

really most likely to be useful as a reference work for people who already know a lot. It could not be used effectively without an understanding of variation and how it behaves, and it is a pity that this aspect is left out of the book. It runs the risk that readers will think that getting the web site working (or a lab method) means that they can start collecting data, without the hard work of deciding the question to be studied, and how to analyse the data to be collected.

References

- Altenburg, E. & Muller, H. J. (1920). The genetic basis of truncate wing – an inconstant and modifiable character in *Drosophila*. *Genetics* **5**, 1–59.
- Harris, H. (1966). Enzyme polymorphism in man. *Proceedings of the Royal Society of London. Series B: Biological Sciences* **164**, 298–310.
- Hongyo, T., Buzard, G. S., Calvert, R. N. & Weghorst, C. M. (1993). ‘Cold SSCP’: a simple, rapid and non-radioactive method for optimized single-strand conformation polymorphism analyses. *Nucl. Ac. Res.* **21**, 3637–3642.
- Konieczny, A. & Ausubel, F. M. (1993). A procedure for mapping *Arabidopsis* mutations using co-dominant ecotype-specific PCR-based markers. *The Plant Journal* **4**, 403–410.
- Lewontin, R. C. & Hubby, J. L. (1966). A molecular approach to study of genic heterozygosity in natural populations. 2. Amount of variation and degree of heterozygosity in natural populations of *Drosophila pseudoobscura*. *Genetics* **54**, 595–609.
- Neff, M. M., Neff, J. D., Chory, J. & Pepper, A. E. (1998). dCAPS, a simple technique for the genetic analysis of single nucleotide polymorphisms: experimental applications in *Arabidopsis thaliana* genetics. *Plant Journal* **14**, 387–392.
- Reamon-Buttner, S. M., T, S. & Jung, C. (1999). AFLPs represent highly repetitive sequences in *Asparagus officinalis* L. *Chromosome Res.* **7**, 297–304.

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Speciation in Birds. T. Price. Roberts & Co. Publ.
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For once in a book review, I will cut to the chase. I am really pleased I have read this book cover to cover and, although I do not work on speciation in birds, this is already an appreciated, re-read and loaned-out book on my shelf. Why? It provides both breadth and depth on speciation in birds, offering sufficient introductory material to grasp the current state of affairs as well as going on to

propound the problems and unanswered questions in speciation, at least as they pertain to birds. In my view, it is an excellent text for graduate students, the concepts are clearly outlined with plenty of examples, supported with colour illustrations, and there is lots of material for discussion and to inspire further reading. If you, or a student, haven't thought much about speciation before, then this book should reward you dipping your toes in the water. If you do study speciation, here is an excellent addition to the recent books by Gavrillets¹ and Coyne and Orr².

Just before you reach for your credit card, you may expect some qualification of my glowing endorsement. And there is a little. You need to know already what the big questions in speciation more generally are before beginning (e.g. What is a species? Does sympatric speciation occur?). In addition, the relative contribution birds have made to our understanding of speciation comes from the wealth of evidence provided rather than from explicit comparisons with other taxa. For example, it is not clear whether birds are useful models of speciation through sheer research effort, or because birds offer a broader range of speciation puzzles than, say, *Drosophila*.

Price makes it clear that to address questions of speciation in birds a greater emphasis on the contributions of behaviour is needed than there would be for many other taxa except, perhaps, *Anolis* lizards or Lake Victoria cichlids. The critical role of behaviour in avian speciation is highlighted by chapters on ‘Behavior and Ecology’ (addressing issues such as dispersal propensity and the likelihood of survival in novel environments, and contributions to the latter of larger brains and feeding innovations), four chapters on ‘Social Selection’, a chapter on ‘Species Recognition’ in which the possible influences of filial and sexual imprinting on assortative mating are addressed, and one on ‘Mate Choice’. Birds, therefore, clearly offer some of the best opportunities to examine the role that behaviour, and especially learning, play in pre-mating isolation mechanisms although Price also stresses that postmating isolation is still essential for species coexistence. On the other hand, the elegant laboratory studies investigating the genetics underlying speciation do not exist for birds as they are not the right group with which to ask this kind of question. Beyond this, Price also considers higher-level patterns. For example, although the birds provide some of the best examples of adaptive radiation (the Galapagos finches of course), the truth is flight has often meant that single lineages do not often radiate to fill new niches in each habitat, but rather multiple lineages colonise and evolve.

As you can see, my qualifications are, in fact, only apparent, rather than critical. This book has already led me into more thoughtful conversations about speciation with my colleagues than I have ever had, as well as stimulating thinking on under-explored connections between my own field (cognition) and another (speciation). How often can we say that about the books on our shelves?

- ¹ Gavrilets, S. (2004). *Fitness landscapes and the origin of species*. Princeton University Press.
- ² Coyne, J. A. and Orr, H. A. (2004). *Speciation*. Sinauer Associates.

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