

BOOK REVIEWS

Lizards: Windows to the Evolution of Diversity. 2003. Eric R. Pianka and Laurie J. Vitt. Foreword by Harry W. Greene. University of California Press. 333+xiii pages. 8 tables, 31 figures, 218 color photos. \$45, cloth. ISBN 0-520-23401-4.

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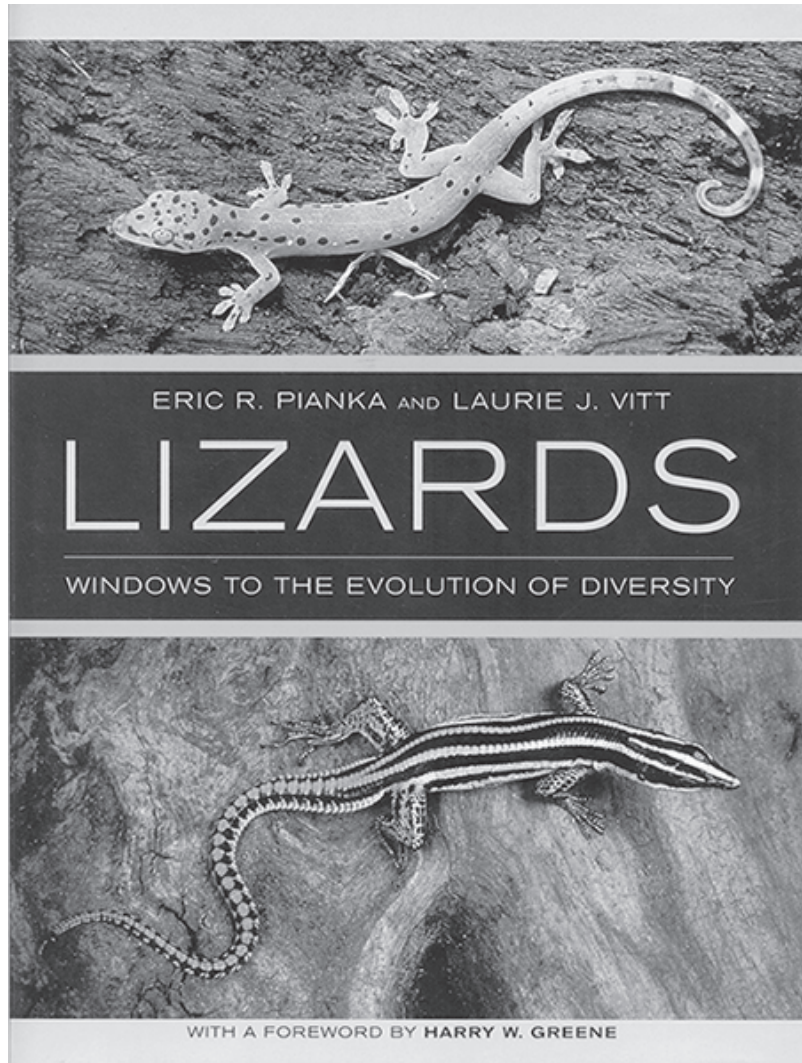
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From the perspective of a lizard lover, who better to write a book about lizards than Eric Pianka and Laurie Vitt? Together, these two biologists have amassed decades of data, anecdotes, and injuries while studying lizards the world over. Their recent book is an enjoyable way to share the wonder and delight of lizard biology with a broad audience. Picture the two of them sitting together brainstorming the best way to portray the excitement of their life's work; this book is what they came up with. By matching readable text with many amazing photos and entertaining anecdotes, Vitt and Pianka present lizards in a much more accessible way than a typical scientific paper or edited academic volume.

Lizards is the 5th in a series on organisms and environments from the University of California Press. Harry Greene serves as consulting editor. Other books in this series include Grismer's (2002) work on Baja herpetofauna and Nabhan's (2003) *Singing the Turtles to Sea*, about herpetofauna and Seri Indian culture in Sonora, Mexico. Similar to these other books, *Lizards* is produced with high-quality paper, with many excellent photographs and figures, and in standard 8.5x11 format. A few of the photos either did not reproduce well or were slightly out of focus, but overall the group of over 200 full color photographs is a delightful sampling of lizard diversity and many portray unusual and interesting behaviors.

Pianka and Vitt begin with a brief introduction that attempts to place lizard research in a broader scientific framework. They also explain their motivations for studying lizards and sharing their knowledge, ending with a caution about the rate at which we are altering habitats not only for lizards but for all life, including humans. The book is then broken into three sections: lizard lifestyles (chapters 1-7), lizard diversity (chapters 8-13), and synthesis (the last two chapters). An appendix lays out a

short table of all extant lizard genera. A healthy sampling of lizard references follows a three-page glossary and the book ends with an index that aids navigation to species (including indication of photographic representation), higher taxa, or subjects of interest.



The first chapter (eight pages long) is a whirlwind introduction to squamate evolution, phylogenetic history, and biogeography. While chapter one is a nice concise overview, a deeper understanding of these issues should be sought elsewhere by interested readers. Morphology, physiology, foraging ecology, predation (on and by lizards, and sometimes both), interspecific interactions, life history, and community ecology are all

touched on in the remainder of the first section. The authors provide many useful examples and cite many important previous publications, including their own research, and occasionally make as-yet-unsubstantiated claims. Sometimes these are presented clearly as hypotheses to be tested, sometimes not. In this first section of the book it becomes apparent that the authors are not consistent with their citation of other biologists' work. A few times, several works are cited when one would suffice, but more often no citation is given for facts and assertions that need one. However, the book does well to introduce most of the interesting research topics in lizard biology and interested readers can dig further into specific areas of fascination.

The first section of the book sampled broadly to illustrate diversity at the expense of a logical, phylogenetic sequence of information. Such a sampling approach is useful for introducing readers to the amazing biology to be found across lizards. The other approach, found in the second section of the book, organizes chapters based on phylogenetic groups. This is a more intuitive perspective which provides context for the diversity of lizard adaptations, behaviors, and life-history traits. On several occasions information for a given group ends up being covered twice (e.g., horned lizard defense strategies), once in the first section of the book during relevant ecological discussion and then again during the specific treatment of that group of lizards. The result is a book that feels less like one that should be read cover to cover at one sitting, but one to be perused here and there to gain a richer understanding of lizard diversity and the historical events and relationships that may help explain observed biological patterns.

Synthesis, the third section, contains one chapter that explores the evolutionary history of lizard groups in more detail and a second chapter that explicitly talks about human relationships with lizards. The take-home message is that we are doing our best to truncate millions of years of adaptation and radiation within this amazing group of vertebrates.

One of the delights of the book are the many "anecdote boxes" scattered throughout each chapter that relate an interesting natural history observation, describe interactions with other noted ecologists, and convey noteworthy pitfalls and successes of decades of lizard research. Each anecdote, attributed to one of the authors, gives the reader the sensation of being on a herping trip with two lizards legends listening to the stories and life highlights that tend to creep to the surface during a few hours or days in the field. My favorite is late in the book when Pianka relates Vitt's suggestion that herpetology should be a spectator sport like football; all the diving and chasing deserves recognition for the athletic and humorous pastime that it is.

Among the changes I would like to see made in this book is inclusion of global range maps for the major

lizard clades. Without such maps it is hard to visualize large-scale biogeographic patterns; genera-scale maps could then be found in recent herpetology textbooks (Zug et al. 2001, Pough et al. 2004). Some of the tables and figures are overly simplistic or contain minor errors. For example, figure 3.2 describes autarchoglossa as having "low sprint speed", but then on page 66 autarchoglossans are described as having "high running speeds." More citations should be included throughout the book, but perhaps the authors and the publisher made a conscious decision, in the spirit of improved readability for a general audience, to omit many relevant citations.

Pianka and Vitt's *Lizards* can be placed in a similar category as Greene's (1997) *Snakes*. Herpetologists will love this book. The inquisitive non-herpetologist may become a convert after thumbing through its delightful pages and learning not only about the amazing world to be discovered in lizards, but also how personally exciting and rewarding the search for lizard knowledge and understanding can be.

Literature Cited

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