we start with the ornithine engendered pyrrolidines and tropanes, then turn our attention to the pyridine and piperidine alkaloids (stressing more the importance of nicotinic acid rather than lysine as a biosynthetic "baustein"), wander via polyketides (γ-coniceine) mevalonic acid (actinidene) to the lycopodium alkaloids (lysine again) We then turn to the necines, and thus back to ornithine as a precursor! Then on to the lupin alkaloids (with lysine) and so on In the biosynthesis of phenylalanine/tyrosine based alkaloids, mescaline is described as a "simple isoquinoline" and we go directly from mescaline to morphine (almost as forecast by the Drug Squad!). Confusing to me and probably much more so to the student The final chapter, Miscellaneous Volatile Plant Products, by H. J Nicholas, is another ragbag apparently loved by the Editor I'm sorry for the author, except to point out to him that to mention phenols such as caffeic acid (m.p 223 dec), hesperidin (m p 258) and alizarin (m p. 290) in a chapter on volatiles is downright misleading to the uninformed reader (unless we are thinking of sunflower products!) However, as I said before, I personally am glad to have this book, but I hope that there will be an opportunity for its revision when a second edition is called for

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Plant Physiology by MILTON THOMAS, S L RANSON and J A RICHARDSON Longman, London, 1973 Fifth Edition, 1062 pp £7 95

THE FIFTH edition of such a well known textbook as this one needs little introduction to an audience of plant scientists Earlier editions have been widely used in University Biology departments for many years It is a text that provides the student reading Honours Botany with all the biochemistry and physiology he needs in his 3-yr course It emphasizes the biochemical approach to physiological studies and indeed contains more biochemistry than physiology, while chemistry is included in several appendices Among its particular merits are the excellent coverage of plant respiration, the depth of historical background, the many literature references and the careful attention to detail in all aspects of the writing

The fourth edition was published in 1956 so that extensive rewriting has been necessary to bring the book up-to-date It now runs to over a thousand pages and has nearly 1500 references The price, although a very reasonable one, must limit its sales to students, although clearly it will still sell well to libraries The considerable increase in length and price raises the question of whether this type of textbook, in spite of its many excellent qualities, has a future as a student text For one thing, plant biochemistry and plant physiology are now such enormous subjects that there is much to be said for treating them separately For another, there is a growing trend towards briefer outline texts, which can be supplemented by the use of short specialized booklets (e g the Studies in Biology series) covering a range of individual topics A further factor is the very considerable burden placed on the authors in keeping a text of this length up-to-date with the latest scientific discoveries in the field

Whether yet another edition eventually appears remains for the future. The present one, even if it has only limited sales to students, will still be widely welcomed by University teachers and, indeed, by research workers as well, as a compact outline within a single volume of the present state of our knowledge in the field of biochemical plant physiology.

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