

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. Ask for free publications direct from issuing organizations.

CATION EXCHANGE IN SOILS—Walter P. Kelley—*Reinhold*, 144 p., \$4.50. Of interest to the soil scientist, agronomist, and the chemist that is concerned with the processes taking place not only in soils, but in rocks and minerals, soaps, certain resins and many other organic substances.

DESIGN FOR WELDING—Robert S. Green, Ed.—*James F. Lincoln Arc Welding Foundation*, 1024 p., illus., \$2.00. A reference book intended to present a record of representative welded designs. Contains 82 papers.

EXPLORING BIOLOGY—Ella Thea Smith—*Harcourt, Brace*, 3d ed., 607 p., illus., \$3.28. A high school text made vivid by a wealth of photographs and drawings.

THE FLIGHT OF BIRDS: Analyzed Through Slow-Motion Photography—John H. Storer—*Cranbrook Institute of Science*, 94 p., illus., \$2.50. Interesting information for bird lovers and those concerned with the problems of flight

and containing a table of bird speeds ranging up to 175-180 miles per hour when pressed by an airplane. The photographs are beautiful.

INSTALLATION AND SERVICING OF LOW POWER PUBLIC ADDRESS SYSTEMS—John F. Rider—*Rider*, 204 p., illus., \$1.89. A practical book for those who want to enter a new field of servicing.

THE NATIONAL RESEARCH COUNCIL REVIEW 1948—*National Research Council of Canada*, 216 p., illus., paper, 75 cents. Annual reports of the scientific divisions of the Council, including the atomic energy project.

THE UNIVERSE AND DR. EINSTEIN—Lincoln Barnett—*Sloan*, 127 p., illus., \$2.50. An understandably written description of Dr. Einstein's eminent place in the world of science and the view of the universe that his work has made possible. Much of the book appeared in serial form in *Harpers*.

Science News Letter, January 15, 1949

fig growers, is announced by Dr. Rene Blondeau, Shell Oil Company agricultural researcher, and Dr. Julian C. Crane of the University of California's Experiment Station at Davis, Calif., in *SCIENCE* (Dec. 24).

The synthetic hormone used was a chemical cousin of 2,4-D which might appropriately be called 2,4,5-T for short—its full name is 2,4,5-trichlorophenoxyacetic acid. Sprayed on fig branches that were ready to develop figs but had not yet been visited by the pollinating wasps, it caused the development of seedless but well-flavored and otherwise perfect figs. Ripening time was shortened from 120 to 60 days.

In the same issue of *SCIENCE*, Drs. G. S. Randhawa and H. C. Thompson of Cornell University tell of producing bigger, redder, tastier tomatoes by spraying the soil in which the plants grew with three different growth-promoting chemicals. The later-produced tomatoes were also seedless.

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ASTRONOMY

Star Clusters Disrupting

► SOME clusters of stars in the Milky Way galaxy may be disintegrating while others are becoming denser and more strongly clustered than ever, if the studies of Uco Van Wijk, of Harvard College Observatory, are correct.

Clusters such as the Hyades and Pleiades, observable these evenings in the eastern sky in the constellation of Taurus the Bull, are subject to two opposing effects, Mr. Van Wijk pointed out at the meeting of the American Astronomical Society in New Haven, Conn.

First there are the inevitable encounters which take place between the stars in the cluster and field stars, since both the clus-

ter and the field stars move through space. These encounters tend to disrupt the clusters over long periods of time.

Within each cluster itself, however, there are internal motions. Some stars may build up so much energy and speed as to escape from a particular cluster, thereby taking energy away from the cluster and causing it to condense to a smaller total volume.

In the case of the Pleiades, and also for the cluster in Cancer known as the Beehive, Mr. Van Wijk finds that the effect of escape of stars is from 20 to 30 times as large as the effect of encounters with field stars. Although the uncertainty in this figure is rather high, it indicates that the density of galactic clusters like the Pleiades and the Beehive is probably increasing.

On the other hand, the Hyades, a V-shaped group which forms the face of Taurus, are already considerably dispersed and will probably eventually become disintegrated by encounters with field stars.

Science News Letter, January 15, 1949



SCIENCE SERVICE BOOK SELECTION

The Universe and Dr. Einstein

By Lincoln Barnett

In a little more than 100 pages, Mr. Barnett, clearly and forcefully sets forth the background of relativity and the world-picture which its theories present. Within the grasp of the highschool student of physics or chemistry, his book is admired by Dr. Einstein himself, who has contributed a preface. The last chapter is a thoughtful and telling statement of man's place in the scientific universe. Photographs, diagrams, and a critical bibliography are included. \$2.50. 127 pp.

This book is one of those chosen from time to time by Science Service for the convenience of its readers, as an outstanding work in its field.



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BIOCHEMISTRY

Speed Up Fig Ripening by Growth-Control Spraying

► CHOICE Calimyrna figs can now be produced in two months instead of the usual four, and without the help of the little gnat-sized wasps that have hitherto been necessary for their fertilization and development, by spraying their unpollinated beginning stages with a growth-promoting substance.

This result of experimental work, of great potential importance to American