

Grismer et al. 2013. *Zoological Journal of the Linnean Society* 169:849–880). Historically only a handful of books have dealt with the herpetofauna of Thailand (e.g., E. H. Taylor. 1963. *University of Kansas Science Bulletin* 44:687–1077; E. H. Taylor. 1965. *University of Kansas Science Bulletin* 45:609–1096; E. H. Taylor. 1970. *University of Kansas Science Bulletin* 49:89–179; M. J. Cox. 1991. *The Snakes of Thailand and Their Husbandry*. Malabar (FL): Krieger Publishing Company; M. J. Cox et al. 1998. *A Photographic Guide to Snakes and Other Reptiles of Peninsular Malaysia, Singapore and Thailand*. London (U.K.): New Holland Publishers; T. Chan-ard et al. 1999. *Amphibians and Reptiles of Peninsular Malaysia and Thailand: An Illustrated Checklist*. Wurslelen (Germany): Bushmaster Publications; W. Nutaphan. 2001. *Snakes in Thailand*. Bangkok (Thailand): Amarin Printing and Publishing Public Company), and the most recent treatment prior to this publication focused wholly on the snake fauna (M. J. Cox et al. 2012. *The Snakes of Thailand*. Bangkok (Thailand): Chulalongkorn University Museum of Natural History).

*A Field Guide to the Reptiles of Thailand* is a concise, yet reasonably thorough field-worthy book that will be of value to herpetologists and naturalists, whether amateur or professional, exploring the rich reptile fauna of Thailand. A total of 352 species of turtles, snakes, and lizards are described and most are illustrated with hand-drawn color illustrations that occasionally include depictions of sexually dimorphic characters (e.g., male dewlaps in *Draco* sp.). Small, stylized distribution maps are provided for each species and taxonomic keys are provided for some families and most genera. The first portion of the book contains helpful illustrations and definitions for many of the morphological characters used throughout. A brief overview of the regional variations in geography and forest types is provided in addition to some discussion of conservation of amphibians, reptiles, and the environments that they inhabit.

The authors provide both scientific nomenclature and common names for the species presented. Common names follow those of J. Nabhitabhata et al. (2000. *Checklist of Amphibians and Reptiles in Thailand*. Bangkok (Thailand): Office of Environmental Policy and Planning), a Thai government publication not widely available. No common names are given in Thai, something a few previous volumes have provided (e.g., Cox et al. 2012). This is unfortunate given that it is a book aimed for use in the field where it would be helpful to show pictures and Thai names to locals familiar with the animals. No discussion is provided regarding the authors' justification for the scientific nomenclature used, some of which was outdated at the time

of publication (e.g., *Ophisaurus gracilis* is now *Dopasia gracilis*). O. S. G. Pauwels and L. L. Grismer (2015. *Herpetological Review* 46:456–459) provide a thorough treatment of the shortcomings and errata of this volume, carefully pointing out missing and erroneous information regarding taxonomy, behavior, ecology, and systematics.

Based on comments in the introduction, a Thai language version of this book is anticipated in the coming years. A Thai edition will be especially helpful and will hopefully encourage the pursuit of formal and informal studies of the country's rich herpetofauna by those who live there and in the surrounding region. A brief history of herpetology in Thailand is provided, but much of this focuses on the work of foreigners and neglects the accomplishments of past and present Thai herpetologists. In recent decades a growing number of Thai researchers have pursued taxonomic, ecological, biogeographical, and evolutionary studies of their nation's herpetofaunal diversity. They have contributed much to the field, and have successfully mentored local, regional, and international students.

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THE ANOLES OF HONDURAS: SYSTEMATICS, DISTRIBUTION, AND CONSERVATION. *Bulletin of the Museum of Comparative Zoology: Special Publication Series, Number 1*.

By James R. McCranie and Gunther Köhler. Cambridge (Massachusetts): Museum of Comparative Zoology; distributed by Harvard University Press, Cambridge (Massachusetts). \$24.95 (paper). iv + 292 p.; ill.; no index. ISBN: 978-0-674-50441-7. 2015.

Honduras is home to a fascinating array of *Anolis* species, from the lanky giant *A. loveridgei* to the impossibly sexy male and female pair of *A. johnmeyeri*. Many of the endemic forms were described by McCranie and Köhler, and thus it is fitting that these authors have drawn from their years of experience in Honduras to produce a magnum opus of Honduran anoles. Their monograph is mainly a systematic review of all species of *Anolis* found in Honduras, but also includes extensive sections on distribution and conservation, a dichotomous key, and brief discussions of anole relationships and the history of studies of Honduran *Anolis*. An instant classic, it succeeds in being a comprehensive summary of *Anolis* in Honduras.

The treatment is detailed and, most importantly, useful. The welcome and impressive qualities of this monograph—for each species—include: dot maps; male dewlap and body photographs; drawings of head scales; full synonymies; and descriptions. This

information is extremely valuable for workers in the field. It had to have been a massive undertaking to compile and present these data for every species of Honduran *Anolis*. When combined with natural history notes and discussion of anoles with respect to physiographic regions, this makes for an indispensable tool for any herpetologist working in Honduras. The scale drawings and maps are clear and informative, and the photographs (with the exception of a few dark examples) are very good.

The utility of this work far outweighs its limitations. However, as a reviewer and unabashed anole geek I would be remiss in not pointing out issues that detract from an otherwise solid contribution to science. The first limitation is the use of *Norops*. The recycled justifications for this practice in this book have all been debunked (see M. D. Castañeda and K. de Queiroz. 2013. *Bulletin of the Museum of Comparative Zoology* 160:345–398; S. Poe. 2013. *Zootaxa* 3626:295–299). The reasons that the authors give for recognizing *Norops* (strong support for monophyly, supposed “distinctiveness” of members of the genus) apply moreso to *Anolis* (sensu lato), and there is no scientific reason to switch to the new Nicholson et al. (2012. *Zootaxa* 3477:1–108) taxonomy or one of the thousands of other permutations that name monophyletic anole groups as genera—see, e.g., Poe’s 10-genus scheme (2014: Figure 1) over the well-entrenched use of *Anolis* for the entire anole clade.

The second limitation is a failure to reassess the species validity of some questionable forms. I am unable to distinguish the following *Anolis* species pairs in the field using traits suggested as diagnostic by the authors, or using any other traits (I have collected each in life, in most cases topotypically): *beckeri-utilensis*, *limifrons-zeus*, *humilis-quagglulus*, and *laevis-ventris-kreutzii*. For example, we collected topotypical *A. zeus* with *limifrons*-like dewlaps (the only trait purported to distinguish them), and topotypical *A. utilensis* with caudal scalation that is indistinguishable from that of *A. beckeri*. The purported diagnostic traits of *A. utilensis* have changed over time (compare the original diagnosis of *A. utilensis*; G. Köhler. 1996. *Senckenbergiana Biologica* 76:19–28) to that of this volume and the authors note that some individuals they assign to *A. zeus* lack the single diagnostic trait of the species (p. 98). Thus, as McCranie and Köhler seem aware of at least some of these issues, it would have been valuable for them to draw attention to these problematic species—as the authors did with the questionable *A. wampuenensis*—rather than to proceed as if the status of each is unassailable. An excellent framework of Honduran anole taxonomy has been erected by McCranie, Köhler, and others, but there is a lot of room for additional taxonomic work on Honduran anoles.

The next limitation is an unnecessary plea for the use of scale data in phylogenetic analyses of *Anolis*. The authors simultaneously note that some researchers have used scale data in *Anolis* phylogenetics (p. 5) and spend four pages lamenting the lack of scale data in *Anolis* phylogenetics (pp. 4–7). This puzzling juxtaposition is reminiscent of Rick James’ response when accused of grinding his dirty feet on Eddie Murphy’s couch: “Come on, what am I gonna do? Just all of a sudden jump up and grind my feet on somebody’s couch like it’s something to do? Come on. I got a little more sense than that. Yeah, I remember grinding my feet on Eddie’s couch” (R. James in D. Chappelle. 2004. *Charlie Murphy’s True Hollywood Stories*. Season 2, Episode 4).

The final limitation is concerned with unsupported conservation assertions. The authors claim that 10 of 39 Honduran *Anolis* species are “vulnerable” or “endangered” and three species are “declining.” But they present no long-term quantitative evidence for these claims. My own anecdotal observations of many of these purportedly endangered forms runs counter to the suggestions of McCranie and Köhler. For example, we found *A. utilensis* to be highly abundant in disturbed habitat on Útila, and we have observed large numbers of individuals of *A. cusuco* and *A. amplisquamosus* during brief visits to Cusuco National Park. Many researchers tend toward caution regarding conservation assessments when data on long-term population trends are unavailable. This tendency is noble in spirit but unfortunate in practice because in most countries, species-based conservation initiatives tend to hinder just one entity—scientists attempting to conduct research—and have no effect on the real estate developers and other destroyers of habitat who should be reined in (see also J. A. Campbell and D. R. Frost. 1993. *Bulletin of the American Museum of Natural History* 216:1–121; J. V. Remsen. 1995. *Bird Conservation International* 5:145–180). The authors should have emphasized that their opinions are preliminary and based on anecdotal, albeit valuable, observations.

The above flaws notwithstanding, this volume is an invaluable resource for herpetologists working in Central America. It is an impressively comprehensive and useful summary of anole diversity in Honduras.

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