

BOOK REVIEW

Plant Phenolics: edited by PASCAL RIBEREAU-GAYON.

University Reviews in Botany, Oliver & Boyd, London, 1972. 254 pp. £4.00.

ORGANIC chemists have been familiar for over a hundred years, readers of *Phytochemistry* for rather less, with the wealth of substances of diverse structural types which are derived from plants and micro-organisms and to which no general function in the overall metabolism can be assigned. These secondary metabolites, or natural products as they are frequently designated, have provided chemists with a seemingly inexhaustible supply of problems for decades. As the purely chemical problems relating to structure have been solved, attention has rightly switched to become focussed upon more biochemical considerations. How these compounds are formed and what their physiological function is in the organism are the questions now most often asked of the scientist.

Phenols are recognized as one of the major groups of secondary plant metabolites and their study now frequently attracts research workers whose primary speciality is a biological discipline rather than chemistry. It is to this group of researchers that Professor Pascal Ribereau-Gayon's book *Plant Phenolics* is slanted and to whom it will most directly appeal. Chapter 1 provides a concise review of the principal classes of plant phenols and chapter two outlines some of the features of chemical reactivity of phenols. This is undoubtedly an essential introduction but the value of the book lies in the subsequent chapters which describe some general methods of investigation of plant phenols, the distinctive features of the major groups—flavonoids, anthocyanidins and tannins and finally a discussion of some of their biological properties and of their position in metabolism. These sections provide a veritable gold mine of detailed information concerning the methodology of plant phenolics research which even the veterans in this field will find invaluable. Although there is perhaps a natural bias towards flavonoids and anthocyanins in the text it represents the distillation of the author's considerable experience in this field and in particular his evaluation of the importance of many of the empirical methods which have been employed.

The book is a translation of Professor Pascal Ribereau-Gayon's book *Les Composés Phénoliques des Végétaux* prepared by E. C. Bate-Smith, J. B. Harborne, T. Swain and I. B. K. Richardson. It is claimed to be the first comprehensive and authoritative review in English on the biochemistry of plant phenolic constituents but that claim would be difficult to sustain particularly in the presence of one of the translators. The text successfully preserves the style of the original although there are occasional inconsistencies and errors. The author has also taken the opportunity to revise the first French edition of the book; nevertheless several statements and formulae remain which the passage of time has rendered false. For example on p. 185 the reader learns that of the many structures proposed for the biflavans 'none has been definitely proven'. Yet on the same page reference is made to the elegant work of Weinges (1968) which rendered that phrase redundant.

This book will doubtless find its way into many libraries but it is regrettable that its price will hardly encourage the private subscriber also.

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