

BOOK REVIEW

Terpenoids in Plants: Edited by J. B. PRIDHAM. Academic Press, London and New York, 1967. 257 pp. 70s.

THIS book is a collection of twelve articles on the chemistry and biochemistry of terpenoids which were originally presented at a Symposium organized by the Phytochemical Group in Aberystwyth in April, 1966. The terpenoids are a large and heterogeneous group of substances which have one basic feature in common: they are all derived from a five-carbon isoprenoid building unit. They include such diverse substances as rubber, carotenoids, steroids, quinones and polyisoprenoid alcohols. The book, however, is not a comprehensive treatise on terpenoids but deals with certain selected topics.

The book opens with an introductory chapter on "The Biological Significance of Terpenes in Plants" by T. W. Goodwin. An article on the "Biosynthesis and Metabolism of Monoterpenes" by W. D. Loomis emphasizes the fact that terpene metabolism is a dynamic process rather than the sluggish process as formerly believed. A. C. Oehlschlager and G. Ourisson discuss the skeletal transformations of diterpenes while M. D. Sutherland and R. J. Park describe the biogenesis of sesquiterpenes in the Australian shrub, *Myoporum deserti*. Articles on steroids include one on conformational analysis by J. S. E. Holker and two on biosynthesis by R. Tschesche and L. J. Goad in which it is shown that the biosynthetic pathways in plants and animals are basically similar. Also, F. Ryback describes methods for preparing specifically labelled substrates for studying terpenoid biosynthesis, particularly in respect of studies on steroids.

The isoprenoid quinones are dealt with in two articles—one on chemistry by J. F. Pennock and the other on biosynthesis by D. R. Threlfall. The recently discovered polyisoprenoid (prenols) are also covered chemically and biochemically in a chapter by F. W. Hemming.

The carotenoids are represented in an article by B. C. L. Weedon in which the application of the new methods of nuclear magnetic resonance and mass spectrometry to structural problems is emphasized.

All the articles are extremely well written and only a few errors were detected. For example, on pages 18 and 19 the side-chains in the formulae of plastoquinone, phyloquinone, tocopherolquinone and ubiquinone are all incorrect.

The book will be extremely useful to all workers in the field but many of the articles will also be of interest to other research workers and advanced students who wish to keep abreast of these rapidly developing areas of chemistry and biochemistry.

E. R. REDFEARN