Book Review


A general and understandable account of the varied approaches to identifying organisms is helpful to students and practitioners of biology. The diverse approaches to systematizing characters are seldom given any emphasis in standard textbooks, and a pocket book, such as this one in the Studies in Biology series published by Edward Arnold Ltd., London, can be used as an informative supplement. It describes and discusses the applications of identification methods that use diagnostic keys, tables, mechanical devices, and computers. The principles and practice of each are illustrated by botanical, zoological, or microbiological examples. The author is a plant systematist, and there is a modest but not overbearing bias in that direction. However, many present-day students of microbiology have only minor exposure to plant and animal systematics and would be likely to be somewhat daunted by the secondary role accorded to those situations (especially in determinative bacteriology) where biochemical and physiological data are dominant features of characterization. There are useful but very unevenly distributed references, and the more generally useful, conventional approaches to bacterial identification are omitted. For example, reference is not made to Bergey's Manual or to Skerman's Guide to the Identification of Genera, to name but two glaring omissions. The balance is redressed only slightly after 25 pages of text concerning computer applications by the statement: "Within the subject of biology applications of these methods are rare outside microbiology and agriculture, and it is worth giving the reasons for this." There follow a very few key references and a limited example; however, the reasoning and cautions given are sound, albeit brief. The four short and rather misleading paragraphs on microbiological applications do not display any real understanding of microbes and of the approaches used by those who study them; furthermore, no mention is made of the usefulness of serology or of molecular data, etc., for confirming or denying identity. It would seem that a modest expenditure of pages (it is a book of only 100 pages) would have allowed a breadth of examples and a more searching treatment of applications. As it is, the book has value for students with a broad acquaintance in general biology.

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