Potter's New Cyclopaedia of Botanical Drugs and Preparations: revised by ELIZABETH M. WILLIAMSON and F. J. EVANS, The C. W. Daniel Co., Saffron Walden, Essex. 362 pp. £14.25 paperback.

Interest in medicinal plants has never been greater than at present in this country and many people are turning to herbal extracts to cure their complaints. Witness, for example, the recent use of feverfew (*Tanacetum parthenium*) for treating migraine; here the active principles are thought to be sesquiterpene lactones, although further work is needed to be sure. As with many medicinal plants, there are problems of administering the drug. Feverfew leaves have a bitter and nauseous taste and if eaten have to be taken with other foods to disguise this taste. There are also side effects, the least distressing of feverfew being a mild tranquillising effect. Toxicity is often present in drug plants and it is therefore vital if one is going to take a herbal preparation, to be able to look up to see what is known of its effects and its chemical constituents. This Cyclopaedia does just that—it provides a handy guide to the wealth of information that we have on all the common botanical drugs.

Plants are listed alphabetically by common name–from abscess root and acacia bark to yohimbe bark and zedoary–but synonyms are also listed and there are excellent indexes to both these synonyms and the Latin names. For each entry, there is a description of the plant, an indication of the part used, a list of chemical constituents where these have been studied and then a description of medicinal use and the preparations that are available. To the scientist, the most valuable feature of this book is the extensive reference list, 1381 in all. It is thus possible to look up and see in detail what has been done before. I know of no other popular tome that provides such a wealth of accurate information and informed comment on our medicinal plants and I can heartily recommend this book to a phytochemical audience.

School of Plant Science, University of Reading JEFFREY B. HARBORNE

Environmental Physiology of Plants, 2nd Edition: by A. H. Fitter and R. K. M. Hay, Academic Press, London, 1987. 423 pp, hardback £35, paperback available.

Unfortunately, I somehow missed seeing this excellent textbook when it first came out so that I cannot compare this second edition with its predecessor. However, I can commend it to anyone responsible for undergraduate botany courses since it clearly provides a sound basis for a second or third year course in physiological ecology. It is also a good introduction for anyone wishing to update themselves on recent developments in this rapidly expanding interdisciplinary field. Who is not concerned today about the damage caused by atmospheric pollution on plant life or who is not interested in the positive steps being taken to breed crop plants resistant to saline or drought stress? This book provides the necessary background for understanding the processes involved in such fashionable research topics.

There is an introductory scene-setting opening chapter, defining such concepts as plant growth, environmental stresses, population responses and plant adaptations. The book is then divided into two halves: the acquisition of resources—energy, carbon, mineral nutrients and water; and the plant responses to environmental stress—temperature, ionic toxicity, gaseous toxicity, interactions between organisms and the ecological consequences. Each chapter is illustrated with many experimental examples from the recent literature and there is an extensive 48 page bibliography at the end.

The whole book has been well thought out in advance and is very readable. In some places, it is almost too concise and one would have liked the authors to have expanded on some topics. Nevertheless this book provides probably the most accessible text for what is a highly complex and continually developing research field and it can be warmly recommended.

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Progress in Botany, Volume 49: edited by H. D. BENCKE, K. ESSER, K. KUBITZKI, M. RUNGE and H. ZIEGLER, Springer, Berlin, 1987. 454 pp., DM 258.

Once again, this useful review series surveying the botanical scene of the last two to three years has appeared. For readers of '*Phytochemistry*', the chapters with the greatest relevance will be those on growth hormones (covering this year the gibberellins, the cytokinins and the brassinosteroids), on the metabolism of inorganic nitrogen compounds, on the reaction centres of photosynthesis, on mineral nutrition and on steroid biosynthesis. There is also a wide ranging article on the evolution and classification of seed plants by H. H. Poppendieck, which reviews *inter alia* recent developments in both chemosystematics and chemical ecology. Poppendieck also provides a helpful evaluation of the application of cladistic studies to plant classification and he lists some ten recent papers where evolutionary 'noise' has been interpreted in unorthodox ways.

The abbreviated style of many of these reviews does not make for easy reading but there is the benefit of compre-