LABORATORY EXERCISES, BIOLOGY OF PLANTS

By H. L. Dean. Dubuque, Iowa: Wm. C. Brown Company. Plano-graph, 244 pages, illus. with diagrams. 1944. $1.75.

This is a conservative laboratory manual designed for a general elementary course in botany. Apparently the course is to be administered without the use of an assigned textbook but with reference reading from several standard texts and specialized material. The excellent lists of references for each topic constitute one of the best features of the volume.

The main topics emphasized in the manual are as follows: The plant cell, mitosis, the external and internal anatomical features of the leaf, stem, root, flower, fruits, seeds, and seedlings. The physiological processes normally associated with the leaf, stem, and root are considered in connection with the morphological and anatomical treatment of those organs. Reproduction of the angiosperms is considered in connection with the flower. The plant groups consisting of the algae, bacteria, fungi, bryophytes, pteridophytes, and conifers are briefly treated.

The material of this manual is expanded beyond that of the ordinary botany course by the inclusion of material on drug plants, economic plant geography, landscape gardening, Mendelism, practical plant and animal breeding, and plant propagation. The manual is illustrated throughout with good conventionalized diagrams and diagrammatic line drawings.

Special features of the manual are the keys for the identification of the common trees of Iowa, the various kinds of starch grains, common temperate zone woods, the common ferns of Iowa, and the coniferous plants of Iowa.—J. BEN HILL.

NATURAL PRINCIPLES OF LAND USE


This book is chiefly an effort to encourage a greater application of the biological sciences in the solution of wildlife management problems. To this end the author has drawn freely from the literature of ecology, botany, and zoology to cite examples of the value of the natural principles of plant and animal sciences to the natural scientist and sportsman. This book is not a factual book, however, in the sense of a reference book for teachers and scientists, for the author apparently intended to reach a wide and diverse audience, including laymen, conservationists, and sportsmen.

In urging a greater adoption of the principles of the biological sciences in the solution of land-management problems, the author does not give, in the reviewer's opinion, sufficient credit through references and quotations to those agronomists who have for these many years drawn heavily from, as well as contributed to, the biological sciences in the improvement of crop varieties, in the management of the soil through crop rotations, and in the improvement of the soil through the addition of lime and fertilizers.