

sources of reference spectral information. However, this reviewer notes with regret the absence of a chapter on chiroptical methods.

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high, even in these inflationary times, for the student's pocket.

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Molecular Biology of Plants: A text-manual: by JOE H. CHERRY. Columbia University Press, New York, 1973. 204 pp. £6.00.

This book contains a selection of experimental procedures for an advanced laboratory course in plant biochemistry and, since there is very little else available of this kind, it is to be warmly welcomed. As the title indicates, it is mainly concerned with the separation and estimation of enzymes, nucleic acids and proteins (a total of 26 experiments) but there also are sections on plant hormones (four experiments) and on certain low molecular weight constituents (five experiments). Each of the 11 chapters begins with a brief introduction to the experiments which are then described with practical details and these are followed by a few key references. Further experimental details, such as the preparation of buffers and procedures for disc electrophoresis, are covered in a series of appendices which come at the end of the book. There is also a brief but adequate index.

In general, the experiments are well described and there are a number of helpful illustrations, e.g. of apparatus for gradient elution. Perhaps, more help could have been given to the student in places. Inclusion of more details of the type of result expected in some of the experiments might have been advantageous. For example, in the analysis of nucleotides, a table giving some representative R_f values, electrophoretic mobilities and spectral maxima would have been useful; as it is, the student must go to the original literature for this. Also, the range of experiments could have been widened by a better coverage of plant polysaccharides and by the inclusion of something on nitrogen metabolism.

In all, this is an invaluable book to have around in any plant biochemistry laboratory. It is unfortunate that the price (£6 for 200 pages) is rather too

The Biology of Blue-Green Algae: N. G. CARR and B. A. WHITTON (eds). Botanical Monographs, Vol. 9. Blackwell Scientific Publications, Oxford, 1973. x + 676 pp. £13.50.

There has been a surge of interest in the biology of the blue-green algae in recent years, reflected in the fact that about two-thirds of the 2000 or so references quoted here were written during the last 10 years. How well is this activity digested and summarized for those unlikely to go to the primary publications?

This volume opens and closes with detailed accounts of metabolic intermediates, autotrophic and heterotrophic physiology, reflecting the interests of the senior editor. (Though one might note on p. 488 that "the physiological and biochemical diversity amongst the cyanophytes appears so low that the microbiologist... may find the group rather monotonous and uninteresting".) Next follow chapters on the fine structure and biochemistry of the internal and external membrane systems. Other important classes of biochemical compounds are then discussed before a sequence of morphological, physiological and ecological chapters. The penultimate chapters deal with phylogeny. There is very little to be gained by reading these chapters in sequence, since each is essentially complete in itself. For a book presumably aimed at those studying the physiology and biochemistry of the blue-green algae, the appendices on culture collections and culture methods will be appreciated even though they do not attempt to be comprehensive. On the other hand, it is unfortunate that the chapters on systematics fail to give an adequate guide to the development of an acceptable practical classification for experimentalists.

The production of the book is good, with few misprints, mostly obvious, such as the misplaced heading on p. 354, but the provision of a list of contents for each chapter, without page references, in what is essentially a reference work, is poten-

tially irritating. The reproduction of photographs is of high quality (better than those in another recent book on blue-green algae).

The key to this volume is in the preface: "...an account of *most* aspects of blue-green algal biology that are of *general* interest, or are currently the subject of *particularly marked activity*" (my italics). This must be the excuse for the very different levels of approach adopted by different contributors. In some cases the students at whom this book is aimed could indeed be undergraduates, but many chapters are aimed at researchers who will know and have access to the primary literature. There is

editorially encouraged overlap in some areas while other acknowledged important topics are totally omitted, for example, mineral nutrition and the ecological role of blue-green algae in tropical soils. It cannot, therefore, be recommended unreservedly to students; many potential users will require only a small proportion of the pages: libraries, contributors and reviewers will be glad to have the volume on their shelves. Those seeking a detailed, modern, general account of the group will go elsewhere.

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