

As in the first edition, chapters are divided among three major sections; species abundance, population processes, and population genetics and evolution. Each chapter ends with a clear summary and, new to the present edition, a short list of textbooks for further reading. The first section introduces the concept of species diversity, explains how species are classified, provides explanations of why there might be so many species (in terms of adaptation, trophic systems and niches) and discusses the ways in which species can be defined. Apart from one or two additional sentences, and the re-arrangement of a table to make the contents less clear (in my opinion), this section is identical to that in the first edition — it does its job pretty well.

The second section comprises the guts of the book and consist of 12 chapters covering the usual topics of population genetics: the concept of the gene (from the standpoint of population genetics), intensity of selection, genetic variability in natural populations, factors affecting gene-frequency changes, etc. New to this edition are chapters on 'Sources of continuous variation' (dealt with very cursorily in the first edition) and 'Polymorphism: a case history', and additional sections on cyanogenesis in plants, chromosomal polymorphisms, and the genetic control of mutation and recombination. The case study (on *Cepaea*) demonstrates clearly how messy life is when one really starts to scratch beneath the surface of polymorphic, visible variation — a valuable lesson indeed for the student used to examining evolutionary processes one at a time. The final section of the book (three chapters) considers ecological and evolutionary topics such as speciation species associations and has a new chapter on 'Pattern and process — the long-term evolutionary perspective' in which mating systems and sex are explored.

So, do the authors succeed in providing the broader theoretical and empirical background they consider may be missing from the education of modern students? I think the answer has to be yes. I particularly liked the approach via the concept of diversity. This neatly spans the crack that, in the past at least, often existed between the disciplines of ecology and genetics. The gap is perhaps less wide these days with the advent of metapopulation studies, which explicitly embrace both subjects, but none-the-less the framework chosen is a useful one. The book is 'classical' in the sense that the

examples used are mostly well-worn favourites out of the E. B. Ford era. Although the authors explicitly did not set out to review the literature, they could have introduced some more recently investigated systems, if only to illustrate that the problems thrown up by the 'favourites' are not unique. The 'classical' epithet also applies to the fact that molecular variation is only mentioned in passing, but then one impetus for writing the book was to provide the missing broad-brush perspective, and students these days will know at least something about molecules.

Will this volume be attractive to students? Possibly. It has to compete with books that specifically cover population genetics, such as Hedrick (2000) and Hartl & Clark (1997) which are more expansively laid out, and those that delve into evolution as well, for example Ridley (1996), with its two-colour text and information boxes. Against this competition, *Genetic and Evolutionary Diversity* might not immediately draw a reader in. However, it is a very worthwhile book to have in a library for students to browse, if not to buy.

One final point, why is *Heredity* reviewing a book in 2001 that was published in 1999? The answer is that the new publishers apparently fail to see the value of announcing their wares to the appropriate public. I have never seen the book advertised or reviewed and after two unanswered requests to the publisher for a review copy one had to be obtained from an alternative source. This is not a good way to sell books or, more importantly, repay the efforts of authors.

References

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Thinking about Evolution — Historical, Philosophical, and Political Perspectives. Rama S. Singh, Costa B. Krimbas, Diane B. Paul and John Beatty (eds). Cambridge University Press, Cambridge. 2000. Pp. 606. Price £60.00, hardback. ISBN 0 521 62070 8.

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