Phytochemistry, 1973, Vol. 12, p. 959. Pergamon Press. Printed in England.

BOOK REVIEW

Introduction to Plant Biochemistry: by T. W. GOODWIN and E. I. MERCER, Pergamon Press, Oxford, 1972. 359 pp. £4.00.

THE REASON why there are so few textbooks on plant biochemistry must be the great difficulty of choosing suitable subject matter to produce a coherent, smooth flowing story. Any such text has to be a compromize because of the size of the topic (how does one compress the biochemistry of photosynthesis into a single chapter?) and because of the problem of deciding how much basic biochemistry to include or omit. The present authors have deliberately avoided the second difficulty by assuming a knowledge of Conn and Stumpf's well known text (now in its third edition) on the part of their readers. They have thus been able to deal with a few general topics which give students particular trouble (e.g. bioenergetics, enzyme kinetics) and then have been able to devote the rest of the book to plant biochemistry proper.

After the two introductory chapters, there follow six on primary metabolism. Starting with cell structure and the cell wall, Goodwin and Mercer then take us through photosynthesis and respiration to carbohydrates, lipids, nitrogen compounds and nucleic acids. The plant cell wall chapter is particularly noteworthy for its thorough treatment of the subject; this is a topic rather skipped over in the other available texts.

The second part of the book is concerned with secondary constituents and with growth. Individual chapters provide concise but penetrating surveys of the biochemistry of terpenoids, porphyrins, alkaloids and flavonoids. Not surprisingly in view of the senior author's research interest, the emphasis here is on biosynthesis. The two final chapters deal briefly with growth substances and the biochemistry of plant development.

Obviously, if one is a University teacher in biochemistry, one may quibble with some aspects of this new textbook. Personally, I would have liked to have seen rather more emphasis on the biochemistry as it takes place in the living plant. Also, the authors have missed an opportunity, I believe, in the chapters on secondary metabolites to discuss their function in an ecological context. A chapter on the biochemistry of plant–animal interactions would certainly have been appropriate in the light of recent developments in this area. These are, however, very minor flaws in what is clearly an outstanding textbook. Indeed, with its very reasonable price, excellent and copious diagrams and up-to-date coverage, it has no rivals and I have no hesitation in recommending it widely for student use. Many more senior biochemists will also, no doubt, benefit from and enjoy reading this fine book.

University of Reading J. B. HARBORNE