

## BOOK REVIEWS

**Plant Growth Substances 1982:** edited by P. F. WAREING.  
Academic Press, London, 1982. 683 pp. £23.40.

Past proceedings of the various International Conferences on Plant Growth Substances have usually been published, but often the resulting volumes were either poorly organized, very expensive or seriously delayed in production. Such accusations can hardly be levelled at the proceedings of the eleventh meeting, held in Aberystwyth in July 1982, since these are impeccably arranged, very reasonably priced and have appeared within a very short time of the actual meeting. In this volume, there are a series of related articles describing the latest advances in the study of auxins, gibberellins, cytokinins, abscisic acid and ethylene, with additional sections on polyamines, gravitropism, senescence and flowering. Although not specifically covered in depth, there is also mention of brassinolide and jasmonic acid,

two of the latest candidates to be added to the list of endogenous plant growth regulators.

Anyone wishing to find out the latest information on abscisic acid biosynthesis, the chemical genetics of gibberellins in maize, the search for an auxin receptor site or the role of calcium in signal transduction of higher plants will need to consult this volume. It is all here and much else. The investigation of growth substances in plant tissues is still a very active field, even if many of the basic problems of understanding their various roles in regulating growth remain to be elucidated. One can only congratulate the editor, the contributors and the publishers on such a timely and worthy addition to the plant science literature. This volume has set a standard which organizers of future conferences will find hard to beat.

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**Pest Control with Nature's Chemicals:** by E. L. RICE.  
University of Oklahoma Press, Norman, 1983. 224 pp.  
\$28.50.

This small book sets out to be a simple readable account of a rapidly-growing, complex subject. The author, Professor Emeritus of Botany, has a special interest in allelopathy, the usually adverse effect of weeds or other crop plants on the growth and productivity of the crop being grown. As he is an American, many of the names he uses are those used in his own country, unfamiliar but usually accompanied by the botanical name. His treatment is straightforward beginning with observations of the ancient philosophers and medieval herbalists which, as is well known, are sometimes true but liable to be imagined or invented. It is with the nineteenth century that records begin to be reliable, and chemical agencies to be identified. But the present vast flood of information on 'allelochemicals' only began in the 1950's, so this is a good time to pause and take stock. Perhaps the most useful contribution from the phytochemist's point of view is his introduction to Dethier's terminology for defining the types of chemical interaction of plants and animals:

attractants, arrestants, stimulants, deterrents and repellents; what Lebreton would picturesquely call "tactiques d'encouragement et de dissuasion". With the aid of this terminology he discusses plant-nematode, plant-insect and plant-plant interactions, giving numerous instances in each case, with the authors responsible and, where possible, the chemical nature and often the identity of the agents responsible. It is a defect of the book that the numbered references are given chapter by chapter all together at the end of the text, so that for use as a handbook it is necessary to know what chapter you're reading in order to be able to look up your reference. And this is not made easier by the way in which the pages fall together when the book is laid down, so that it can't be described as a comfortable book.

While primarily intended for a less sophisticated audience than readers of '*Phytochemistry*', this book would nevertheless be a good read for any scientist unaware of the potential usefulness to man of secondary constituents.

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