Berry. The Chapter also includes consideration in brief of the three subgroups of C_4 photosynthesis, the NAD-ME, NADP-ME and PCK. However the parameters involved in this connection including those of bundle sheath conductance are relatively difficult to model, and should await further advances.

The coverage of C_3–C_4 intermediate photosynthesis in Chapter 5 is quite adequate. The C_3–C_4 intermediacy is itself not fully understood presently. It is not clear whether these intermediates are in the course of evolution towards C_4 pathway or if they are actually stabilized hybrids between C_3 and C_4 plants. Great deal of variation also exists in the biochemistry of the different intermediate species, the common denominator being only the reduced level of photorespiration. The models of Peiskar and that of von Cammerer are presented well. The glycine shuttle is discussed clearly as a possible mechanism for the refixation of photorespiratory CO_2. The final Chapter 6 involves a one-page conclusion stating clearly the summary, the philosophy and basis of the content in the book. The author has also mentioned very rightly the gaps regarding the lack of models for CAM photosynthesis. The inclusion of work relating to antisense transgenic plants in the context of photosynthesis is to be appreciated.

Throughout the book the style of presentation is excellent and highly lucid. There is adequate introduction preceeding every aspect covered in the text and considerable background information including the development of present concepts has been provided. The techniques described and the models discussed would help in furthering the new areas of investigation and are expected to stimulate the researchers in this area. The analytical approach followed by the author is an asset for the book.

The Appendix constitutes a good addition giving explanation of symbols used in the text and will serve as a ready reference. The literature cited is fairly exhaustive and is upto date till 1999 and includes some forthcoming in 2000. The book can be considered as a highly important reference work on latest developments in the area of research on photosynthesis and can be recommended for the use of postgraduates, research students and teachers in Plant Sciences, Biochemistry, Environmental Sciences and Biotechnology.

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Mathematics of Wave Propagation. Julian L. Davis. Princeton University Press, 41, William Street, Princeton, New Jersey, 08450, USA. 2000. 395 pp. Price: US $49.50.

This book should more appropriately be called *Physics of Wave Propagation*, since it is in the modeling and elucidation of a variety of wave phenomena that it excels. That indeed is the title of its first chapter. Mathematics serves to quantitatively describe the phenomenon, but it is kept here at a very elementary level. Ironically, that, for many readers, may prove to be an attractive feature of the book.

The range of wave phenomena described here is quite wide and extensive, waves in viscous and nonviscous fluids, stress waves in elastic and viscoelastic solids and in thermoelastic media, and water waves. There are a couple of chapters which may aptly be called mathematics of wave propagation, for example those dealing with PDEs, wave equations in one and higher dimensions, and calculus of variation.

Chapter one introduces elementary concepts in the propagation of waves – transverse waves, travelling waves, characteristics, sinusoidal waves, interference phenomena, reflection of waves, the Doppler effect, etc. Each concept is illustrated in a physical context.

To appreciate the approach of the author it is best to discuss one chapter, say, PDEs of wave propagation. Here initial and boundary value problems for first order PDEs, both linear and nonlinear, are discussed with special reference to characteristics, which naturally form the sinews of hyperbolic wave phenomenon. Several examples are treated, but the author stops short of any discussion on shock waves.

Second order linear and nonlinear scalar equations are discussed quite adequately. Chapter three on wave equation does some justice to the mathematics of waves. The material here, however, is fairly standard and may be found in any good book on PDEs, for example, by W. E. Williams.

Again, wave propagation in fluids (Chapter 4) and water waves (Chapter 8) are treated quite succinetly. The strength here again is in introducing the relevant physical ideas with the help of some simple examples. However, much of the material is quite standard: one-dimensional compressible gas-dynamics, two-dimensional steady flows, and some simple viscous flows. The flows, with and without shocks, are discussed with the help of characteristics.

The viscous fluids are also included, but not quite in depth – Poiseuille flow and Stokes flow with Oseen approximation are quickly dealt with. Water waves in Chapter 8 are discussed mainly in the linear approximation.

To summarize, the book by Julian Davis would amply meet the needs of students who, with minimal background, wish to be initiated into wave phenomena. The book provides excellent physical and mathematical motivation to the study of the phenomena. This book is not for specialists. This is borne out by the bibliography which enlists some basic books giving the background material; there is no reference to any research papers. The reader must look into recent literature to find out what is the current status of research in any specific aspect of a linear or nonlinear wave phenomenon.

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