description of the complementation test for the mapping of the r_{II} locus, in words strongly reminiscent of a certain classic book on the subject, the author states that "either no plaques or normal, wild type plaques develop"; this, of course, should be "or normal r plaques develop", as, indeed, the very next sentence indicates. Of the omissions, it is a pity that transfection is not mentioned, nor due reference made to Jacob and Monod and their operon theory in the discussion of immunity from superinfection. The last chapter is novel in that it deals with the problems caused by bacteriophages in cheese-making and antibiotic production. There is an appendix in which two recipes for media are given; the second, however, makes no reference to units or to the need for water.

The book is a useful, although perhaps, in some places, superficial introduction to bacteriophages. The price seems high, but this may be due to the many photographs; the electron micrographs are good, but the illustrations of electron microscopes and a microtome are surely superfluous. Incidentally, a book published in England ought not to have American spelling.

L. O. BUTLER

Actinomyces, filamentous bacteria: biology and pathogenicity

By J. M. SLACK and M. A. GERENCSEI. 1975. Minneapolis, Minnesota, USA: Burgess Publishing Co. Pp. ix and 158. US \$14.95.

The aim of this monograph is to provide an historical, pictorial and up-to-date account of certain bacteria that form branching filaments, with particular emphasis on those that cause disease in man, are present in the oral cavity or both. The authors consider in detail the genera *Actinomyces*, *Arachnia*, *Bacterionema* and *Rothia*, which are currently classified in the Family Actinomycetaceae, but have little to say about the genus *Bifidobacterium*.

The chapter on the taxonomy of the Family Actinomycetaceae is comprehensive, summarises the data obtained by modern taxonomic techniques, and contains a useful list of type strains. The chapters on the ecology, physiology and cell-wall composition of these organisms are concise and to the point, but the best chapter in the book, on the biology of the genus *Actinomyces*, reflects the main interest of the authors. It is beautifully illustrated and contains information on cell and colony morphology, ultrastructure, O₂ requirements and the biochemical and serological properties of these bacteria. Similar information is provided on *Arachnia*, *Bacterionema* and *Rothia*. The chapter on actinomycosis in man and animals is also comprehensive and well illustrated.

The chapters on nocardiae and the diseases they cause are not so well done; the photographs are not as relevant as before and important papers and identification techniques are not cited. However, the sections on the practical procedures for the isolation and identification of *Actinomyces*, *Nocardia*, etc, should be of great help to diagnostic microbiologists who have to grapple with these problems. They will also find the final chapter on techniques, media and reagents of some help. The book contains an index and an extensive bibliography.

This book is well produced, spotlights a neglected group of bacteria and should be of general interest to a wide range of bacteriologists. All of those interested in the actinomycetes should purchase it and place it next to their copies of H. Prauser's "The Actinomycetales" (Gustav Fischer, Jena, 1970), and G. Sykes and F. A. Skinner's "Actinomycetales: characteristics and practical importance" (Academic Press, London).

M. GOODFELLOW

Public Health Laboratory Service Monograph Series

Edited by A. T. WILLIS and C. H. COLLINS. London: Her Majesty's Stationery Office.

No. 7. Preservation of bacteria with notes on other micro-organisms. By S. P. LAPAGE and K. F. REDWAY. 1974. Pp. x and 121. £1.50.

This monograph is based on the authors' work and experience with the National Collection of Type Cultures (NCTC) at Colindale. Though they discuss the preservation methods