

sive cross-referencing has been implemented to accentuate links and similarities. Extended detailed information is provided as short monographs, covering sources, production methods, principal components, drug use, mode of action, and synthetic and semisynthetic derivatives, as appropriate. The book includes a vast array of natural products currently used in medicine.

The first chapter (better suited as a forward by author), "How to Use This Book", is subdivided under the headings "The Subject", "The Aim", "The Approach", "The Topics", "Be Selective", "To learn or To Understand", "Conventions Regarding Acids, Bases, and Ions", and "Some Common Abbreviations". This chapter focuses on Dewick's mission and design of the textbook. As Dewick states, "Rationalization based on mechanistic reasoning is paramount. The sequences themselves are not important; the mechanistic explanations for the processes used are the essence."

The remaining six chapters logically follow traditional biosynthetic textbook flow, and including the following: Chapter 2, "Secondary Metabolism: The Building Blocks and Construction Mechanisms"; Chapter 3, "The Acetate Pathway: Fatty Acids and Polyketides"; Chapter 4, "The Shikimate Pathway: Aromatic Amino Acids and Phenylpropanoids"; Chapter 5, "The Mevalonate Pathway: Terpenoids and Steroids"; Chapter 6, "Alkaloids"; Chapter 7, "Peptides, Proteins, and Other Amino Acid Derivatives"; and Chapter 8, "Carbohydrates". The structures and biosynthetic pathways are extremely well illustrated and organized within each chapter. Each chapter ends with a Further Reading Section, containing a total of over 400 references to the primary and secondary literature. The Table of Contents and the Index are superbly fashioned and sufficiently detailed and are easy to use and follow. The cost of the paperback is extremely reasonable for students (and faculty!). The textbook is essentially error-free (except for a few structural and typographical oversights) and is highly recommended for use in the classroom, equally suited as either a supplemental or a stand-alone textbook.

**John M. Rimoldi**

*Department of Medicinal Chemistry and  
National Center for the Development of Natural Products  
University of Mississippi  
University, Mississippi 38677*

NP9701081

S0163-3864(97)00108-0

**Supplements to the 2nd Edition of Rodd's Chemistry of Carbon Compounds, Vol. IV. Heterocyclic Compounds, Part B. Five-membered Heterocyclic Compounds: Alkaloids, Dyes, Pigments.** Edited by

M. Sainsbury. Elsevier Science, V.B., Amsterdam, The Netherlands. 1997. xvi + 509 pp. 15 × 22.5 cm. \$324.25. ISBN 0-444-827587.

This volume comprises eight chapters that update the corresponding volume in the series on the basis of information published in the period from 1985 to the end of 1995. The chapters are devoted to the following: pyrrolidine alkaloids, pyrrolizidine alkaloids (both by R. J. Robins, 19 and 47 pages), indole alkaloids (G. W. Gribble, 96 pages), Amaryllidaceae alkaloids (J. R. Lewis, 85 pages), tropane alkaloids (G. Fodor, 26 pages), pyrrole pigments (K. M. Smith, 81 pages), indigo group dyes (M. Sainsbury, 22 pages), and cyanine dyes and related compounds (G. Bach and S. Dähne, 99 pages). There is an index of compounds.

The editor is to be congratulated on assembling a group of exceptional authors for these chapters, each of whom is an authoritative expert in their respective field. When considering one word to describe this book I thought of either "terse" or "succinct". The former has a somewhat negative connotation these days, although its original derivation refers to being polished and refined. Succinct would be applied in the context of clarity of presentation of a vast amount of information. So perhaps both words apply. For this is indeed a polished volume of briefly presented information covering some very large areas of alkaloid and synthetic chemistry. The styles and contents of the various alkaloid chapters are reasonably equivalent. Each of these chapters deals with the isolation of new alkaloids, and most of the alkaloid chapters deal with recent synthetic strategies (not the indole alkaloid chapter). Fodor also covers the biosynthesis of tropanes. As one might imagine, very little attention is paid to the biological activity of the isolates. The last two chapters on the indigo and cyanine dyes, respectively, are very well-presented, and the section on the present divergent industrial uses of cyanine dyes was most illuminating.

Overall these are excellent reviews. There were very few errors noted, and the structures are well-proportioned. Unfortunately, the very high price means that this volume is not intended for the bookshelf of the typical academic. However, as a part of maintaining a library collection of the series, it is an essential acquisition.

**Dr. Geoffrey A. Cordell**

*Department of Medicinal Chemistry and Pharmacognosy  
College of Pharmacy  
University of Illinois at Chicago  
833 South Wood Street  
Chicago, Illinois 60612-7231*

NP970109T

S0163-3864(97)00109-2