

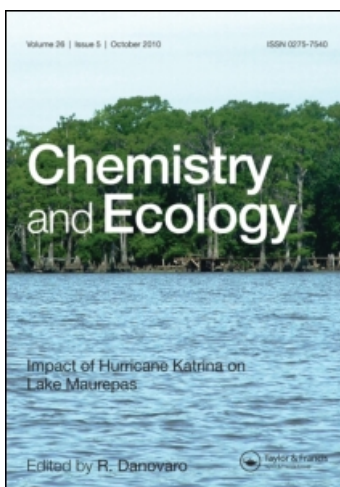
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### Book Reviews

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## Book Reviews

Oxygen and Life Second BOC Priestley Conference by various editors. The Royal Society of Chemistry: Letchworth, 1981. £11.00 ISBN 0 85186 825 8

This volume contains the lectures delivered at the second BOC Priestley conference organised by the Royal Society of Chemistry in conjunction with the University of Birmingham. In addition to the Priestley lecture on 'Mars Biogenesis and the role of Oxygen' the scientific programme encompassed four main themes: photo-oxygen evolution; superoxides i.e. intermediates between oxygen and water; biological oxygen transport and oxygen utilizing enzymes. An introductory lecture provided a useful view of the underlying chemistry and biochemistry of all four themes. The approach to these topics was essentially two pronged: industrial and medical. Oxygen is widely used in industry and the present methods of large scale industrial production are energy intensive. Clearly there is tremendous potential for a production method using a cheap, clean and abundant energy source such as light and several papers dealt with processes which may have future applications in this field. The papers dealing with the medical aspects ranged from the applied/clinical to pure research. At the applied/clinical end of the spectrum were two fascinating papers (to the non-medic at least) describing work carried out in America and Japan on the use of perfluor-chemicals for partial and total blood replacement. The pure research papers centred on the enzyme cytochrome oxidase although several other topics such as Hemocyanins (copper) role in oxygen transport were also discussed.

Most of the papers required a considerable background knowledge of the subject and in view of their detailed technical nature I would hesitate to recommend this book to anyone who does not have this background or is not prepared to acquire it. For those in this field I have no doubt they will find many of the papers interesting and stimulating and to contain a considerable amount of material which is not yet available from scientific papers. In this respect the Royal Society of Chemistry is to be congratulated on its swiftness in publishing this book. The Conference was held in September 1980, the proceedings published in April 1981. I suspect my fairly minor criticisms of this book stem from the printing techniques

required for such rapid publication - a case of swings and roundabouts. The quality of the reproductions of the photographs is rather poor. The type face changes throughout the book and on occasions, especially on some of the diagrams is too small.

The book retails at £11.00 and for the reader who is able to extract all the undoubtedly useful information therein it seems a reasonable price.

A. J. MURRAY

The Estuarine Ecosystem Tertiary Level Biology Series  
by D.S. McLusky. 150pp. Blackie: Glasgow, 1981. £6.25  
ISBN 0 216 91116 8 Pbk.

Inevitably, in reviewing this book, a comparison was made with the author's previous book "Ecology of Estuaries" which was published ten years ago. In many respects, "The Estuarine Ecosystem" is an updated version of the earlier book. It covers much of the same ground in its introductory chapter, the sequence of topics dealt with in succeeding chapters is similar and several text figures are identical. However, a decade of research in estuaries has seen a new approach in attempts to understand this ecosystem. This is reflected in the content of the three key chapters which deal with primary producers, primary consumers and predators. These are discussed principally from the point of view of production, biomass and energy flow through the ecosystem and this is the book's main strength. These chapters are an excellent source of factual material and interesting comparisons between estuaries are provided. Unfortunately, the life cycles of the flora and fauna are scarcely mentioned. Having adopted the approach of ecological energetics, it is regrettable that the same theme was not used in the chapter entitled "Problems of life in estuaries" which examined physiological stress and speciation. The sixth and final chapter which deals with man's impact upon the estuarine environment amounts to a rather superficial treatment of this important topic. There are significant gaps in the discussion on pollution which are not fully compensated for by the papers provided in the reading list. Similarly, the discussion of man's impact on estuarine fisheries as a result of pollution contains few of the important issues.

In conclusion, the reader is left with the impression of a lack of balance in the treatment of the subject and a feeling that certain essential topics have been left out. This book alone will hardly provide the undergraduate

student, to whom the series is directed, with a complete view of estuarine processes. Nevertheless, in paperback form the book is probably a worthwhile purchase, provided that the reader has access to the other basic textbooks on estuarine and marine ecology.

J.G. PARKER

Fine Dissection of Ascoglossans by T. Gascoigne. 1980. Pub.: The Author, in conjunction with the Conchological Society. 32 pp. Price £1 post free from T. Gascoigne, 16a York Grove, London SE15, England.

From the publication of his early paper on feeding and reproduction in the Limapontiidae (*Transactions of the Royal Society of Edinburgh*, 1956) Dr. Gascoigne has produced a stream of communications on the systematics and functional morphology of those obscure but historically important opisthobranch molluscs, the ascoglossans. The basis of his work has rested on the fine dissection of these small animals using a variety of techniques and a pair of very steady hands. Now, during a retirement that is no more than nominal, he has placed before the scientific world an account of his dissecting methods. It is true that rather few students will wish to follow him in examining the convoluted interiors of these curious sea slugs and it is a pity that the rather forbidding title of his booklet gives little indication of the broad value of the text within.

"Fine Dissection of Ascoglossans" is a very good guide to the dissection of any small, soft-bodied invertebrate; herein lies its general worth. While all the diagrams and textual examples refer to ascoglossans the methods described have a wide application and will be found of use by many invertebrate taxonomists, physiologists, toxicologists and others. This may be gathered from such section headings as: Relaxation; Preservation; Microscopy (Dr. Gascoigne is an authority on microscopes); Lighting; Preparing a dissecting dish; and Mountants; the last two sections being particularly informative.

This useful volume is offered at £1 post free and since prices have risen since its publication the virtuous will add something for postage. I understand that profits from sales will accrue to the Conchological Society.

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