

appear to have worked well together as a team and have produced a unified treatment which reads very smoothly. A welcome feature in the first chapters are the numerous and excellent illustrations, some in colour, of the form and structure of these organisms. The book then deals with the general biology, physiology, some biochemistry and much on ecology; a final useful summarizing chapter describes the evolution and phylogeny of these organisms. The authors con-

clude the book, in a discussion on the symbiotic origin of chloroplasts, on the happy note: "it seems possible that the blue-green algae are something more than a lower branch of the evolutionary tree and represent a pervading and vital component which made possible the highest forms of plant life". For this reason, if none other, those working on higher plants should take note of this excellent text.

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Phytochemistry, 1975, Vol. 14, pp. 2314-2315. Pergamon Press. Printed in England.

Membrane Transport in Plants; by U. ZIMMERMANN and J. DAINTY. Springer-Verlag, Berlin, Heidelberg and New York. 473 pp. \$29.80.

This is a very good book. It reports the proceedings of an 'International Workshop on Membrane Transport in Plants' held at the Nuclear Research Centre, Jülich, West Germany, in February 1974. The subjects covered were: thermodynamics and electrochemistry of membrane transport (6 papers); water transport and osmotic processes (8); electrical properties of membranes (7); solute transport in algae and cell suspension cultures (13); transport in isolated chloroplasts (6); ATPases and transport (4); kinetics of transport (4); transport in organs of higher plants (10); regulating factors in membrane transport (6).

Almost all the articles are concerned with experimental data. They measure up very well to what is published in standard journals. The methods are clearly presented and the data presented merited publication. Quite a proportion have been published, sometimes subsequently, elsewhere but as I shall indicate, I would not want this to be taken as a criticism of the book. There are scattered through the text some helpful reviews of literature but in general the emphasis has been on the actual laboratory situation.

There are a number of reasons why this is a good book. It is excellently produced. The editing has been first-class. It is all too easy for those running a large meeting to lump the manuscripts into a volume and make matters even worse by adding the unedited transcript of discussions which took place. This sort of thing has happened with sufficient frequency to give published proceedings of meetings a bad name. But this volume

is a very welcome exception. The articles are clear and concise. Each has a simple straight-forward introduction and the reader is quickly made aware of what the article purports to show. The text is uniformly easy to read and the diagrams and tables are all extremely clear and well laid out. Zimmermann and Dainty and their helpers at Jülich have done an excellent job, particularly when one realises that publication of the volume was only about ten months after the meeting.

But I recommend this book over above its value as a very readable account of a meeting on membrane transport in plants. *In toto* the book makes an excellent statement about the present position concerning ion transport in plants. This is a book which can be recommended to a new postgraduate student who is entering the field. He will of course need a reasonable grounding in biophysics. But this should present no insuperable problem, since there are now good texts around e.g. 'Introduction to Biophysical Plant Physiology' by P. S. Nobel. Such a student will quickly learn about what is uppermost in the minds of workers in the field, what seems to be the technical difficulties and about those areas where there is distinct controversy. In almost all instances, everything is clearly presented and in terms of actual experimental situations. For once, the printed abstracts of the discussions are particularly informative and they provide a valuable commentary on the text. The book can be read by tackling a section at a time or as a reference book, since there is a very good index. Of course a raw postgraduate would not be the only one who would benefit from having this book around. I feel certain that even those who think they are conversant with the field will value this book,

especially because it covers so well such a variety of topics.

Finally, my compliments to Springer-Verlag on impeccable book production.

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Phytochemistry, 1975, Vol. 14, p. 2315. Pergamon Press. Printed in England.

Plantes Medicinales de la Côte d'Ivoire. by A. BOUQUET and M. DEBRAY, Travaux et Documents de L'O.R.S.T.O.M. No. 32, Paris. 1974. 70 Fr.

As a continuation of the publications on overseas medicinal plants published by L'Office de la Recherche Scientifique et Technique Outre-Mer (L'O.R.S.T.O.M.), two French pharmacists have reviewed information on the folk medicinal uses and chemical constituents of genera indigenous to the Ivory Coast. Some 160 pages of French text lists alphabetically 116 families, text and references being given for each family. For scientists interested in the plant kingdom as a source of medicinal agents, the inclusion of tables of the authors' screening results for some 39 of the families, is noteworthy. Each of these tables lists the plant part examined, together with the results of tests on extracts for the presence of alkaloids, quinones, saponins, steroids, triterpenes, flavonoids and tannins. Although some 1972 references are included, there are only a few references later than

1969 and this is unfortunate since in some instances the information could well have been included. For example, in the section on Loganiaceae there is no mention of review articles on the ethnobotany or on the alkaloid screening of African spp. of *Strychnos* (published in 1970 and 1971), and in the section on Rubiaceae references to the alkaloids of *Nauclea diderrichii* are omitted. (published in 1970 and 1972). The book is not free from typographical errors and in the review copy it is to be regretted that pages 189-204 of the index are missing. For a paperback of 230 pages, the book is highly priced at 70 Fr. for individual use, but for libraries it can be recommended as a useful supplement to the literature on African medicinal plants since it contains abundant information on plants which require further chemical and pharmacological investigation.

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