

BOOK REVIEWS

Progress in Botany Volume 39: edited by H. ELLENBERG, K. ESSER, H. MERXMÜLLER, E. SCHNEPF and H. ZIEGLER. Springer, Berlin, 1977. 304 pp. DM 98, ca £25.

A reader picking up this volume hoping to learn what the most significant breakthroughs in botany during 1977 have been will undoubtedly be disappointed. The editors do not attempt to gather together the various strands in the reviews published each year and it is left to the reader himself to search among the 18 review articles presented here to find the significant growing points of the subject. Perhaps with such a broad canvas, ranging from morphology and physiology through genetics and taxonomy to geobotany, it is impossible to summarize any one year's research activity in botany. However, some of the reviewers themselves do select important trends, while others are content simply to list the recent papers within their brief.

One notable review, which is both comprehensive and elegantly written, is that by K. Kubitzki, which covers the systematics and evolution of seed plants. It is an excellent blend of pure biology and biochemistry and includes

chemosystematic advances and also progress in the biochemistry of pollination. In general, plant biochemistry is subsumed under physiology and within this section, there are two reviews specifically on biochemical topics: cell wall polysaccharides by E. Beck and J. Wiczeorek; and monoterpene indole alkaloids by H. R. Schütte. The former is a particularly valuable review of an actively developing subject; the latter is also a useful summary, but unfortunately was sent to press too late to include the very recent evidence showing that strictosidine, not vincoside, is the key intermediate in the biosynthesis of the *Catharanthus* alkaloids (see Stockigt and Zenk (1977) *J. Chem. Soc. Chem. Commun.* 646; Brown *et al.* (1978) *Phytochemistry* 17, 899).

In summary then, this volume once again provides a useful survey of the current botanical literature, which will be appreciated equally by research workers and by University teachers anxious to up-date their lecture notes.

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Plant Disease Epidemiology: edited by P. R. SCOTT and A. BAINBRIDGE. Blackwell Scientific Publications, 1978. x + 329 pp. £9.00.

This book is based on 33 papers presented by leading plant pathologists at a meeting of the Federation of British Plant Pathologists in London in December, 1977. The book deals chiefly with diseases caused by fungi and viruses and also mentions bacteria.

The book will be mainly useful for plant pathologists with research interests in the forecasting and control of plant disease epidemics. Indeed, for workers with interests in the area, the book presents an authoritative survey of the subject to date. At first glance it might be

assumed to be of little interest to biochemists. Nevertheless, several of the articles contain points which pose potential research problems to those interested in disease physiology. For example, Ellis Griffiths in his introductory chapter raises two problems, the first of which relates to changes in host resistance after fungicide spraying; the plants become more susceptible when the effects of the spray have worn off. A second phenomenon for which no biochemical explanation is given is the enhancement of infection by increasing the nitrogen status of the plant following fertilizer application.

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