

is devoted to the bicyclic spiro [4.5] decane sesquiterpenes, the best known members of which are acorone from *Acorus calamus* and  $\beta$ -vetivone from *Vetiveria zizanoides*. A useful tabulation of the physical properties and sources of the 37 sesquiterpenes of this type is included in this chapter. The last three chapters cover biogenetic-type syntheses of polyketides (T. M. and C. M. Harris, K. B. Hindley), the stereoselective total synthesis of indole alkaloids (E. Winterfeldt) and the mechanisms of corrin-dependent enzymic reactions (G. N. Schrauzer).

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**Drugs and Transport Processes**; edited by B. A. CALLINGHAM. MacMillan, London and Basingstoke. 376 pp. £13.00.

This is not a book that I would recommend Plant Biologists should buy, but if they are interested in membrane processes, it is one they should note. It reports a meeting organized by the Biological Council Coordinating Committee for Symposia on Drugs Action and held on two days in April 1973. Some articles are of little interest to plant physiologists, but, if they are interested in membrane processes, they will find a number of articles which are well worth reading. Clearly these articles do not directly relate to plant systems, but they provide pointers as to the way plant physiologists may have to turn their thinking and experimental attack. I should like to instance two: one by G. Semenza on the transport of sucrose in the small intestine. This is a fascinating article because it indicates a possible mechanism for sucrose uptake in plant cells and at the same time describes an elegant attack on the problem under investigation both using the intact tissue and black lipid membranes. The other article by W. F. Widdas summarizes in a succinct manner our knowledge of the hexose transport system in erythrocytes and this article should appeal to anybody who is interested how proteins in membranes bring about transport. But in a general way the book is valuable because it indicates how plant physiologists might proceed in what looks like proving to be a developing field of the subject. Drug action in animals is paralleled by phy-

toxin action in higher plants and it is interesting to note that Gardner, Scheffer and Higinbotham have reported (*Plant Physiol.* **54**, 246–249, 1974) that the H. V. toxin from *Helminthosporium victoriae* affects the passive permeability to ions of infected plants. H. V. toxin is clearly a compound which can provide valuable information about the functioning of plant membranes and experiments using this toxin could clearly parallel the sorts of experiments used by pharmacologists and animal physiologists.

The book is well written and well illustrated. Discussions at the meeting are recorded but as seems to be customary, they don't appear to be very useful. The book seems to be excessively expensive at £13.00.

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**Enzyme Handbook, supplement 1**: by THOMAS E. BORMAN. Springer-Verlag, Berlin, 1974. 517 pp, DM 51.80, £9.10.

This first supplement to the Enzyme Handbook published in 1969 (for review, see *Phytochemistry* **10**, 619) mainly covers enzymes discovered in the intervening 5 years and lists concise molecular and catalytic data for no less than 430 new proteins. Enzymes are arranged, as in the original Handbook, according to their E.C. numbers and for those interested in statistics, it may be noted that oxidoreductases occupy 151, transferases 123, hydrolases 98, lyases 68, isomerases 27 and synthetases 15 pages respectively. The phytochemical reader will discover that an increasing number of enzymes of secondary metabolism from higher plant sources appear in this Supplement. For all those who have found the original two-volume handbook indispensable in the laboratory, this Supplement will be an essential buy.

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**Plant Anatomy** by A. FAHN. Second edition, revised. Pergamon Press, Oxford, 1974. pp. i–viii + 611 with 257 text figures. £9.60 & £5.10 (flexi cover).

The first edition of Fahn's *Plant Anatomy* was well received and is widely used by botany, horti-

culture, agriculture and forestry students at university level. It is pleasing to see that many of the minor irritations which occurred in that volume have been eliminated from this edition. For example, the texts to figures now all clearly relate to the illustrations which they are intended to describe. The book has a larger format and there are 77 more pages, with 37 additional figures. The basic plan of the original work is followed and all of the sections are brought up to date, with the necessary literature references cited.

Some of the photographs have not reproduced as well as would have been expected from the quality of the originals, but the overall standard of illustrations is good. None of the typographical errors scattered through the text would lead to confusion. Even those who possess the first edition will find it worthwhile obtaining this revised version and students will undoubtedly make use of it as one of the more readable and satisfactory plant anatomy texts.

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