

Book Reviews

Gene Structure and Expression. By J. D. HAWKINS. Cambridge University Press. 1985. 173 pages. £20.000 hardback, £7.95 paperback. ISBN 0 521 25824 3

In any University course of teaching in biological sciences, and probably indeed in any other subject, we have a concern to teach a selection of current beliefs about our subject, the 'facts', and also something of the process of investigation and reasoning which has led to those current beliefs. Different academics will inevitably hold different opinions about the balance between the product of scientific investigation and the process of scientific investigation. This book comes down rather heavily on the side of the product. It is a closely written account in 162 pages of text which begins with the structure of DNA, its replication and transcription, and then deals with the methodology of molecular genetics. About thirty pages are devoted to prokaryotic gene organization, expression and operons and about fifty pages to eukaryotic genes, with emphasis on a number of examples such as haemoglobin genes and immunoglobulin genes. The mitochondrial genome is also considered. These chapters are mainly concerned with telling us the 'facts'. No references are given in the text, but at the end of the book there are reading lists, chiefly of reviews written between 1981 and 1984, about a half a dozen for each chapter. There is a good index.

The book is described as 'designed as a textbook for various students in the fields of genetics, biochemistry and microbiology, particularly those followed by medical students. . .'. I would hope that an honours course in science might be rather more concerned with the nature of the evidence and the intellectual pathways from the experimental data to the conclusions drawn from them. The exploration of these pathways is perhaps best carried out by studying original papers and discussing them in seminars and it is probably unrealistic to expect a textbook to be a tool in the process. This book provides a good overview of modern molecular genetics which would be useful to a student before beginning a more intensive study and as a revision afterwards, though the reading would require close attention. The constraints of time in a medical course might not permit such an intensive study and this book might then play a more central role. The objectives of science and medical teaching are, after all, distinctive.

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Milk Production from Pasture. By C. W. HOLMES, G. F. WILSON, D. D. S. MACKENZIE, D. S. FLUX, I. M. BROOKES and A. W. F. DAVEY. Sevenoaks: Butterworth. 1985. 319 pages. £24.95 paperback: ISBN 0 409 70140 8.

Some explanation of why a review of this book should appear at all in *Genetical Research* is clearly in order. It deals with not just the methods and principles of dairy-cattle husbandry but also the relevant basic science of nutrition, lactation, reproduction and genetics. Approximately one-quarter of the book is devoted to the last of these, comprising one short chapter which discusses the breeding of a single herd, and a major section of five chapters and appendix on principles of genetic improvement.

The authors are all from Massey University and the book is set in the New Zealand scene. Indeed, a useful feature of the book is that it provides a source on dairy-cattle