

and spiny softshells differ considerably in their propensity to bite!). Instead, I want to highlight the especially well-crafted answers to questions about how the public can help turtles and the roles of turtles in religion and mythology.

In the end, any turtle lover should find this reasonably priced volume to be a valuable and useful addition to their book collection. We can all hope that providing an accurate understanding of turtles will dispel unfavorable myths, enhance our wonder at this ancient lineage of magnificent creatures, and ensure a successful future for them out of a troubled present.

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LIZARDS IN AN EVOLUTIONARY TREE: ECOLOGY AND ADAPTIVE RADIATION OF ANOLES. *Organisms and Environments, Number 10.*

By Jonathan B. Losos; Foreword by Harry W. Greene. Berkeley (California): University of California Press. \$95.00 (hardcover); \$49.95 (paper). xx + 507 p.; ill.; index. ISBN: 978-0-520-25591-3 (hc); 978-0-520-26984-2 (pb). 2009.

More biologists should know about *Anolis* lizards. Jonathan Losos makes a compelling case that *Anolis* lizards should be viewed in at least an equal light as the classic examples of adaptive radiations we are all familiar with, such as the Galápagos Finches and the Honeycreepers and *Drosophila* of the Hawaiian archipelago. This volume synthesizes decades of research on *Anolis* lizards, emphasizing their importance in much of the seminal work in ecology and evolutionary biology. Beyond their central role in the theoretical development of such concepts as competition, community organization, and thermal biology, anoles still figure prominently in cutting-edge research in the fields of community ecology, systematics, phylogeography, functional morphology, and evolutionary ecology. It is this pervasive place of *Anolis* lizards in the classic and current literature that makes this book so accessible, interesting, and broad in scope.

The author begins with a primer of evolutionary biology as a science, and then follows by getting into the details of anole biology. The next three chapters center on characterizing what anoles are and what makes them interesting, but subsequent chapters have a slightly different feel. Although anoles are the centerpiece of each chapter, they are also used as a common-thread model system for discussions of current topics in evolutionary biology, such as phylogenetic inference, life-history evolution, physiological ecology, microevolutionary processes and how to measure them, and speciation. One could easily imagine structuring a whole course in introductory or advanced

evolutionary biology using anoles as a case study for each topic. The writing to me had the tone of a conversation, albeit very articulate conversation. The footnotes liberally included throughout the book (477 of them!) at first seemed a strange mode of communication, but they contain a wealth of relevant examples, anecdotes, and trivia that I found fascinating and a significant enhancement of each topic. The footnotes also contributed to the overall feel of the volume that I found welcome, which is that knowing a great deal about the natural history of a group of organisms can allow great insights into ecological and evolutionary processes. Anoles are fascinating, as Losos deftly points out, because we now know so much about their natural history. But as this book so elegantly establishes, it should be that way for other taxa, and I hope this volume demonstrates to nonfield biologists the value and place of natural history in biology.

Another strength of this volume is the emphasis on what we do not know about *Anolis* lizards. The intense research conducted on anoles since the 1960s has largely been done on the "ecomorphs" that have convergently evolved on Greater Antillean islands in the Caribbean (which are fascinating). Nonetheless, the largest portion of the diversity of the nearly 400 species of *Anolis* lizards is not on those islands, but instead in mainland Central and South America where the evolutionary scenario appears to have unfolded in a very different fashion. Losos puts forth clear, testable hypotheses about unknown aspects of anole biology that only future research can clarify. His open call to researchers to study anoles is refreshing, and after reading this volume, my guess is that many graduate students and young investigators will want to answer that call, as the detailed questions outlined in the future directions section of each chapter could occupy and define numerous academic careers. With green anoles (*Anolis carolinensis*) having served as a model system in neuroendocrinology for many decades, and the green anole genome now sequenced, there is huge potential for *Anolis* lizards to jump into the forefront of numerous fields in biology beyond evolutionary ecology, including comparative genomics and evolutionary developmental biology, as the author points out in his book.

The weaknesses in this volume are almost nonexistent given the stated scope and purpose of the book. It is worth noting that general readers with no familiarity with evolutionary biology may struggle with some sections. Although Losos goes above and beyond the call of duty, in general, of carefully explaining sometimes difficult key terminology and concepts throughout, some parts will require

a bit of extra reading to get up to speed with the level of detail presented. This will be a weakness to some, and a strength to others, but it emphasizes the difficulty in finding an appropriate balance between depth and accessibility to a diverse readership. In my opinion, Losos struck this balance well, and a strict molecular biologist can get as much from this book as a strict field biologist. For those who study anole physiology, the previously mentioned voluminous work on the neuroendocrinology of green anoles is noticeably only lightly touched upon, but this is not an oversight. That aspect of anole biology has so far said little about the adaptive radiation of anoles, but it is my hope that this book will catalyze the inclusion of that piece of the puzzle into the larger picture of processes involved in adaptive radiation. None of these minor points detracts from the value of this work, and it will certainly be a useful resource for anyone interested in the patterns and processes of adaptive radiation, appealing to herpetologists, ecologists, evolutionary biologists, and integrative biologists alike. It will also serve as an indispensable source of references (74 pages worth) for those looking for relevant anole literature. This apparent labor of love, with its large breadth of topics and clear, testable hypotheses, will most likely become an academic favorite that will be well used by many.

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CHAMELEONS OF AFRICA: AN ATLAS: INCLUDING THE CHAMELEONS OF EUROPE, THE MIDDLE EAST AND ASIA. *Frankfurt Contributions to Natural History, Volume 37.*

By Colin R. Tilbury. *Frankfurt am Main (Germany): Edition Chimaira.* €98.00. 831 p.; ill.; no index. ISBN: 978-3-89973-451-5. 2010.

Although most people would consider an atlas as a collection of maps, this large (831 pages) and impressive "atlas" of the chameleons of Africa delivers so much more. For one thing, this book has species accounts for not just Africa, but also includes Europe, the Middle East, and Asia. In fact, the only other regions with endemic chameleons not covered in this volume are Madagascar, the Comoros, and the Seychelles. But of greater significance, in addition to the species point-locality maps, detailed accounts are also provided that include the taxonomy, morphology, ecology, and bibliography of each species. And each species account is richly supplemented with illustrations and excellent photographs (this volume includes over 650 full-color photographs and 129 line drawings).

Unlike many chameleon books that have preceded it, this treatment is comprehensive for the

species within the geographic area that it covers, and the information is presented in a consistent and logical way. This allows users to quickly extract the species information needed, especially concerning the most typical types of needs: Where is it found? How do I recognize it? What does it look like? What is the source literature? The bibliography is extensive and almost complete and, importantly, the author has drawn heavily from his more than 30 years of field experience to provide these highly detailed species summary accounts and photographs. As such, this volume represents a useful and valuable addition for anyone interested in chameleons, or even African biogeography.

The only major omission is the lack of a figure labeling the head crests and other ornamentation features used in the species descriptions (and defined in a glossary), which would have helped nonspecialists. The detailed 105-page general introduction to chameleons (which is excellent) also inevitably includes some minor redundancy. Regardless, however, this book is destined to become a standard reference for African chameleons for many years to come, and will be an asset to those who own it.

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HANDBOOK OF THE BIRDS OF THE WORLD. *Volume 15: Weavers to New World Warblers.*

Edited by Josep del Hoyo, Andrew Elliott, and David Christie et al.; color plates by Norman Arlott et al.; Consultant for Systematics and Nomenclature: Walter J. Bock; Consultant for Status and Conservation: Nigel J. Collar. *Barcelona (Spain): Lynx Edicions.* \$281.45. 879 p.; ill.; index. ISBN: 978-84-96553-68-2. [This volume includes 60 color plates.] 2010.

What an impressive project: sixteen volumes over two decades to cover all of the extant bird species of the world. Volume 15, as superlative as previous volumes, features eight passerine families (606 species): Ploceidae (weavers; 116), Viduidae (whydahs and indigobirds; 20), Estrildidae (waxbills; 134), Vireonidae (vireos; 52), Fringillidae (finches; 144), Drepanididae (Hawaiian honeycreepers; 23), Peucedramidae (olive warbler; one), and Parulidae (New World warblers; 116).

Family descriptions include systematics, morphology, habitat, habits, voice, food and feeding, breeding, movements, relationship with man, status and conservation, and a general bibliography. More detailed species accounts follow, including 614 range maps that show major rivers, but not country boundaries.

Authors were well chosen for their expertise and ability to write clearly, even when presenting fairly technical information from over 6000 references.