Such analyses should be in compact and understandable form and free from extravagant subjective opinion and emotional appeal.

I propose this in the interest of creating an informed opinion, though I do not concede the irrelevance or unimportance of certain far-reaching generalities that must form a background of any opinion that is reached.

LELAND H. TAYLOR
WEST VIRGINIA UNIVERSITY

SCIENTIFIC BOOKS

THE HISTORY OF BOTANY

A Short History of the Plant Sciences. By HOWARD S. REED. 323 pp. 37 figs. Volume VII of A New Series of Plant Science Books, edited by Frans Verdoorn. Waltham, Mass.: The Chronica Botanica Company. 1942. $5.00.

REED'S "Short History" is more than a dry record of progress. Through the kind and appreciative eyes of one of America's best-liked botanists the kaleidoscopic change in scenes and actors on the stage of botanical progress becomes a vivid adventure. This book will be enjoyed not only by professional botanists but also by students and others.

The first half of the book will appeal especially to those already versed in the history of botany, since it discusses many salient but generally neglected aspects of botany. Among these should be mentioned the chapters entitled "The Gardeners and Herbalists of Antiquity" and "Gardens and Other Things." In both of these the role of primitive agriculturists and horticulturists in the development of our knowledge of plants is stressed. Even though no written records of their activities are preserved, thus making the task of the historian difficult, their actual contributions, in the form of domesticated plants and cultural practices, are of such magnitude that our own work—although properly recorded and published—is dwarfed by them.

The middle portion of the book is most detailed, and the botanists of the seventeenth and eighteenth centuries receive considerable attention. This part conforms most closely to existing texts, but the evaluation of the work of these scientists is based on original research and is not a mere restating of current opinions. One might expect such conformity, since after more than 200 years the historian can estimate the influence of his predecessors with far greater certainty than that of more recent investigators in fields which are at present in a state of flux. In the latter case only a person actively engaged in research in such fields is in position to give a proper historical account, in which more than mere facts are recorded.

In the third part of the book a limited number of fields of research have been selected, and the development of each is traced to the present time. The choice of these fields was mainly determined by Dr. Reed's own interests and research activities, which are of a remarkably wide scope. In this manner plant geography, morphology, cytology, mycology, plant pathology and various plant physiological topics are dealt with in eleven chapters. Although some readers might wish the inclusion of certain other subjects, such as taxonomy, agriculture or growth and plant movements, the reviewer, for one, is glad that the author has chosen the adequate treatment of a selected number of subjects rather than an abbreviated encyclopedic treatment of all phases of botany. As it stands, the book is very readable and should be required reading for all more advanced students in biology. It gives a welcome addition to the diet of currently accepted facts on which most students are reared, and it will help in giving them a proper perspective, which becomes harder to attain as specialization progresses.

This book is thoroughly original, in scope and treatment as well as in illustrations. We do not find the traditional portraits of the paragons of science, which often are of questionable authenticity and usually are entirely non-committal as to the character of the subject. Instead, original illustrations of significant experiments, laboratories or publications are depicted, with delightful originality. One of the special values of the book is the adequate, though not undue, stress laid on the contributions of American scientists. The reviewer was surprised to find how seldom he disagreed with the author, which can only be attributed to the care with which Dr. Reed has considered each contribution and the sympathy with which he has treated each contributor. It is easier to criticize mistakes than to appreciate positive advances, which become incorporated in our general body of knowledge and which can be recognized as advances only after careful consideration.

The Chronica Botanica Company and its active editor should be commended for their initiative in bringing this book, for which a definite need existed, before the public.

F. W. WENT
CALIFORNIA INSTITUTE OF TECHNOLOGY

THE THEORY OF RINGS

The Theory of Rings: Mathematical Surveys, No. 2. By NATHAN JACOBSON. vi + 150 pp. New York: The American Mathematical Society. $2.25. 1943.

THIS is the second book in a new series of expository books entitled "Mathematical Surveys" which is edited and published by the American Mathematical