

I also hope that future editions will attempt to attract a wider scientific audience.

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Phylogeny and Conservation edited by Andy Purvis, John L. Gittleman & Thomas Brooks (2005), xiii + 431 pp., Cambridge University Press, Cambridge, UK. ISBN 0-521-53200-0 (pbk), GBP 35.00.

When new scientific fields emerge a great deal of controversy often surrounds what they do and what they should consist of. One such field, conservation genetics, has arguably come of age in only the last 5 years, with the appearance of the first textbook and journal by that name. While participating in a recent Latin American conservation genetics workshop several contributors voiced strong skepticism about the relevance of phylogenetic techniques to the new discipline (notwithstanding their skilled use of such techniques in their non-conservation work). I therefore found it irresistible when, shortly afterward, the opportunity came along to review an edited volume on the subject.

Satisfyingly, the editors of this book open their introductory chapter by implicitly recognizing such skepticism, arguing the need for a critical review based on the rapid recent growth in both phylogenetics and conservation biology, and on the fortuitous pre-adaptation of phylogenetic techniques to a growing (and some might say disturbing) trend in conservation biology toward priority-setting, planning, and 'diagnosis' (as opposed to 'cure'). However, they conclude their introduction with a disarming lack of self-promotion: 'In the end how will phylogenies impact conservation? Some of the evidence presented in this book suggests that their impact may be small . . . [although] in other ways, phylogenetics may provide considerable benefits to conservation.' This dispassionate stance promises and delivers a judicious volume that combines the original work and reviews of a wide range of experts into four main sections, within and across which chapters are well edited to interconnect, with cohesively styled and clear graphics.

Section One, Units and Currencies, tackles the applications of phylogeny in conservation that are perhaps most widely accepted as useful: the diagnosis of units (species, ESUs, etc.) towards which to direct conservation attention, and the measurement of currencies (such as phylogenetic distinctiveness) by which to prioritize the units receiving that attention. In this section, chapters range in style from synthetic (Chapters 3, 4 and 6), to hypothesis driven (Chapter 5), to 'how to' (Chapter 2, which many molecular ecologists with basic rather than applied conservation questions will also find of interest).

The section validates some aspects of these applications of phylogeny in conservation, thoroughly covering current controversies while suggesting creative paths forward. For example, while the editors dream of an international movement to arrive at a unified, phylogenetically based conception of species for conservation purposes, Chapter 3 dismisses visions of this sort as folly, but also makes the innovative suggestion that IUCN Red List assessments at least should include an explicit description of the species concept used in each case, with the evidence supporting the taxonomy selected.

Section Two, Inferring Evolutionary Processes, moves on to more controversial justifications for using phylogeny in conservation: as a means to diagnose extinction risk (based on species distributions that are smaller than expected from phylogenetic predictions, Chapter 7), and to understand the mechanisms that have both generated and pruned diversity in the past, in order to safeguard or avoid them in the future (Chapters 8–11). While the structure of many of these chapters, in-depth studies of circumscribed areas, with a brief Implications for Conservation section at the end, make these justifications less compelling, the richness of detail and the quality of technique in these chapters amount to a defence of basic, geographically-focused, multidisciplinary ecological research, which in the end might have made a better reason for their inclusion in this volume. Many conservation solutions, in the end, are intensely local, and the simple fact that many unpredictable local factors may combine to make conservation efforts successful is perhaps argument enough that no amount of local knowledge, including phylogenetic, can be too much (that is, when gathering information that taps into resources that are otherwise unavailable to conservation).

Section Three, Effects of Human Processes, then combines chapters that further plumb two justifications presented in earlier sections (phylogeny as a currency to set priorities and as a tool to diagnose future risk), in ways that bolster the editors' rather cool appraisal of some uses of phylogeny in conservation. Chapters 13, 14 and 16 present exhaustive evidence that phylogeny plays a significant role in determining both taxon susceptibility to threats and propensity to invasiveness. However, they also show that this role is small enough when compared with other factors as to presently limit its usefulness for future predictions. Chapter 12 finds that, at least for birds at a large scale, several components of extinction risk (endemism, threat to species, habitat vulnerability and evolutionary distinctiveness) appear to covary, creating a limited number of areas high in all of these measures, and perhaps obviating the need to focus in on phylogenetic measures for priority setting.

The final section of the book, Prognosis, is an entertaining combination of chapters considering the often glibly stated but rarely closely examined twin goals of

saving biodiversity and maintaining the ability to produce it in the future. Chapter 17's all-encompassing phylogenetic perspective leads inevitably to a bemused recognition of the irrelevance of the first goal: humans are not in fact threatening the vast majority of the earth's biological diversity, but just the products of a few rather recent branches of it. It therefore exposes the broadest phylogenetic perspective as perhaps too broad to be useful at all in conservation: indeed, how can any human endeavour with a remit of (optimistically) a few thousand years seem relevant in the face of more than 3 billion years of evolutionary history? The logical fruits of such a wide perspective are comical in their uselessness: 'Currently in our midst are talented sociopaths devoted to the destruction of our civilization and, present in the world, if not yet in their hands, are the means to achieve this. Should this come to pass, the silver lining will be the salvation of tropical forests' (p. 390). Chapter 18 is contrastingly sober in its consideration of the second goal, but in the end concludes similarly. The authors show there are simply too many unknowns and unknowables in the evolutionary process for serious thinkers to believe that any conservation decisions made today can predictably affect evolutionary outcomes thousands or millions of years into the future.

On the whole, only a pedant could find points to complain about in this volume. Although from the title one might reasonably expect to find a chapter about the conservation implications of the dwindling number of traditional taxonomists, in fact this book has little to say about the fruits of comparative morphology. Although the heavy emphasis on molecular phylogenetics may be justified in the name of presenting the most current advances, a recent molecular theme in phylogeny and conservation that is absent (which of late has generated a lot of news, although perhaps not yet important scientific advances) is DNA barcoding. Finally, our pedant may be somewhat mystified to discover that the reptile gracing the front cover of this book is in fact a Boyd's forest dragon, mentioned fleetingly in Chapter 11, and not a tuatara that, with far more numerous mentions than any other single taxon in the book, easily qualifies it instead as the most apt poster child for phylogeny in conservation.

In rapidly advancing fields such as conservation genetics, edited volumes can play a role tending towards two extremes: they can either be the final resting place for random assemblages of work that has found no other outlet in a field that is expanding more rapidly than are publishing opportunities within it, or they can provide a more unified forum for in depth and critical work than individual journal articles typically allow, in a more timely and multifaceted manner than synthetic textbooks are typically able to. Happily for this reviewer, *Phylogeny and Conservation* falls quite solidly at the latter extreme.

This book is an excellent example of how diligent editors can pull together a controversial part of a field, particularly if backed by institutions with sufficient clout and resources to attract top participants. With its timely contributions, this volume will be valuable as supplementary reading for any course in conservation genetics, and will be particularly useful to advanced graduate students presently puzzling their way through projects, to practising conservation geneticists weighing the use of phylogenetic techniques in their own work, and to policy makers considering the inclusion of phylogenetic factors in their decisions.

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Plant-Pollinator Interactions: From Specialization to Generalization by Nickolas M. Waser and Jeff Ollerton (eds) (2006), xii + 445 pp., The University of Chicago Press, Chicago, USA. ISBN 0 226 87400 1 (pbk), USD 45.00 / GBP 28.50.

This book is divided into three main parts, covering the ecology and evolution of specialized and generalized pollination, community and biogeographic perspectives, and the application of knowledge of specialized and generalized pollination to agriculture and conservation. Within each section there are a number of chapters, written by researchers from 12 countries.

Ivory Markets of Europe: A Survey in France, Germany, Italy, Spain and the UK by Esmond Martin and Daniel Stiles (2005), 104 pp., Care for the Wild International, West Sussex, UK and Save the Elephants, London, UK. ISBN 9966 9683 4 2 (pbk), unpriced.

This monograph details the findings of field work carried out in 2004 to assess the ivory trade in selected European countries. Martin and Stiles aimed to establish a set of baseline indicators for the ivory trade in Germany, the UK, France, Spain and Italy that can be used in the future to monitor the European ivory trade and detect changes. Many different aspects of the ivory trade in each of these five countries is described in detail. The report is illustrated with black and white drawings, and there are also some colour photographs.

State of the World 2006: A Global Portrait of Wildlife, Wetlands and Oceans by Sharon Guynap (ed.) (2005), xvi + 326 pp., Island Press, Washington, DC, USA. ISBN 1 59726 001 0 (pbk), USD 25.00.

This book, produced by the Wildlife Conservation Society, is the first in a new series that aims to provide