Book Reviews

Bacteriocine und bacteriocinähnliche Substanzen. Henning Brandis and Jan Smarda. VEB Gustav Fischer Verlag, Jena, 1971, 407 p., 98M. This is volume 11—in German—of a monograph series, "Infektionskrankheiten und ihre Erreger" (Infectious Diseases and their Causative Agents), edited by R. Bieling, J. Kathe, W. Köhler, and A. Mayr.

This is a reference work for specialists. The book is divided into two sections, one on colicins by J. Smarda (Brno)—207 pages long with about 550 references including many from the Russian and East European literature—and one on other bacteriocins and bacteriocin typing by H. Brandis (Bonn). The colicin section contains chapters on the occurrence of colicins in various *Enterobacteriaceae*, genetics of colicinogeny, formation of colicins, classification of colicins and colicin typing, mechanism of action of colicins, and experimental methods. There is an appendix reviewing the literature from 1968–1969. More recent literature is not covered.

Chapters in the second part of the volume are as follows: colicin typing of *Shigella* according to the procedure of Abbott and Shannon, bacteriocin formation and bacteriocin sensitivity as aids in typing of *Enterobacteriaceae*, pyocins, pesticins, vibriocins and bacteriocins, and bacteriocin-like agents of gram-positive bacteria. References include many from 1970 and some from 1971.

The presentation of materials is well organized. Most often, there is a brief but clearly written recapitulation of the contents of several literature articles, with emphasis on methodology. Occasionally, the historical development of a topic is briefly indicated. There is a fairly detailed subject index, a separate author index, and a 7-page table of contents. Particular items in the rather heterogeneous subject matter of the book are thus found readily. There are 85 black-and-white photographs and graphs, adequately reproduced, and 79 tables.

Earlier book-length treatments of the general subject of bacteriocins are by Smarda (1965) in Czech and by Kudlay and Lichoded (1966) in Russian. Symposium volumes have appeared under the editorship of Brandis (Zbl. Bakt. I. Orig. 196 issue 2/3, 1965), Györfy (Acad. Kiadó, Budapest 1966—symposium held in 1963), and Wollman (Ann. Inst. Pasteur 107 issue 5, 1964). This book should be available in

libraries serving researchers in microbial genetics, microbial physiology, and bacterial taxonomy.

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Identification of Enterobacteriaceae. Third Edition. P. R. Edwards and W. H. Ewing. Burgess Publishing Co., Minneapolis, 1972, 362 p., \$12 (paper).

A decade has elapsed since the appearance of the second edition of this book. The publication of the third edition, prepared by William H. Ewing, after discussion with the late Philip R. Edwards, is a welcome event. Reflecting the progress in the field, the number of pages has been increased from 258 to 362.

The overall organization has been maintained. However, two important chapters (3 and 4) have been added, namely, the "Differentiation of *Enterobacteriaceae* by Biochemical Reactions" and "The Antigens of *Enterobacteriaceae*." Of particular practical value is the information on the percentages of cultures giving various biochemical reactions (Tables 5 to 26). It is this approach to quantitative information on biochemical activities of numerous strains that may well serve as a guidepost to authors of volumes dealing with identification of bacteria. Another change in the present edition relates to the deletion of the chapter concerned with bacteriophage typing of salmonellae. The introductory chapters 1 and 2 of the new edition deal with "Taxonomy and Nomenclature" and with "Isolation and Preliminary Identification." Chapters 5 through 17 are concerned with the genera *Escherichia*, *Shigella*, *Edwardsiella*, *Salmonella*, *Arizona*, *Citrobacter*, *Klebsiella*, *Enterobacter*, *Serratia*, *Pectobacterium*, *Proteus*, and *Providencia*. The final chapter 18 gives practical information on various culture media and reagents. The typography of the book has been greatly improved, and a helpful index has been added.

This reviewer finds the system regarding the genus *Salmonella* and its species, used by Dr. Ewing, entirely reasonable, recognizing only three species, namely, *Salmonella cholerae-suis* as the prototype or type species, *Salmonella typhi* as a unique pathogen of man, and *Salmonella enteritidis* to comprise all other