodents, on the contrary, pay no attention to color but pick up all the grain indiscriminately.

There is one partial exception to the birds' rule of rejecting colored grain. Ducks and other water-fowl will sometimes eat at least a little of it, though even they show a preference for naturalcolored food. Mr. Kalmbach thinks it possible that this may be connected with the fact that water-fowl do a good deal of their feeding under water, where the food is either obscured by turbidity or even actually buried in the mud, and hence found by touch rather than by sight.

Science News Letter, April 3, 1948

Books of the Week

TO SERVE YOU: To get books, send us a check or money order to cover retail price. Address Book Dept., Science News Letter, 1719 N St., N. W., Washington 6, D. C. In the case of free publications order direct from issuing organizations.

THE BEGINNINGS OF MODERN SCIENCE: Scientific Writings of the 16th, 17th and 18th Centuries—Holmes Boynton, Ed.—Walter J. Black, 634 p., \$2.39. Here are some of the foundation bricks on which the structure of the atomic age is built. CENTRIFUGAL AND AXIAL FLOW PUMPS:

Theory, Design and Application—A. J. Stepanoff—Wiley, 428 p., illus., \$7.50. FUNDAMENTALS OF PHOTOGRAPHIC THEO-RY—T. H. James and George C. Higgins—Wiley, 286 p., illus., \$3.50. A technical book presupposing basic knowl-

edge of physics and chemistry.

KLYSTRONS AND MICROWAVE TRIODES—
Donald R. Hamilton, Julian K. Knipp and J. B. Horner Kuper—McGraw-Hill, 533 p., illus., \$7.50. Covering the principles underlying the operation of the tubes known as klystron and planar-grid, basic to radar.

LORAN: Long Range Navigation—J. A. Pierce, A. A. McKenzie and R. H. Woodward, Eds.—McGraw-Hill, 476 p., illus., \$6.00. A technical book on the Loran all-weather navigation system for ships and airplanes

MICROWAVE DUPLEXERS-Louis D. Smullin and Carol G. Montgomery-–McGraw-Hill, 437 p., illus., \$6.50. Dealing with the use of a single antenna for both receiving and transmitting as in radar.

MICROWAVE RECEIVERS-S. N. Van Voorhis-McGraw-Hill, 618 p., illus., \$8.00. Discussing the receivers used in radar systems but including material applicable

PLANTS OF THE HOLY SCRIPTURES-Eleanor King—New York Botanical Garden, rev. ed., 23 p., illus., paper, 25 cents. Background information on bible plants in the light of modern scientific knowledge.

PRESERVATION OF GRAINS IN STORAGE— Stephen S. Easter, Ed.—Food and Agriculture Organization, (Columbia University Press), 174 p., illus., paper, \$1.50. Papers presented at the International Meeting on Infestation of Foodstuffs, Aug. 5-12, 1947.

PRINCIPLES OF FOOD FREEZING-Willis A. Gortner, Frederick S. Erdman and Nancy K. Masterman—Wiley, 281 p., illus., \$3.75. Covering all aspects of this new type of food preservation from the preparation of the food to the transportation

and cooking.

PRINCIPLES OF JET PROPULSION AND GAS
TURBINES—M. J. Zucrow—Wiley, 563
p., illus., \$6.50. The facts necessary for understanding this new field of engineering with a review of general principles. RADIANT HEATING—Richard Woolsey Shoe-

maker — McGraw-Hill, 306 p., illus., \$4.00. Practical information intended not only for architects and engineers but also for home builders.

RADIO NEWS WRITING-William F. Brooks -McGraw-Hill, 200 p., \$2.75. Based on a course given by Columbia University Extension in cooperation with the NBC.
RUSSIAN ARCHITECTURE: Trends in Nationalism and Modernism—Arthur Voyce —Philosophical Library, 282 p., \$5.75. Tracing in text and a large number of photographs the history of architecture in Russia.

A TAXONOMIC STUDY ON THE GRASSES OF PENNSYLVANIA - Richard Walter



First time in America! Now you can have a close-up of all events with these all-purpose heavy duty binoculars. Coated precision lenses, interpupillary adjustment and other features found only in high priced binoculars. Carrying case and shoulder straps included. 10-day no risk money back guarantee. An ideal gift for everyone.

SEND NO MONEY! Pay postman on delivery plus charges. Send remittance with order and we send postpaid. Be sure to add 20% Fed. tax (\$1.40). Act now!

VETERANS EMPORIUM, Dept. B-43 1148 W. Chicago Ave., Chicago 22, III. 1148 W. Chicago Ave.,