

Biology students will surely have difficulties with much of the basic theory, despite the high standard of writing. The book is strongly recommended to chemists of any variety, although the price will probably put it out of their reach as a personal copy; a soft back version is surely the answer, for all concerned.

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**The Science of Allelopathy:** edited by A. R. PUTNAM and C. S. TANG. Wiley and Sons, New York, 1986, 317 pp. £50.40.

Generally speaking, allelopathy has had a bad press. Although the harmful effects of one plant on another were recognised by De Candolle and other early botanists and although these effects are dramatically illustrated in the aerial photographs of inhibitory zones around *Salvia* shrubs in the Californian chaparral, the subject is often ignored or minimised in ecology textbooks. Whether this book will bring wider recognition to the subject, I am not sure, but it is the first multi-author treatise to address itself to the topic and it therefore deserves to be taken seriously.

The book falls neatly into three parts: six opening chapters on field observations of allelopathy and of autotoxicity; five chapters on techniques; and six final chapters on the chemistry of allelopathy. The contributions come mainly from the USA, though there are two Chinese authors and one Australian. It is thus not entirely representative and a European contribution would have been welcome.

Unfortunately, like much of the primary literature on allelopathy, this book seems to me to be a mixed bag

of good and not-so-good papers. On the credit side, there are some useful chapters by such well known figures as N. H. Fischer, C. H. Muller, E. L. Rice and G. R. Waller and the editors themselves provide a well balanced summary chapter. Some of the other chapters, however, are not really particularly helpful in convincing one that allelopathic effects are being dealt with.

The best and most distinctive section of the book is probably that on techniques. It is clear from one of these chapters that some of the practical problems in studying and collecting root exudates have yet to be solved. As C. H. Tang puts it "the major difficulty has been the lack of a reliable sample collection method". The selection of a bioassay technique, which is crucial to the successful analysis of root or leaf exudates, is also considered here. Perhaps the big break-through in allelopathic techniques is about to happen. Then we shall be able to assess much more objectively the contribution of phytochemicals in determining the patterning of vegetation in both natural and disturbed habitats.

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**Molecular and Physiological Aspects of Plant Peroxidases:** edited by H. GREPPIN, C. PENEL and T. GASPARD. University of Geneva, Switzerland, 1986. 470 pp. 100 Swiss Francs (inc. postage) (only available by sending remittance to Professor Greppin, Lab. de Physiologie végétale, 3 place de l'Université, CH-1211 Geneva 4, Switzerland).

In 1982, these three Swiss plant physiologists, together with T. Thorpe, published a list of over 2000 references to the literature on plant peroxidases. Since that time, several hundred new papers must have appeared on this most versatile and enigmatic of plant enzymes. These same scientists have put us in their debt again by organizing in September 1985 an international symposium of peroxidases and then publishing the proceedings in this relatively inexpensive and handy form. With 49 contributions from all over the world, almost every conceivable

aspect of plant peroxidases is covered. A number of papers centre on the role of peroxidase in cell wall formation and in the lignification process, while several others deal with the relationship between peroxidase activity and plant stress. Work on the three-dimensional model of peroxidase is also included, as is the involvement of peroxidases in plant growth processes.

One criticism of the volume is the general lack of abstracts. Also, a few of the papers, presumably those derived from posters, are so short that they are hardly worth having. Otherwise, however, this is an excellent production. It nicely reveals the current state of the art and must be an essential purchase for anyone remotely interested in plant metabolism.

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