I learned something about Haldane and about the world every time I opened this book. You will too.

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The Genetic Basis of Plant Physiological Processes. By JOHN KING. Oxford University Press. 1991. 413 pages. Price £40.00. ISBN 0 19 504857 1.

Why is it almost impossible to find a microbiology textbook which does not mention the use of mutants to dissect physiological phenomena, yet almost equally impossible to find a plant physiology text which does? In the preface to *The Genetic Basis of Plant Physiological Processes*, John King suggests that part of the reason may be that plant physiologists are unaware of the potential of genetic analysis, and he attempts to put this right by bringing together a vast number of examples where the use of mutants and genetic variants has contributed to an understanding of plant behaviour.

The book contains six chapters, dealing with a variety of processes from photosynthesis to hormone metabolism and development. Each consists of several case studies, in which large amounts of relevant data are presented and discussed concisely, but without areas of controversy being glossed over. It is therefore easily read and also a good source of reference. Although the author states that his objective is not to provide a complete account of plant physiological genetics, the coverage is broad, and shows a consistency which would not be found in a collection of reviews with the same scope. The brief introductions to each case study would in themselves make a useful physiology textbook.

I have one major criticism of the book. As a member of a generation which regards genetics as part of an analytical process which also includes gene isolation, and all the techniques that this makes possible, I found the impact which molecular genetics has already had on the subject neglected. Conversely, in addressing itself to a dying breed of pure physiologists, the book also understates the importance physiological genetics should have for molecular biology. As one example, it says little about how genes with a regulatory role, or which encode rate-limiting enzymes, might be identified genetically. This kind of information would be important for anyone wishing to manipulate a physiological or biochemical process by the introduction of transgenes. As it stands, the book appears to mark the end of a period of research, and not to herald the beginning of a new one. Perhaps this will make it an enduring classic.

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Catalog of Prenatally Diagnosed Conditions (second edition). By DAVID D. WEAVER. Johns Hopkins University Press. 1992. 415 pages. $75.00. ISBN 0 8018 4415 0

Classification of medical disorders has always been a key to diagnosis, management and treatment. Amongst genetic and partly genetic diseases, where individual rarity and extreme heterogeneity are the rule, sorting out, ordering and naming the syndromes has been of immense importance in all subsequent studies of the cellular and molecular basis of the underlying pathology. The 'bible' for medical geneticists is Victor McKusick's *Mendelian Inheritance in Man*, now in its 10th edition, and an essential handbook of both normal and pathological variation where there is evidence for single locus control. Most genetic disorders can now be assigned an MIM number based on McKusick's classification.

The explosive growth in the science and technology of prenatal diagnosis has presented both clinical geneticists and obstetricians with a real problem in keeping abreast of their discipline. Can a particular condition be diagnosed *in utero*, and if so, how and with what degree of certainty? This question is frequently addressed to the genetic counsellor with a degree of urgency; indeed, it has to be said that there are occasions when it is asked with the patient already prepared for amniocentesis or chorionic villous biopsy. There is a crying need for an instant reference book, which will provide the initial answer to the question posed as well as a set of references to the relevant medical literature.

The first edition of David Weaver's book (1989) was an attempt to offer a comprehensive listing of disorders where prenatal diagnosis had been reported in the journals. He recorded 445 conditions and 1221 references. In the second edition there are 601 conditions, while the reference list has grown to 1848 citations. More importantly the text has been considerably enlarged, so that there is now reasonable comment on most disorders covered.

The catalogue is organized into major chapters on the big three of prenatal diagnosis – chromosome anomalies, congenital malformations and Mendelian conditions – with lesser sections on dermatological disorders, fetal infections, tumours and cysts, and others. Each condition is assigned a 'PD' number, though the rationale for these numbers is not made clear. It could be argued that matching PD and MIM numbers would have been helpful, particularly as McKusick's MIM system immediately indicates the mode of inheritance of the disorder. However, since a large majority of prenatally diagnosable conditions are not simply inherited, this would have been difficult though not impossible to achieve.

I have little doubt that Weaver's catalogue will find its place next to McKusick on the shelves in all modern medical genetic centres. It really is an invaluable reference book. It is pleasing to note that