

**Phytochemistry, Volume 1:** edited by LAWRENCE P. MILLER, Van Nostrand-Reinhold, New York, 1973. £11.25. pp. xiv + 410.

THE PLANNED three-volume work on "Phytochemistry" edited by Dr. L. P. Miller has been awaited for some time by the reviewer, since a comprehensive work on plant chemistry and biochemistry is long overdue. On looking at the first volume, however, which is subtitled "The Process and Products of Photosynthesis" I must confess to be somewhat disappointed. There is certainly nothing wrong with the eleven chapters as they stand, but I had expected a great deal more from a volume which claims to be "comprehensive, authoritative and unique in its coverage". It is simply that the authors have not been given enough space to do anything more than give a brief introduction to their subject, the sort of coverage which one might present to first- and second-year undergraduates in Botany. It is also a pity that many of the chapters were obviously completed three or four years ago. In some cases, for example, there are no references after 1968. Actually it might be questioned whether there should be any references at all, except to more advanced reviews, in a volume which will mainly be useful as a general introduction to the subject. Having said all this, let me make it clear that I will value having this book on my shelf because it certainly does contain a wealth of basic information. Its two chapters on Photosynthesis by Professor Wolken and Professor Bassham are more than adequate, as are those on Chlorophyll by Professor Jones and on Carotenoids by Professor Goodwin. The five chapters on Carbohydrates from monosaccharides to polymers by Professors Manners, Towle, Whistler, Teng, Doesburg and Dr. Miller himself likewise cover the field adequately. I do, however, question the inclusion of the last chapter by Dr. Miller on Glycosides, which is the usual ragbag of everything from glucosinolates to cardiac glycosides, and all the compounds included would surely have better been covered in chapters in the remaining two volumes. I am also sorry that the Editor in his introductory chapter did not stress the importance of secondary plant constituents in ecology and evolution. He appears to take the line in this anecdotal, rather than factual, chapter that these compounds are interesting but not essential, in spite of the number of examples he gives where they obviously confer an advantage to the plants which contain them. I expect a number of libraries will buy all three volumes, since there is little else in the field, but one hopes that if a second edition is called for that the whole work be expanded into the comprehensive treatise which phytochemistry really needs and deserves.

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