

The other three sections present case studies of signalling in action, looking at gene transcription, regulation of the cell cycle, cell death, the immune response and cancer. Here again, Helmreich courts the danger of being superficial, which is certainly true for the chapter on transcription, and repetitive, for example with STAT proteins and SMADs being discussed in chapters six and ten.

The text is supplemented in six ways. The list of contents and index are both succinct and would benefit from improvement. By way of amends, there is a long list of abbreviations and a glossary, both of which will prove useful. Curiously, the latter includes numerous word fusions, such as celldivision and expressionvector, at which even my word processor balks. Each chapter ends with a list of citations, some with more than a hundred entries, which strikes me as excessive, especially as some only acknowledge material sources. Perhaps a rating scheme could be adopted to single out recommended further reading. Finally, there is a section of glossy plates in the middle of the book showing protein structures, which add some colour and contrast to the grey scale structures and numerous diagrams included throughout. However, whereas the diagrams succeed in illustrating function, the structures are static and less effective.

The book is conceived as a supplementary text for graduate students and postdoctoral scientists, which is reflected in its format. The obvious difficulty has been condensing the subject accordingly. Helmreich has made a good effort in what is presumably his second language but more support from the publisher with language and structure should have been forthcoming. As this is a rapidly moving field, improvements could be wrought into an early second edition.

In autumn, people in Germany drink “new wine”, customarily accompanied with slices of onion tart. Nobody would contend that it can compete with vintage wines, but it has its merits, it is widely appreciated and can be recommended nonetheless.

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**Katydid and Bush-Crickets.** D. T. Gwynne. Cornell University Press, New York. 2001. Pp. 317. Price \$42.50, hardback. ISBN 0-8014-3655-9

The Tettigoniidae are an ancient and culturally important taxon, so much so that they received geographically distinct names before science cast its beady eye on them (hence the duplication in the title). This book is sub-titled “The reproductive behaviour and evolution of the Tettigoniidae” and is largely a contextualised review of Gwynne’s fascination with, and substantial contribution to, the reproductive behavioural ecology of tettigoniids over the last quarter of a century. The book begins by covering key aspects of the background

biology of the taxon and then moves into a review of the landmark behavioural ecology. I picked up the book with the expectation of being driven fairly directly to the destination promised in the sub-title and, on the way, shown some important, possibly even spectacular, vistas. The journey was largely informative and enjoyable and I did glimpse some grand biology. However, to my mind, the guide spent a little too much time regaling me with historical perspectives and personal stories which detracted from the scenery and my enjoyment of the trip. I probably have a reputation as a miserable passenger, and I am sure many travellers down this route will enjoy the commentary that I found distracting.

The first chapter is a temporal anchor (the book has a strong chronological sub-theme with respect to the author’s work) detailing the intriguing behaviour and ecology of the Mormon cricket – the organism that piqued the younger Gwynne’s curiosity and set him on the research path that culminated in this book. The style, at this point is very relaxed, almost chatty, and it works by drawing the non-specialist into the system. The book then transits into the important question of phylogeny: it does so rather abruptly, and, I confess, I did not enjoy the prose about the phylogenetic relationships. Some well-conceived diagrams in an appendix would have conveyed this information and illustrated the points for me. However, I am no orthopterist (or phylogeneticist) and I am sure a reader with both, or either, orientation will relish the detail. The book’s next two chapters aim to cover important behavioural ecological ground for later, and deal with habits, life-cycles, natural enemies and ecology. It is these first scene-setting chapters, consisting of mixed writing styles, that give the impression that the book isn’t going directly to an interesting destination. This impression detracted from the utility of these chapters and was actually wrong: as Gwynne gets onto his home turf I began to feel I was going somewhere. This second phase deals with the costs and benefits of singing and mate attraction, nuptial gifts, and courtship-role reversal and the writing becomes much more sharply focussed and readable: this part of the book is very good. The text is supported throughout by one of Gwynne’s trademarks — stunning photographs that concentrate the essence of the biology they are illustrating. Several of these are produced as a collection of 24 small colour plates.

Like many journeys, my recollections got fonder as time passed and I found myself reminiscing over the good bits. There were certainly enough to make the trip memorable and worthwhile.

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**The Basis for Gene Therapy.** W. J. Burdette. Charles C. Thomas Publisher Ltd., USA. 2001 Pp.204. Price \$33.95, paperback. ISBN 0-398-07159-4

Gene therapy is an emotive subject for scientists, clinicians and the general public. There has been a recent explosion in

scientific papers dealing with this subject, and intense competition between different research groups jockeying for position in the race to publication. In addition, clinicians differ in their opinion of the rights and wrongs of clinical trials of gene therapy. The recent death of a young, comparatively healthy, man after gene therapy in the USA only serves to polarise this debate. Finally, the popular press have latched onto the topic because of its headline-grabbing nature; on the one hand promising the cure for chronic disease, whilst on the other predicting that tinkering with the blueprint of life will be the downfall of civilisation. There is no doubt that as the field has advanced over the last decade, many clinicians and scientists have been left behind, without sufficient understanding of the molecular biology involved to comprehend the intricacies of each new report. Thus, there is a definite need for a book that explains the basics of molecular genetics, and its potential applications for gene therapy.

'The Basics for Gene Therapy' sets out to address this need. The first few chapters deal with the genetic make up of the nucleus and the mechanisms behind the cell cycle. The book then explains the molecular techniques used to manipulate these processes, before detailing the potential applications of gene therapy, the vectors that can be used, and some specific clinical scenarios. The final section contains an extensive bibliography, a list of vendors providing laboratory supplies, and addresses of Internet sites pertaining to the subject. The early sections are relatively comprehensive and act as an excellent introduction to the field of molecular genetics for an interested medic/scientist with limited previous experience in the subject. This book,

however, contains no more information than would be taught on most undergraduate courses, and certainly is not as detailed as a recent edition of the standard textbooks. Likewise, the discussion of disease targets for gene therapy is very brief, and the results of current trials will become dated in the very near future. In contrast, the section detailing the vectors used for gene therapy is more detailed and provides an excellent comparison of the advantages / disadvantages associated with each. One of the selling points highlighted on the back cover is the list of relevant Internet sites and industry contact details. I am not convinced: surely it is easier and more reliable to find up-to-date information on available web sites using an Internet search engine. Likewise, the address of a company that could supply PCR products is unlikely to be of use to the target audience of this book. Finally, despite the narrative style, I found the text of many sections very difficult to penetrate with overlong sentences and poor syntax.

In conclusion, the book provides a useful introduction to the terminology of molecular biology and the basics of gene therapy. However, despite its user-friendly format I found it no easier to read than many more detailed alternatives.

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## Books Received

**The Triumph of Sociobiology.** John Alcock. Oxford University Press, New York. 2001. Pp. 257. Price £16.95, hardback. ISBN 0-19-514383-3.

**The Basis for Gene Therapy.** Walter J. Burdette. Charles C. Thomas Publisher Ltd., USA. 2001. Pp. 204. Price \$33.95, paperback. ISBN 0-398-07159-4.

**Forensic DNA Typing: Biology and Technology Behind STR Markers.** John M. Butler. Academic Press, London. 2001. Pp. 322. Price \$69.95, hardback. ISBN 0-12-147951-X.

**Principles of Cell Proliferation.** John K. Heath. Blackwell Science Ltd., Oxford. 2001. Pp. 137. Price £22.50, paperback. ISBN 0-632-04886-7.

**Genes, Categories, and Species: The Evolutionary and Cognitive Causes of the Species Problem.** Jody Hey. Oxford University Press, New York. 2001. Pp. 217. Price £34.95, hardback. ISBN 0-19-514477-5.

**Functional Genomics: A Practical Approach.** Stephen P. Hunt and Frederick J. Livesey (eds). Oxford University Press, New

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**Phenotypic Plasticity: Beyond Nature and Nurture.** Massimo Pigliucci. The John Hopkins University Press, Baltimore. 2001. Pp. 328. Price \$65.00, hardback. ISBN 0-8018-6788-6.

**Human Cytogenetics: Constitutional Analysis.** D. E. Rooney (ed). Oxford University Press, New York. 2001. Pp. 282. Price £32.50, paperback. ISBN 0-19-963839-X.

**Human Cytogenetics: Malignancy and Acquired Abnormalities.** D. E. Rooney (ed). Oxford University Press, New York. 2001. Pp. 287. Price £32.50, paperback. ISBN 0-19-963841-1.

**Essential Developmental Biology.** Jonathan M. W. Slack. Blackwell Science Ltd., Oxford. 2001. Pp. 321. Price £16.50, paperback. ISBN 0-632-05233-3.

**Gene Transcription: Mechanisms and Control.** Robert J. White. Blackwell Science Ltd., Oxford. 2000. Pp. 273. Price £29.50, paperback. ISBN 0-632-04888-3.