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BOOK REVIEWS

Progress in the Chemistry of Organic Natural Products: volume 33: edited by W. HERZ, H. GRISEBACH and G. W. KIRBY. Springer-Verlag, Vienna, 1976. 581 pp. DM 240; *ca* £58.00.

This volume contains five review articles covering the usual wide range of topics we have come to expect from this excellent series. The first by L. Minale and his associates in Naples catalogues recently discovered natural products of marine sponges, most attention being given to bromophenols, terpenoids and sterols. Among novel structures mentioned one might select the unique series of eight linear C_{21} difuranoterpenes from *Spongia* species, which the authors regard as having arisen by degradation of sesterterpenes rather than by condensation of diterpenes with a C-1 unit. Support for this view is provided by their co-occurrence in sponges with several furanoid sesterterpenes. The second chapter by R. M. Coates continues the theme of terpenoid biogenesis but entirely from the viewpoint of biogenetic-type rearrangements. This article is extremely valuable background reading to anyone interested in terpenoid biosynthesis and discusses the various schemes proposed for terpenoid skeletal inter-relationships from the standpoint of reaction mechanisms and stereochemistry.

A regular feature of recent issues of 'Fortschritte' has been an article on microbial products and in the present volume the tradition is maintained by a review of the chemistry of ansamycin antibiotics by K. L. Rinehart and L. S. Shield. For the uninitiated, these are macrocyclic molecules characterised by an aliphatic bridge linking two non adjacent positions of an aromatic nucleus, usually of a quinonoid nature; the best known is rifampicin, which is widely used in the treatment of tuberculosis.

The next chapter by A. Fontana and C. Tonioli deals with the chemistry of tryptophan as it occurs in peptides and proteins and is the most wide-ranging review in this particular volume. It includes a useful discussion of methods of determining tryptophan residues in proteins and concludes with an account of the role of this amino acid in the enzymic function of lysozyme and dehydrogenase. The final chapter on flavin and flavocoenzyme chemistry by P. Hemmerich is the one which will be of most interest to biochemically inclined readers. The author creates his own terminology as he proceeds, has a lively if rather unorthodox style of writing and has produced here a most readable account of a highly complex, often neglected subject.

Needless to say, volume 33 is as fully documented and illustrated and as elegantly produced as previously and it should be a valuable and widely consulted addition to all chemical and biochemical libraries.

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Annual Index of the Reports on Plant Chemistry in 1972: edited by T. KARIYONE with the assistance of H. OGETA, T. INOUE, T. KIMURA, S. NATORI and Y. SAIKI. Hirokawa Publishing Company, Tokyo. 391 pp.

This volume of the now familar Kariyone Index covers the phytochemical literature for 1972 and is a considerable advance on the last one issued, which was for the year 1967. Publishing has been speeded up by using camera copy instead of typesetting and this has, fortunately, had no deleterious effect on legibility. Emphasis again in this volume has been on thoroughness of coverage and the editors, together with a team of 32 abstractors, have collected together all relevant phytochemical data on plants published in 1972 and set it out on a taxonomic basis, family by family. The Index is, therefore, an ideal supplement to Hegnauer's multi-volume 'Chemotaxonomie der Pflanzen' since the reader can quickly ascertain what new material has been published on any plant family with the minimum of effort. In addition, there is a key to phytochemical review articles published in 1972 and the volume concludes with very complete compound and plant name indexes. The whole volume is liberally illustrated with chemical formulae especially of new structures and, where possible, tables of distribution patterns are also included. All phytochemists, whatever their particular interests, will find this volume a fund of information and can but be grateful to the team of Japanese scientists who have made its production possible.

With the ever increasing size of the phytochemical literature, the problem of coping, year by year, with all the available reports becomes more and more acute. One way of saving space would, of course, to be selective. Reports of such widely distributed substances as sitosterol, mannitol, rutin, caffeic acid, tetracosane, α-pinene etc. in new plant sources could possibly be omitted. At the family level, one could omit substances known to be more less universally present, e.g. tricin in leaves of grasses. Such editing, however, would create problems to the abstractors and it could perhaps be more up to the Editors of primary journals to see that such trivial reports do not appear in the first instance. The Editors of the Index promise to produce back numbers covering the years still outstanding (i.e. 1967 and 1968 to 1971) within a short time. They also plan to produce the Index within three years of the date of the original publication. We can only hope they are able to keep to these schedules and wish them well in their endeavours to up-date such a valuable and indispensable guide to the phytochemical literature.

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