



## Book reviews

**Plant Secondary Metabolism**

D.S. Seigler; Kluwer, Dordrecht, The Netherlands, 1998, 759 pp., ISBN 041201 9817, £313.00 or \$460.00.

This is not the first account of plant secondary metabolism to be written and it will surely not be the last. Most texts published in recent years have been written as course books for University students. The challenge has been to squeeze sufficient representative structures and facts into a manageable textbook of no more than 250 pages. Here, however, the author has chosen a more comprehensive approach and has described and illustrated every known class and subclass of secondary metabolite. Indeed, there is a veritable wealth of structural formulae and of biosynthetic schemes. There is also a generous coverage of function (where it is known), of natural distribution patterns, of chemical ecology and of biological properties.

Unfortunately, the author has not been helped by his publisher, who instead of deciding to produce the work in two volumes as it deserves, has chosen a single volume with such a small typeface that it is a real strain to read. It is sad that such a splendid text should be marred in this way.

Some of the many attractive features of this book, if you can struggle to read this far, are the introductory

summary chapters that interlace the main text. There is an intriguing general introduction, which considers the various hypotheses that have been advanced to explain the profligacy of plants in synthesising so many different metabolites. There are also useful introductions to shikimate metabolites, to the terpenoids and to the alkaloids. The book in fact is strong on alkaloids and there are 11 chapters on the different alkaloid classes which take up nearly a third of the book.

A survey of the extensive biographies, which appear at the end of each chapter, suggest that there is a distinct shortage of literature references after 1990. The recent work on terpenoid biosynthesis involving the 1-deoxy-D-xylulose 5-phosphate pathway is missing. Nevertheless, there is some compensation in the good coverage of the 1970s and 1980s literature, a period when the subject of secondary metabolism was expanding most rapidly.

The very high price will mean that it is likely to be purchased only by libraries. This masterly work is especially good on chemical ecology and medicinal phytochemistry and can be warmly recommended as a valuable reference source.

Jeffrey B. Harborne

*Department of Botany, The University of Reading, UK*

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PII: S0031-9422(00)00020-0

**Regulation of Primary Metabolic Pathways in Plants**

N.T. Kruger, S.A. Hill and R.G. Ratcliffe (Eds.), *Proceedings of the Phytochemical Society of Europe* No. 42, Kluwer, Dordrecht, The Netherlands, 1999, 311 pp., ISBN 0-7923-5494-X, £105.00.

Proceedings of the PSE first appeared under the imprint of Academic Press in 1965 and then moved on to Oxford University Press for a number of years. This is the first volume to appear that is published by Kluwer. It is beautifully produced, but unfortunately the price seems to have nearly doubled and it is diffi-

cult to see many individual phytochemists being able to afford to buy it. This would be a pity since this volume is one of the first books to consider in detail the impact that molecular biology has had on our understanding of primary plant metabolism.

This particular volume is based on a series of review lectures presented at a PSE meeting held at St. Hughes College, Oxford in January 1997. The main aim of the contributing authors was to consider the potential that exists now for modifying the quantity or quality of harvestable crop products through genetic manipulation. At the same time, the various authors describe how