

evidently derived from the work of Kalousek, which actually involved mixed potentials and had nothing to do with copper(I). On p. 665 $E_{1/2}$ is given as -0.54 v. vs. N.C.E. for the process $\text{Re(I)} \rightarrow \text{Re(II)}$ in 1 *M* perchloric acid: though no reference is given, the only possible source known to this reviewer is a paper by Lingane which gives a different half-wave potential, a different oxidation state of the starting material, and a different concentration of the supporting electrolyte, and also describes three additional waves of which no mention is made in the table. In the organic section of the table, the consistent use of trivial rather than systematic names of organic compounds is regrettable, as is the frequent failure to give full details concerning supporting electrolyte composition. As in the remainder of the book, American sources are poorly represented in this table—the reviewer sought in vain for any mention of a long and important series of papers by Elving, *et al.*—and over half of those which are listed are over ten years old.

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Fortschritte der Chemie Organischer Naturstoffe (Progress in the Chemistry of Organic Natural Products). Volume XIII. Edited by L. ZECHMEISTER, California Institute of Technology, Pasadena. Springer-Verlag, Mölkerbastei 5, Wien 1, Austria. 1956. xii + 624 pp. 16.5 × 23.5 cm. Price, \$24.75; Ganzleinen, \$25.60.

Earlier volumes in this series have presented comprehensive reviews by leading workers on topics which, while of current interest, have not become hackneyed by repeated reviewing. The present volume continues this valuable tradition, although some of the chapters have been anticipated to a greater or less degree by reviews published elsewhere.

The chapter on infrared spectra of natural products by A. R. H. Cole discusses instrumentation, and then considers numerous applications to problems in the structure of natural products, principally of steroids and terpenoids. Cole wisely does not attempt to duplicate the comprehensive collections of information about infrared spectra of organic compounds which are available in the writings of Bellamy and of Norman Jones, but his chapter is interesting and useful.

O.Th. Schmidt's review of gallotannins and related compounds gives a good summary of a field with which most organic chemists are probably not very familiar; the reader should note that "genetisch" in this chapter is apparently synonymous with the word "biogenetic" in English.

The cardiac drugs have offered one of the most complex structural problems in the whole steroid field, and in spite of many outstanding researches, particularly the classical studies of W. L. Jacobs, the structural problems are not all solved. Ch. Tamm gives a comprehensive and timely review of the chemistry of the glycosides and the aglycones.

Tropolone chemistry is reviewed by one of its most active exponents, Nozoe; the coverage is not as comprehensive as that in the recent review article by Pauson, but Nozoe's paper contains some new material and is a readable summary.

J. R. Price contributes an interesting and well-written chapter on alkaloids which can be considered to be related to anthranilic acid; the alkaloids considered include those of the quinoline, acridine, furoquinoline and quinazoline types.

The chemistry and pharmacology of the *Rauwolfia* alkaloids are discussed by Chatterjee, Pakrashi and Werner; this paper is comprehensive, is admirably up to date (Woodward's total synthesis of reserpine is included) and will undoubtedly be very useful to the many workers in this field. The section on pharmacology is particularly well done.

The great advances made in method of polypeptide synthesis in the last decade, and the large amount of work currently going on in the field of protein structure, make the last chapter, by Grassmann and Wunsch, particularly timely. They present a comprehensive and valuable, although occasionally rather uncritical, survey of methods of synthesis of the peptide bond; the chapter is, as far as the reviewer knows, the most complete and up to date discussion available.

In summary, all of the chapters will be useful to the specialist, and they all make instructive and broadening reading to the organic chemist who is interested in structural and theoretical problems. The emphasis of the whole book is on structural organic chemistry; possibly a chapter or two of more biological and biochemical nature, such as have appeared in earlier volumes of the series, would have provided some welcome variety.

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