Book Review

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Molecular Panbiogeography of the Tropics

University of California Press, Berkeley 2012
viii + 576 pp.; GBP 52.00 (hardback)
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The book is comprised of ten chapters, ranging from broader biogeography-based topics such as spatial evolution ('Evolution in Space': chapter 1) to specific chapters covering small biogeographic ecosystems ('Distribution within the Hawaiian Islands': chapter 8).

Chapter 1 ('Evolution in Space') covers fundamental principles and ideas behind spatial evolution. After explaining the main concepts associated with vicariance, normal ecological dispersal, sympatric differentiation and founder dispersal, the author rejects the last two for being either too controversial or for 'not existing'. There follows extensive coverage of vicariance, dispersal and speciation, spanning an almost exhaustive combination of species and ecogeographic zones.

Chapter 2 ('Evolution in Time') shifts focus onto the temporal aspects associated with evolution. Moving from variability in rates of change seen across species and between populations to 'calibrating the evolutionary clock' and cases of extreme variability in evolutionary rates, the bulk of this chapter focuses on numerous case studies: from intertidal snails to tenrecs.

Chapter 3 ('Evolution and Biogeography of Primates') focuses more specifically on tropical biogeography. There follows a thorough and balanced coverage of (early) evolutionary primate history, setting the foundations for the several following primate chapters. The rejection of some theories on strepsirrhine evolution within this chapter (without explanations) leaves holes within the content and while the author may indeed be right, the lack of explanation causes ambiguity.

The following two chapters; 'Biogeography of New World Monkeys' (chapter 4) and 'Primates of Africa and Asia' (chapter 5) cover the numerous families and genera found across these three ecoregions, with examples of range expansion, distribution, physical traits and more. These two chapters will appeal most to any reader interested in primate biodiversity and primate paleozoology. From fossil remains of *Xenothrix* in the Antilles to early Cretaceous rifting in central Africa, these chapters are broad in their coverage whilst remaining in depth enough to supply the reader with a background in practically any example of primate by biogeography.

Whilst this book is part of a series which sets out to investigate 'fundamental and practical aspects of systematics and taxonomy', it does, in my opinion, fail to achieve its goal. Whilst there is great potential, it is flawed by minor (but in some cases fundamental) discrepancies and ambiguity. In several instances, key definitions are omitted, which is an issue, considering that the book is aimed at researchers and students alike. The writing is beleaguered by a (at times) weak style of sentence structuring; in one case for example leaving the reader to believe that Old World primates and tarsiers are allopatric. Inappropriate descriptive terms such as 'medieval nominalism' and references to historical European heads of state such as Oliver Cromwell and Louis XIV create further confusion at times.

The author advises the reader to accept the cited data as 'facts for discussion that, hopefully, the reader will accept' and 'the book does not give a systematic area by area treatment' and it is examples such as these that make me feel the presence of either another author or editor would have produced a more balanced, clearer text. Overall, having expected to be very interested in this book, I was very disappointed with what it had to offer.

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