

considerable duplication of other available literature; this applies to M. J. S. Dewar's article on "Heteroaromatic Boron Compounds" (which is very similar to the same author's review in *American Chemical Society Monograph* No. 42), and to G. W. Campbell's contribution on "The Structures of the Boron Hydrides" (which overlaps largely with W. N. Lipscomb's *Boron Hydrides*, Benjamin, New York, 1963).

The other chapters are by R. J. Brotherton on "The Chemistry of Compounds which Contain Boron-Boron Bonds", T. D. Coyle and F. G. A. Stone on "Some Aspects of the Co-ordination Chemistry of Boron", A. H. Soloway on "Boron Compounds in Cancer Therapy", R. Köster on "Organoboron Heterocycles" (by which are meant compounds having only boron and carbon within the ring system), K. Torssell on "The Chemistry of Boronic and Borinic Acids", and R. Schaeffer on "Nuclear Magnetic Resonance Spectroscopy of Boron Compounds".

The standard of writing is high throughout, although there are inconsistencies in style and nomenclature between various chapters, which suggest that the editors might have been more active. I believe they should have examined with special care, from this point of view, the contributions by those authors for whom English is not their native language.

The book is attractively produced and its arrival is undoubtedly a landmark in the development of boron chemistry.

M. F. LAPPERT

Dissociation Constants of Organic Bases in Aqueous Solution

(International Union of Pure and Applied Chemistry: Analytical Chemistry Division Commission on Electro-analytical Chemistry.) By D. D. Perrin. Pp. vii + 473 + xlii. (London: Butterworth and Co. (Publishers), Ltd., 1965.) 140s.

Tables for Identification of Organic Compounds

Compiled by Prof. Max Frankel and Prof. Saul Patai. Second edition. (Supplement to *Handbook of Chemistry and Physics*.) Pp. x + 301. (Cleveland, Ohio: The Chemical Rubber Co.; Oxford: Blackwell Scientific Publications, 1964.) 67s. 6d.

THE first is a basic work of reference—no pun intended—being a sequel to the similar table for organic acids published in 1961. It follows much the same pattern and gives, in twenty-three main sections classified according to chemical structure, first and, where appropriate, other dissociation constants of some 3,700 organic bases. For each the temperature and method of determination, an appraisal as to the reliability of the result, and original literature references are quoted, the values listed being to some extent selected. The digest thus presented is an extremely concentrated but remarkably informative guide to many decades of original work in physical chemistry and, like the previous volume, is worthy of a place in the reference section of all academic chemical libraries.

Over the past 50 years the *Handbook of Chemistry and Physics* has built for itself, through 45 successive editions, a prominent place on the chemist's bookshelf. Indeed, it has often been one of the new books allowed a permanent place on his desk, or even (unprofessional thought!) on his laboratory bench. To many it has become the single-volume *handbook* of reference data. In 1963 two separate supplements were published for the first time. The present tables, now in the second edition, are one of these and derive from the somewhat cryptic tables of melting- and boiling-points in earlier editions of the main work: as its title implies, it supplements rather than replaces the section in the latter on physical constants of organic compounds.

The new publication presents, in twenty-two groups of tables based on chemical character, the melting-points, boiling-points, n_D^{20} and D_4^{20} values together with the appropriate properties of suitable derivative aids for

identification of more than 5,500 organic compounds. Other tables deal briefly with solvent miscibility, surface tension and boiling-point and thermometer stem emergence corrections. Inevitably there are gaps to be filled in the principal tables and, as the editors point out, some degree of non-uniformity in the standard of reliability of the data available, despite efforts made to include only the best.

Both of these books suffer from the minor annoying feature of sideways presentation of the main part of the text.

H. EGAN

The Biochemistry of Poliomyelitis Viruses

A Synopsis of Poliomyelitis Infection and Research. By Ernest Kovacs. (International Series of Monographs on Pure and Applied Biology. Modern Trends in Physiological Sciences, Vol. 21.) Pp. xii + 272. (London and New York: Pergamon Press, 1964.) 70s. net.

CONTRARY to expectation the scope of *The Biochemistry of Poliomyelitis Viruses* is wider than the title would seem to indicate. Half the book deals with non-biochemical aspects of poliomyelitis virus infection including clinical and epidemiological features. In addition, there is a short chapter on viruses and tumours which seems superfluous in a book of this title and scope.

Dr. Kovacs has consulted a vast range of literature concerning poliomyelitis and has attempted to establish a biochemical approach to the underlying problems and define them in biochemical terms. In recent years virology has reached a stage of very rapid development which makes a general synthesis of the biochemical data by no means easy. Hence the more purely biochemical chapters result in a mere collation of interesting observations, many of which are contradictory, making their interpretation difficult, if not confusing. The recent work which has led to the increased understanding of the mechanisms by which proteins are synthesized and viruses replicate, inspired by the work of Crick, Watson and others, is not clearly explained by Dr. Kovacs, who fails to convey the excitement of this rapidly growing branch of biochemical and virological research.

Although the book contains much interesting information it makes a somewhat dull impression and Dr. Kovacs's style proved irksome to me. The book abounds in laboratory jargon and neologisms of which "centralneurally", "percentually large differences" and "phageists" are examples, as is the author's description of "the virologic process" as "a physio-pathological process on a biophysico-chemical basis". The text would have been improved if Dr. Kovacs had avoided the verbose and rhetorical passages which occur here and there in the book, and surely no apology or argument is needed nowadays for the inclusion of electron-microscopic data.

The photographic reproductions are adequate, but there are occasional typographical errors.

ARNOLD COHEN

Genetics

Second edition. By Dr. H. Kalmus. Pp. viii + 216. (London: Heinemann Education Books Ltd., 1964.) 15s.

HAVING pointed out, in the foreword to this second edition, that many laymen, scientists and even biologists are failing to keep abreast of exciting current progress in genetics, Dr. Kalmus goes on to say that biochemical elucidation of gene structure and activity "has revealed a new and beautiful unity of life". The book's strong point is not, however, a thorough account of those discoveries at the cellular and biochemical levels which have characterized the past decade.

The 15 pages of new material dealing with "modern sophisticated concepts of the gene" and microbial genetics are scarcely adequate to reveal clearly to the layman this new and beautiful unity. He would not, for example,