

Book reviews

Biological Evolution. Peter W. Price. Saunders College Publishing (Harcourt Brace College Publishers), Orlando. 1996. Pp. 429. Price £19.95, hardback. ISBN 0 03 096843 7.

Choosing textbooks for undergraduate courses in evolution is a daunting prospect. To date, textbook options have generally fallen into two categories: (i) traditional books in which students are given the facts in a straightforward manner, but the excitement of the field is often lost amongst the excess 'baggage' of information accumulated over the years, and (ii), narrative books in which facts are woven together in a story-like fashion in order to give students information in a more 'palatable' form, but at the same time lead to much confusion. Price has adopted a new approach in his book that is extraordinarily refreshing and will be particularly valuable to undergraduates that are not yet fully convinced as to the attraction of evolutionary biology. There are two attributes that stand out as being immensely important for introducing students to ideas of evolution: (i) the deeply historical perspective, and (ii), the activity of the field, and the excitement of ongoing research and debate. In addition, the solid factual presentation, copiously and carefully illustrated, makes it very easy to follow.

Price explains that this text is organized in a framework that is more historical than biological; 'big picture' concepts in macroevolution are treated before microevolutionary processes. This approach is sound, particularly in a course designed for undergraduates who are unlikely to be turned on by the more abstract concepts of microevolution. The introduction to the book is an undisguised history lesson that is guaranteed to captivate even the most hesitant of students. Price meticulously 'sets the stage' for the development of evolutionary thought during the time of Darwin. The reader is transported into Darwin's life and given the spectrum of thoughts and emotions that he would have experienced, as well as the extent and limits of knowledge at the time.

The book has its faults, and in particular some important topics appear to have been overlooked: there is virtually no mention of effective population size, Fisher's fundamental theorem, frequency dependent (apostatic) selection, or kin selection. The detailed treatment of some other topics (for example the Raup, Schopf and Simberloff model of extinction and the gene-for-gene hypothesis of coevolution) may seem excessive. In addition, the common thread that holds together much of the book is the need for phylogenetic understanding. However, phylogeny is not defined until p.277, and is not in the glossary. In terms of 'jargon', Price justifies his introduction of important biological terms; however, a number are not defined (stenophagy, dosage effects, homoplasy, mygala-

morph, panmixia). How DNA sequences can be used for examining phylogenetic relationships is also mentioned but not explained. Finally, some minor points. Examples are given for phenomena without any explanation (skyrockets are an example of semispecies — but we are not told what skyrockets are, where they occur, or why they are a good example of semispecies), and the choice of placement of figures sometimes is odd (for example, to compare a zebra and a gerenuk, the reader must turn a page).

However, these shortcomings are trivial in consideration of what Price has achieved in his book, and could easily be rectified in future editions. Price has made a product that exudes energy and inspires inquisition. It is factual and straightforward, yet at the same time immensely easy to read, exciting and absolutely current. The true test of the book will be the upcoming semester when I will use it in my class. Never before have I approached the use of a book with such confidence as to its appeal.

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Evolution — The Four Billion Year War. Michael Majerus, William Amos and Gregory Hurst. Longman Group Limited, Harlow. 1996. Pp. 340. Price £19.99, paperback. ISBN 0 582 21569 2.

Ever since Darwin, the British have been fascinated by evolution. *Via* Bateson, Haldane, Fisher and Ford to Maynard Smith, Hamilton and the current generation, British scientists have contributed a distinctive flavour to evolutionary theory and the data that inform it. This book is, though the authors do not say so, a celebration and an updating of that tradition. It is written in an informal, unpolished style that readers may find endearing or enraging. We are at once on first name terms with all the authors' friends, with Bill and John, Sir Cyril and Sir Alec. This emphasis on personalities runs deep: there are more people listed in the index than there are organisms, and more than a third of the people are British. The authors are not afraid to bring forward examples from their own work, but they have wide-ranging interests and the result