

with other functional groups (alkanes, carboxylic acids, esters, amides, nitriles, aldehydes and ketones, amines, alkyl halides, alcohols, and sulfur compounds). It is the stated intention of the publisher to devote the third chapter of aliphatic chemistry to a "class of related natural products." In this volume, the third chapter of Part I, by F. D. Gunstone, reports various facets, from physical properties to biological reactions, of the literature on fatty acids and related compounds. Part II also consists of three chapters: Chapter 1 by H. Maskill reviews developments in the chemistry of three- and four-membered carbocyclic rings; Chapter 2 by D. R. Boyd and B. J. Walker summarizes progress on three-membered heterocyclic rings; and Chapter 3 by the same authors similarly treats four-membered heterocyclic rings. The basic format is similar for each chapter of Parts I and II: first, syntheses of each class of compounds are surveyed and, then, reactions of each class are subdivided by reaction type and are reviewed. However, physical properties, theoretical and structural considerations, mechanistic interpretations, and published reviews of the various topics are either covered in separate sections or are interwoven with the chemistry in the sections dealing with reactions.

Part III is comprised of six chapters devoted to the following areas: (1) five- and six-membered, saturated (and partially saturated) heterocyclic rings by F. G. Riddell; (2) conformational analysis of five- and six-membered saturated heterocyclic rings also by F. G. Riddell; (3) five- and six-membered carbocyclic rings by D. G. Morris; (4) medium- and large-ring carbocyclic and saturated-heterocyclic rings by M. S. Baird; (5) bridged carbocyclic rings by J. M. Mellor; and (6) bridged, saturated heterocyclic rings also by J. M. Mellor. Both syntheses and reactions of the numerous types of structures are again summarized; but, as one should expect from the nature of the subject matter, conformational analysis, structural properties and theory, physical properties, and mechanistic aspects are prominent, if not dominant, in Part III.

All three parts of this volume contain a wealth of information organized systematically and presented, generally, in concise form. The various chapters are not mere recitals of what was published during the 2-year period; rather, the basic substance of the significant literature is presented for the reader. In general, coverage of the significant, but not the routine, literature is comprehensive, particularly in those chapters dealing with the various carbocyclic and bridged-ring systems and three-membered heterocycles. The liberal use of structural formulas and equations is an invaluable aid to the reader or rapid scanner.

The areas included in Part I obviously constitute part of general or basic organic chemistry; most of the other areas are equally fundamental because of their importance to structural theory and reaction mechanisms. Because of the nature of the material covered by this Specialist Report, most organic chemists, as well as the specialist interested in a particular area, will profit by reading or by browsing through the parts of this volume. Those inter-

ested in the more specialized areas of Parts II and III are provided with the opportunity to review, and to gain an overall view of, recent significant developments in their areas of interest. For others, the great value of this volume derives from the fact that it brings together in one place recent progress in syntheses and reactions and in many of the fundamental concepts of organic chemistry. For research, development, or teaching, this Report and subsequent annual volumes, if they maintain the quality of Volume 1, should be a valuable reference source for many years.

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NOTICES

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Heroin and Behaviour. By GARY B. STIMSON. Halsted Press, 605 Third Ave., New York, NY 10016, 1973. 14 × 22 cm. Price \$11.50.

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Locomotion of Tissue Cells, Ciba Foundation Symposium 14. Associated Scientific Publishers, P.O. Box 1270, Amsterdam, The Netherlands, 1973. 17 × 24 cm.

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Synthetic Methods of Organic Chemistry. Edited by W. THEILHEIMER. S. Karger, Basel, Switzerland, 1973. 585 pp. 15.5 × 23 cm. Price \$27.70.