

of the relevant international committee which is dropping the unwieldy family name "herpetoviridae" in favour of "herpesviridae", after having strenuously resisted the arguments to do so in 1975!

The honours student will inevitably need to refer to more comprehensive volumes and a useful reference list is provided. Nevertheless, most teachers of virology would be more than delighted were their students to have a firm grasp of all the material in this book.

Inevitably, individual teachers will be slightly critical on one or two minor points. I was a little disappointed that the section on neutralization of viruses by antibody, reflecting the inclusion of Della Porta and Westaway in the reference section, appeared to suggest that the multiple critical site theory is fully substantiated. My preference would be to refer students to a more balanced view as represented in the reviews of Mandel. Others, perhaps, may be a little surprised at the omission of any reference to sub-unit vaccines in the relevant chapter. However a book of this size inevitably involves condensation of argument and selection of some topics at the expense of others, and there can be no serious claim of major omissions. The volume is likely to be welcomed by students and teachers alike. □

D.H. Watson is Professor of General Microbiology and Head of Department at the University of Leeds.

Spoiling the story

R. Whittenbury

Microbiology. 3rd Edn. By G. A. Wistreich and M. D. Lechtman. Pp.786 + appendices. (Glencoe, Encino, California/Collier Macmillan, London: 1980.) \$20.95, £11.95.

GOOD plays, good novels, even good textbooks for undergraduates all display a common quality — a mastery of the subject, revealed in clarity of style, fluency of writing and in the skilful telling of the tale. *Microbiology*, I'm sorry to say, is not of this class. It is divided into six sections, three on basic principles of microbiology and three on related topics (immunology, medical microbiology and control of micro-organisms, and applied microbiology). Although much of the book is unexceptionable, it is badly flawed particularly in the area of basic principles.

A more personal criticism should be directed towards its "education props" style of presentation. All students (one likes to believe) relish a bit of an intellectual challenge. In this instance the challenge will, I fear, be boredom, rather than comprehension. Each chapter is prefaced by a brief description of the goodies to

come and a list of major "take-home" messages, point by point, to be absorbed. In other words, the bones of the plot and the fate of the main characters are revealed before you've even had a chance to clap eyes on the chapter proper, itself subsectioned and highlighted. To reinforce this approach the chapters finish with a fairly lengthy sub-sectioned summary, again point by point — "Ribosomes are important in protein synthesis" — a list of review questions and a supplementary reading list (a bit too advanced for the readers the authors have in mind).

Excellent micrographs, black-and-white and colour photographs, and clear tables and diagrams (with one or two notable exceptions) all help to hammer home the message. One quibble I have is the pointless and irritating colour banding of the tables.

The more serious problems, emerging mainly in the basic-principle sections, stem from the remit the authors have set themselves — to write a text for students who have had some exposure to chemistry or biology, but not necessarily to both. These emerge as ill-written paragraphs and sub-sections, many errors of fact, contradictions, and over-simplification of concepts and complex issues. The last sometimes leads to incomprehensible statements or to truisms, some of which even raise spurious queries in the mind of the reader, for example "Phototrophs are noted for their photosynthetic activity". All phototrophs, of course, are photosynthetic organisms, by definition; the very form of this seemingly innocuous statement sows the seed of an idea that there may be some other and more important feature characterizing all phototrophs. Failure to integrate to ensure consistency, if not accuracy, adds to the confusion. For instance, what is written about autotrophs, photosynthesis, methane oxidizers and methane producers contains many examples of all these faults. Many of the errors (typographical included) are really inexcusable in a basic textbook.

Four final examples of the sort of thing you shouldn't find in a work of this nature are: a gross typographical error — "phoyodnynyhriv bacteria"; a fiction — that carbonates can be reduced via the cytochrome-mediated electron transport chain; a contradiction — that lignin is an exception to the rule of microbial infallibility (after giving earlier a list of bacterial and fungal species which break down lignin); a paragraph containing misinformation and needing no valedictory comment from me:

The microorganisms in the rumen also provide other specific functions, such as the synthesis of amino acids and vitamins. Some microorganisms leave the rumen and are digested in other parts of the gastrointestinal system to serve as a major supply of proteins and vitamins for the ruminant. This is particularly important for the nutrition of ruminants because grasses are deficient in protein.

The authors have much remedial work to do before the fourth edition emerges and before the book, as a whole, can be recommended for use as a student text. Even if the text were faultless — and, potentially, it is a good example of its genre — my preference would still be for the Roger Stanier style (*General Microbiology* by R. Y. Stanier *et al.*; Prentice-Hall/Macmillan, London, 4th Edn 1977), an example of the sort of book I had in mind when writing the opening sentence. □

R. Whittenbury is Professor of Biological Sciences and Chairman of the Department of Biological Sciences at the University of Warwick.

Nearly Fungi perfecti

Peter E. Long

Introduction to Modern Mycology. By J.W. Deacon. Pp.197. (Blackwell Scientific/Halsted: 1980.) Flexi £6.50, \$18.50. *Introduction to Fungi*. 2nd Edn. By John Webster. Pp.669. (Cambridge University Press: 1980.) Hbk £30, \$79.50; pbk £9.95, \$21.95.

MYCOLOGY, traditionally a taxonomically orientated part of a botany honours syllabus, now finds a place in microbiology courses where greater emphasis is placed on fungal development and function. *Introduction to Modern Mycology* is a welcome, though belated, addition to Blackwell's *Basic Microbiology* series, reflecting the new approach. Very much a book for beginners, it is a clearly written, compact, explanatory account of fungal structure, growth and development, coupled to consideration of the role of fungi in nature. Taxonomy and morphology are confined to the introduction and there is a concluding chapter on ways of restricting fungal growth. The 14 chapters include an amazing number of topics, aided by lengthy figure captions that impart additional information. The author admits to neglect of some traditional areas; these include the mechanisms of ascospore and basidiospore discharge, while slime moulds receive scant attention. Such omissions are largely excusable, but I draw the line at his failure to make any mention of the lichens, which number roughly a quarter of all described fungal species. The illustrations are not so well chosen as the contents and sometimes appear crude, especially in

The Great Gray Owl: Phantom of the Northern Forest, reviewed in *Nature* 288, 519, 1980, will be published in the UK, Europe and the Middle East in March of this year by Oxford University Press. Price will be £9.95. The book is available in the USA from The Smithsonian Institution or through bookshops.