

BOOK REVIEW

Field Guide to Amphibians and Reptiles of California. 2012. Robert C. Stebbins and Samuel M. McGinnis. California Natural History Guides. University of California Press, Berkeley, CA. \$29.95. 538 pages, 488 illustrations. ISBN 978-0-520-27051-0.

I was an avid user of the Peterson field guide *Western Reptiles and Amphibians* (Stebbins 1985) during the 1980s and 1990s, and that guide is where most of my knowledge of amphibian and reptile natural history stems from. The third edition was published in 2003, and I was quick to add it to my ever-growing collection of field guides (Stebbins 2003). These books by Stebbins had a significant influence on me and my studies of California's rich herpetofauna. Now we have a much-needed guide written by Stebbins and McGinnis that specifically addresses the herpetofauna of California. The guide covers 69 amphibian species and 98 reptile species that inhabit California and its coastal waters (page xi). There are 488 outstanding illustrations and photographs; these figures raise the guide to a level that is surely to be a new standard in field guide preparation.

The guide is divided into 3 major sections: (1) introduction, (2) amphibians, and (3) reptiles. The introduction has several subsections covering amphibians and reptiles as vertebrate terrestrial pioneers, herpetofauna distribution throughout California's habitat complex, protective status of some amphibian and reptile species, common and Latin name changes, and field identification keys.

The subsection addressing the recent taxonomic changes within several species of reptiles and amphibians is well worth a read. Stebbins and McGinnis state that in the past few years, many name changes have been proposed and these changes have led to considerable confusion for the field guide user. Indeed, not all proposed name changes are reflected in the guide. For example, Frost et al. (2006) proposed that the American bullfrog (*Rana catesbeiana*) be placed in the genus *Lithobates* and

that the true toads (family Bufonidae; genus *Bufo*) be placed in the genus *Anaxyrus*. These proposed changes are not mentioned in the guide. In the snakes, coachwhips are still in the genus *Masticophis* rather than reflecting the change to *Coluber* proposed by Nagy et al. (2004) and Utiger et al. (2005). Other taxa include both Latin names resulting from recent taxonomic splits, such as the western whiptail, now *Aspidoscelis tigris* (formerly *Cnemidophorus tigris*); both of these Latin names are written at the top of the species account. As another example, Stebbins and McGinnis have accepted the recent split of *Rana aurora* and *Rana draytonii* (Shaffer et al. 2004, Conlon et al. 2006), and a special note in the species account explains the split details.

Under the subsection regarding amphibian and reptile distribution throughout California, each major habitat type is provided a brief description. Habitats include North Coast Range, Cascade Range, Great Basin Desert, South Coast Range, Great Valley, Sierra Nevada, Coastal Southern California, the Mojave and Colorado Deserts, Transverse Range, Tehachapi Range, and Peninsular Ranges. These habitat descriptions touch on why California is such a diverse state and home to such a variety of reptile and amphibian species. But with wonderful habitats come human occupation of these same ecosystems.

A section is included that discusses the ongoing loss of habitat and the decline of California's amphibians and reptiles. Reasons for the loss of biodiversity are many; including introduction of nonnative species, chemical contamination, chytrid fungus infection, and UV radiation. The authors point out that these causes for decline of California's herpetofauna are the "results of both intentional and unintentional interference by humans" (page 29). The authors urge the reader to join in accepting stewardship of these unique animals and actively supporting and pursuing "whenever possible those activities and policies that promote the preservation of amphibians and reptiles, both in California and the world" (page 29).

The second section covers the amphibians. Prior to the species accounts are 4 general lessons about amphibians: taxonomy, anatomy, physiology, and behavior. These lessons provide the foundation for fully understanding amphibians and the way they interact with the environment.

Two orders of amphibians occur in California: Order Caudata (salamanders) and Order Anura (frogs and toads). Each amphibian species account has several parts, including identification, range description with a detailed map, natural history, and in some cases, a conservation note. These accounts are the crux of the guide—the main reason to have the guide handy at all times while in the field. The accounts are very well researched and contain a wealth of information. Each account has a figure of the species that includes a richly detailed colored illustration and, in many instances, accompanying photographs of the species, representative habitats, and larval forms. Some accounts have photos of behavior interactions, such as Plate 29 showing a red-bellied newt “ball” (page 93).

The third section covers the reptiles. Two orders are presented: Order Squamata (lizards and snakes, each having their own suborder, Sauria and Ophidia) and Order Testudines (tortoises and turtles). Like the amphibian section, the reptile section contains 4 lessons prior to the accounts: taxonomy, anatomy, physiology, and behavior. These lessons are crucial for understanding how reptiles interface with the environments they occupy. The species accounts are formatted like the amphibian accounts, with each account having an identification section, a range description and map, and a natural history section. Each account has an illustration of the reptile, and photos accompany almost every account.

Other useful sections for further study of reptiles and amphibians are included after the species accounts. These cover observation, photography, capture, and husbandry of amphibians and reptiles. A checklist of California amphibian and reptile species is also included. The final parts of the guide have an abbreviations section, a glossary, a selected references section, and an index.

This field guide is a must for students, professionals, and the general public interested in

California herpetofauna. The accounts are some of the best I've ever read, and the natural history sections are especially informative (the authors provide a brief discussion of the phrase “natural history” in the preface). Besides being a useful tool in keying out and identifying reptiles and amphibians, the guide has a conservation theme threaded throughout its pages, which I hope will encourage readers to reflect on the current pace of biodiversity declines and become champions of herpetofauna conservation. In all, the guide fills a void in California's natural history record and provides easy access to the world of Californian herpetology to anyone interested in the topic.

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