

BOOK REVIEWS

The Flowering Process: F. B. SALISBURY. Pergamon Press, Oxford. 50s.

THIS is a stimulating book which I have enjoyed reading. It is addressed to graduate students but should also be very useful to anybody engaged in research on the reproductive physiology in plants. The book, which is written in a somewhat racy and highly individual style, falls into two parts. The first four chapters comprise a generally descriptive account of the environmental control of flowering, while the remaining six chapters are largely concerned with studies of a single species, the Cocklebur. Since this species has been used more than any other in the detailed investigation of the mechanisms controlling flower initiation, this division is perhaps less arbitrary than would appear at first sight. Nevertheless, the treatment of the various aspects of this subject is somewhat uneven and for a novice to the problems of flowering in plants this may be a disadvantage. The particular areas in the field to which the author himself has made distinguished contributions receive considerably greater emphasis in the second half of the book, as he disarmingly admits in the preface. On the other hand, this personal involvement makes the account of a rather complex subject much more readable.

In Chapter II and the ten-page-long appendix the author attempts to classify a considerable number of species and varieties according to their specific environmental requirements, but here he does not fully achieve his purpose, nor does the great variety of symbols employed in this classification help to clarify the situation. Unfortunately, the detailed responses of many plant species vary to some extent, not only genetically, but also in different combinations and sequences of environmental conditions. Hence, the citation of a smaller number of characteristic types, or alternatively, an attempt at completeness with full author references, to allow the reader to check the original experimental conditions, would have been more useful. The book is well produced and there are few misprints; one worth correcting appears in the footnote on page 35 where "solstices" should be replaced by "equinoxes". In general this book provides an excellent introduction to a complicated field of research and can be fully recommended to anyone interested in the physiology of flowering.

W. W. SCHWABE

Methods in Polyphenol Chemistry: Edited by J. B. PRIDHAM. Pergamon Press, Oxford, 1964. 146 pp. 50s.

THE Proceedings of the Plant Phenolics Group meeting which was held in Oxford in April 1963 were concerned with the application of physical methods to the structural investigations of phenolic compounds. The lectures given at this Symposium form the subject of the publication, *Methods in Polyphenol Chemistry*.

Although the information included in this slim volume is available elsewhere in much more detailed compendia concerning physical methods and their applications to organic chemistry, this publication fulfils a useful purpose. The contributions succinctly report the application of the various physical techniques to the specialized field of phenolic compounds. They enable the practitioner in this area who is not immediately familiar with these physical techniques to obtain relevant literature references, together with appropriate elementary background

knowledge. The investigator may then refer, with greater benefit, to the more advanced compendia.

There is considerable variation between the standards of the different chapters, although this is probably unavoidable in a joint publication. Several of the contributions are rather loosely worded and the Reviewer regrets that the Editor did not wield his editorial pen with a little more severity.

The book is well produced, although rather expensive for its size. It contains, unfortunately, an excessive number of typographical errors, the majority of which should have been rectified at the proof-reading stage.

Despite these criticisms, this slim volume will be a most useful starting point for those interested in the applications of physical techniques to the chemistry of plant phenolics.

W. B. WHALLEY

Enzyme Chemistry of Phenolic Compounds: Edited by J. B. PRIDHAM. Pergamon Press, Oxford, 1963. 142 pp. 50s.

THIS book is a collection of the papers presented at a symposium meeting of the Plant Phenolics Group held in April 1962. The length of the papers is of the order of ten pages. Six papers deal with the nature, purification and occurrence of phenol oxidase in plants and micro-organisms (N. A. Burges; D. S. Bendall and R. P. F. Gregory; J. C. Boswell; J. Lavollay, G. Legrand, G. Lehongre and J. Neumann; E. Kuster) and two with the interaction of phenolic compounds with other plant enzyme systems (A. H. Williams; A. C. Hulme and J. D. Jones). Other aspects of the metabolism and enzymic reactions of phenolic compounds are covered in four papers (J. B. Jepson; J. B. Pridham; H. M. Hurst; B. R. Brown and S. M. Bocks) and finally the chemistry of tocopherols and the chemistry and biochemistry of ubi- and plasto-quinone are summarized in papers by J. Green and by F. W. Hemming and R. A. Morton respectively.

Although several of the papers are of a high standard, the book as a whole does not have the impact of the earlier symposium volumes of the Plant Phenolics Group. This is partly because in several of the papers too much emphasis is placed on a review of the literature and these, therefore, tend to duplicate material which has been published elsewhere. However, this fault emphasizes the fact that despite the large amount of published work we still have not defined the physiological role of phenolic compounds and phenol oxidases in plant metabolism.

The book would probably have been more attractive to potential purchasers if it had been published in a cheaper edition. Fifty shillings for 142 pages seems excessive.

J. FRIEND