

Prof. Mangham attempts a *tour de force* by endeavouring to deal with every aspect which plant life opens out. Not only, for example, does he give an account of the plants of past ages but he also describes in some detail the rock systems and geological revolutions. It seems doubtful, too, whether the general reader will be able to appreciate fully a history of botany from Aristotle to the present day and a fairly detailed account of the structure of plants, recent and fossil.

The book is very fully illustrated, but one feels that in this respect also the author has been too ambitious. Many of the ecological photographs—excellent in themselves—have lost a good deal of clearness by reduction in size. By a more careful selection of the illustrations as well as by some cutting down of the subject-matter the author's praiseworthy attempt to enlighten the general public on the interest and importance of the plant life would probably be more successful.

**Concise Flora of Britain for the use of Schools**  
With Explanatory Illustrations and Keys to Identification. By F. K. Makins. Pp. xxviii+212. (Oxford: Clarendon Press; London: Oxford University Press, 1939.) 4s. 6d.

**I**n the preface to this book the author states that its object is to meet the demand for a modern Flora of Britain suitable for use in schools and by beginners generally, and in describing how to use the Flora he claims that its chief use is to enable the student to identify plants for himself. Short descriptions of more than 1,100 species are given, including, therefore, the great majority of aggregate species of flowering plants and ferns found in Britain. Most of the rarities are excluded. The author has wisely refrained from including illustrations which would give a clue to the identity of any plant, and the main series of drawings is intended to illustrate the technical terms given in the glossary. The attention of the young student will very naturally be directed to these drawings, and it is a pity that there is no indication of what they represent except by reference to the glossary.

The synopsis of families follows fairly closely the arrangement adopted in Bentham and Hooker's "British Flora", but for the actual identification of families and anomalous genera an artificial key is provided which is so constructed that the beginner should have little difficulty in referring any plant to its proper family. Keys to the genera of the larger families and to the species of the larger genera are given throughout the book.

The author is to be congratulated on producing in very compact form a book which is sure of a welcome in schools where botany is taught and where students require an easy guide to the identification of the wild plants they are likely to find. The use of the Flora, however, should be supervised by the teacher so that the artificial aids to identification may not lead to a wrong impression of plant affinities.

J. R. M.

## Chemistry

### B.D.H. Reagents for Delicate Analysis including Spot-Tests

Seventh and enlarged edition. Pp. viii+120. (London: The British Drug Houses, Ltd., 1939.) 2s. 6d. net.

**T**HE fact that a new edition of the popular and useful publication of the British Drug Houses has been called for annually is sufficient proof of the established position which this book has attained. The seventh edition has been carefully compiled to eliminate four reagents which have not stood up to the test of time, and to include four new reagents, for the determination respectively of palladium, magnesium, manganese and aluminium. The scope of the book, which now runs to 120 pages, has been augmented by expansion of the monographs of some of the more important reagents.

The reagents are carefully described, but it is suggested that if it were possible to represent the formula of each reagent graphically as in the case of acridine hydrochloride the value of the book would be enhanced, particularly to those whose interest now lies mainly in inorganic chemistry. Included in the book are separate leaflets, one describing the B.D.H. spot test outfit and the other the B.D.H. price list of the organic reagents described in the book.

This B.D.H. publication has proved of great value as a laboratory guide not only to analytical chemists but also to all research workers whose activities lead them to conduct delicate analysis. By supplying frequent editions of their book, the British Drug Houses keep abreast of the most recent advances in the field of analysis, render their publication the standard work on this topic, and summarize for the practical chemist much valuable but often scattered information. It is sufficient to say that the B.D.H. book should be available in every chemical laboratory.

### Theoretical Qualitative Analysis

By Prof. J. H. Reedy. (International Chemical Series.) Pp. ix+451. (New York and London: McGraw-Hill Book Co., Inc., 1938.) 18s.

**P**RACTICAL manuals on qualitative analysis are many, and usually consist of tables of practical directions with little or no explanation of the reactions underlying the processes used. Reedy's "Theoretical Qualitative Analysis" is one of the few books which seeks to give the student commencing a course of analysis a thorough understanding not only of such reactions but also of the general theories which form the basis of analytical chemistry, and indeed of inorganic chemistry as a whole.

General theoretical considerations form the first half of the book and include important chapters on the ionization theory, in which both complete and incomplete dissociation theories are discussed in an unbiased manner. For the most part, however, the author has based his applications on incomplete ionic dissociation, and in this connexion it is noteworthy that ionic equations are freely used in place of the older molecular equations.