

THE BIRDS OF SULAWESI. *Images of Asia.*

By Derek Holmes; illustrated by Karen Phillipps. Oxford and New York: Oxford University Press. \$24.95. xii + 86 p + 20 pl; ill.; index to genera, systematic section. ISBN: 983-56-0005-8. 1996.

WARBLERS OF EUROPE, ASIA AND NORTH AFRICA.

By Kevin Baker. Princeton (New Jersey): Princeton University Press. \$49.50. 400 p; ill.; index. ISBN: 0-691-01169-9. 1997.

The 350 to 387 species of the family Sylviidae include mostly the so-called Old World warblers. Many of these rather dull-plumaged, brown birds present a challenge for field identification. Any birders who have ever puzzled over whether they had just seen a Willow Warbler or a Chiffchaff, an Icterine Warbler or a Melodious Warbler, will welcome this manual. Indeed, the emphasis of the book is to serve as an identification guide to this group of birds, much in the style and layout of other recently published works.

Accounts of 145 species in the subfamily Sylviinae are presented, including notes on identification, description, geographical variation, molt, voice, habitat, behavior, measurements, and distribution, the latter illustrated with color maps. Discussions of "confusion species" (some illustrated with line drawings of plumage details and field marks) are helpful in distinguishing among similar species. In addition, biological summaries are included for each major genus (e.g., *Phylloscopus*, *Sylvia*). Forty-eight color plates, prepared by the author, depict 144 species in various plumage phases (the Large-billed Warbler, known only from a type specimen collected in 1867 and of unclear taxonomic affinity, is the only "species" not illustrated). Each bird is accurately illustrated in a lifelike pose, either perched on vegetation or standing on the ground; noticeable exceptions are the Rufous-vented Prinias (Plate 20), which lack vegetation backgrounds, probably due to an oversight. The only other production flaw I discovered was on Plate 47, where the orange crest of the Firecrest is slightly shaved at the top of the page. These, however, are minor detractors from an otherwise carefully produced work.

Of special interest is the inclusion of three Oriental leaf warblers new to science, as well as lesser known groups such as ground warblers, prinias, and tailorbirds. Readers familiar with New World wood warblers (subfamily Parulinae) will be struck by the remarkable morphological and behavioral convergences between this group and many species treated in the current volume. Overall, *Warblers of Europe, Asia and North Africa* will appeal most directly to birders in these regions, and to ornithologists and bird enthusiasts with an interest in, and fondness for, these popular birds.

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HANDBOOK OF THE BIRDS OF INDIA AND PAKISTAN: TOGETHER WITH THOSE OF BANGLADESH, NEPAL, SIKKIM, BHUTAN AND SRI LANKA. Volume 8: Warblers to Redstarts. Second Edition.

By Sâlim Ali and S Dillon Ripley; with contributions by T J Roberts. Delhi: Oxford University Press. \$40.00. xiv + 281 p + 89 pl; ill.; index. ISBN: 0-19-563657-0. [Sponsored by the Bombay Natural History Society.] 1997.

SNAKES: THE EVOLUTION OF MYSTERY IN NATURE.

By Harry W Greene; with photographs by Michael Fogden and Patricia Fogden. Berkeley (California): University of California Press. \$45.00. xiv + 351 p; ill.; index. ISBN: 0-520-20014-4. 1997.

While preparing a public lecture on snakes, I found myself referring to this book as I would to a well-established classic. I am also using it extensively in my university herpetology course, and have recommended it to herpetologists, ecologists, wildlife biologists, graduate students, a mathematician, my brother-in-law, and several neighbors. Its broad appeal, combined with its bargain price, makes the book accessible to practically everyone; it is a "must-have" for vertebrate biologists.

Harry Greene's personal fascination with snakes is combined with his scholarly and thorough treatment of snake biology and evolution. The 16 chapters, organized into sections on Lifestyles, Diversity, and Synthesis, are each introduced by a personal anecdote that is especially relevant to the evolutionary topic to be explored. Thirteen special topics, ranging from Deadly Colubrids and Famous Herpetologists to Other Elongate Vertebrates, are placed strategically throughout the book and are packed with additional information that would otherwise interrupt the flow of the main chapters. The biology and diversity of snakes is thoroughly reviewed, intermingled with a summary of Greene's own research. The evolutionary scenarios put forth can be formulated into testable hypotheses, and I expect research on snakes will increase as a result of this book.

Greene made two difficult choices that worked out well: he avoided in-text citations, and used common names according to a few clearly defined conventions. Latin names follow common names in parentheses. Notes with copious citations are compiled (by chapter) at the end of the book, followed by an alphabetical listing of about 800 complete references. A lucid appendix explains phylogenetic classification, adaptation, and species concepts. This arrangement makes the book exceptionally readable without sacrificing technical merit. Thus Greene arrived at a solution to keep scientists as well as laics happy.

Snakes is not a coffee-table book, although my copy has remained there. The spectacular photo-

graphs by Michael and Patricia Fogden do more than merely illustrate the beauty and variety of snakes. Without the portraits and action pictures, Greene could not have met his "dual agenda—facts and a feeling for the organisms in nature" (p 7). Text and photos meld to create a crystal-clear vision of the natural lives of snakes. In the Epilogue: Why Snakes?, Greene takes an eloquent shot at answering the challenge posed to him by the novelist Norman Maclean: "Look, just tell me, why do you work with those damned old rattlesnakes? Go write about that!" (p x). Field biologists will relate instantly to his answer, while nonbiologists may finally understand why we feel so lucky to work on wild creatures in harsh conditions for low pay. *Snakes: The Evolution of Mystery in Nature* is, in my opinion, a great book that will help change the way society views both snakes and biologists. I heartily recommend it.

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FROGS AND REPTILES OF THE SYDNEY REGION.

By Ken Griffiths. *Sydney: University of New South Wales Press.* \$19.95 (paper). 125 p; ill.; index. ISBN: 0-86840-432-2. 1997.

HOMEOSTASIS IN DESERT REPTILES. *Adaptations of Desert Organisms.*

By S Donald Bradshaw. *New York: Springer-Verlag.* \$139.00. xi + 213 p; ill.; subject index. ISBN: 3-540-59264-4. 1997.

This volume reviews a dynamic and provocative area of physiology. In the introduction, Bradshaw discusses why the success of reptiles in deserts appears to have resulted from a suite of fundamental reptilian characteristics that are exaptations for inhabiting deserts. He also reviews why recent research on reptiles requires us to reevaluate the concepts "milieu intérieur" and homeostasis.

In Chapter 1, Bradshaw evaluates the variation in reptile body fluid and electrolyte levels in relation to taxon and habitat, and demonstrates how the milieu intérieur of reptiles is highly variable relative to that of birds and mammals. Chapters 2 and 3 summarize the importance of reptilian kidneys, salt glands, and the cloacal-colonic complex to homeostasis and how the coordinated hormonal control of their function represents an integrated approach to water and electrolyte homeostasis. Studies of desert reptiles have also provided evidence of thermal homeostasis (Chapter 4), hormonal and neural control of thermal homeostasis, interactions between osmoregulatory and thermoregulatory processes, seasonal acclimatizations of thermal homeostasis, and a dual set-point model for thermoregulation.

Bradshaw clearly and concisely illustrates that reptiles use a coordinated system of physiological

processes and behaviors to maintain fluid, electrolyte, and thermal homeostasis. He identifies the strong and weak areas (empirical and theoretical) of the discipline and provides focus for future research. Bradshaw also provokes us to reconsider our definitions of homeostasis and the advantages and disadvantages of tightly regulating the milieu intérieur. The book has a few typesetting errors and some statistical comparisons that were not completely rigorous. For example, in Chapter 1 some, but not all, species had several datapoints included in the reptile group comparisons, potentially biasing the results. These were minor errors and do not prevent Bradshaw from effectively communicating ideas to readers.

This book is an excellent reference for animal physiologists, herpetologists and other scientists interested in desert wildlife. Its scope and content are also well suited for graduate seminars in these disciplines.

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HANDBOOK OF PHYSIOLOGY: A CRITICAL, COMPREHENSIVE PRESENTATION OF PHYSIOLOGICAL KNOWLEDGE AND CONCEPTS. *Section 4: Environmental Physiology. Volumes I and II.*

Edited by Melvin J Fregly and Clark M Blatteis. *Published for the American Physiological Society by Oxford University Press, New York.* \$295.00 (two-volume set). (I) xxii + 783 p; ill.; no index. (II) xiii + pp 785–1586; ill.; index. ISBN: 0-19-507492-0 (set). 1996.

ANIMAL PHYSIOLOGY: ADAPTATION AND ENVIRONMENT. *Fifth Edition.*

By Knut Schmidt-Nielsen. *Cambridge and New York: Cambridge University Press.* \$49.95. ix + 607 p; ill.; index. ISBN: 0-521-57098-0. 1997.

It is clearly time for the new fifth edition of this premier textbook of comparative physiology. The previous editions have been authoritative, readable and accessible to undergraduates and graduates alike. This is largely because the author has published classical papers in the fields of osmoregulation and water balance, temperature regulation, excretion, circulation and energy metabolism as well as a number of excellent books, such as *How Animals Work* (1972. Cambridge (UK): Cambridge University Press). In this edition the author has resisted the "dinosaur syndrome"—the tendency of revisions to increase in size and thereby to die out. The text has been improved by the addition of a blue background color to the illustrations and more attractive headings. Its organization is identical to that of previous editions, with sections on oxygen, food and energy, temperature, water, and finally move-