



BOOK REVIEW

The Lives of Snakes: A Natural History of the World's Snakes

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***The Lives of Snakes: A Natural History of the World's Snakes.* 2025. Chris Mattison. Princeton University Press, Princeton, New Jersey, USA. 288 pp. Hardback – ISBN 9780691250601. \$35.00.**

Snakes have long occupied an unusual status in zoology and popular culture in that they are simultaneously feared, admired, mythologized, and scientifically fascinating. Their evolutionary distinctiveness, ecological importance, and complex relationships with humans have made them enduring subjects of both scientific investigation and public curiosity. Chris Mattison's *The Lives of Snakes: A Natural History of the World's Snakes* is a contemporary attempt to synthesize these multiple perspectives into a single accessible volume. Published as part of Princeton University Press's *The Lives of the Natural World* series, the book combines current biological understanding with abundant photographs and species-based examples to introduce readers to snake evolution, anatomy, behavior, ecology, reproduction, and conservation.

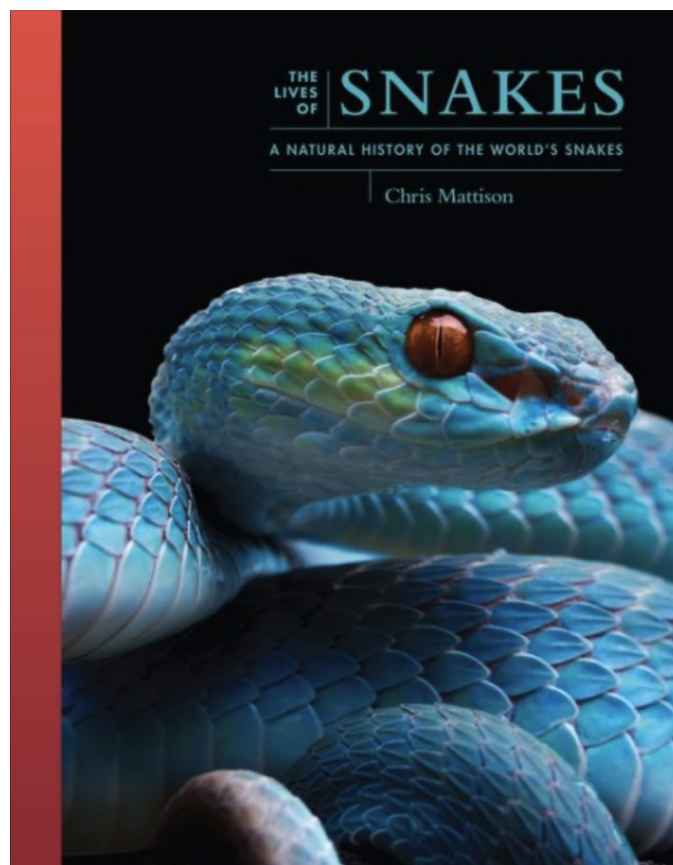
Mattison is particularly well placed to undertake this task. As a natural history writer, photographer, and specialist in reptiles and amphibians, he has previously produced major works including *Snake: The Essential Visual Guide* (Mattison 1999) and *The New Encyclopedia of Snakes* (Mattison 2015). Unlike a conventional taxonomic handbook, *The Lives of Snakes* is not designed primarily for identification. Instead, it adopts a narrative approach centered on biological processes and evolutionary adaptations, positioning snakes as dynamic organisms rather than collections of unusual physical traits.

The book's central achievement is its ability to communicate the complexity of snake biology without reducing these animals to familiar stereotypes. However, when considered alongside earlier landmark works such as *Snakes: The Evolution of Mystery in Nature* (Greene 1997) or *How Snakes Work: Structure, Function and Behavior of the World's Snakes* (Lillywhite 2014), and Mattison's own earlier encyclopedic treatments, it occupies a somewhat different intellectual space: less analytical than Greene, less physiological than

Lillywhite, but arguably more effective as a modern synthesis for a broad readership.

The Lives of Snakes follows a thematic structure rather than a conventional taxonomic arrangement. The book examines snake origins and diversity, external form and internal anatomy, sensory systems, locomotion, reproduction, feeding, defense, relationships with humans, and conservation. Representative species accounts are used throughout to illustrate broader biological principles.

This approach is particularly effective because snake diversity is otherwise difficult to communicate. More than 4,000 currently recognized species of snakes occupy environ-



ments ranging from deserts and tropical forests to freshwater systems and oceans. A species-by-species treatment would inevitably become encyclopedic and fragmented. Instead, Mattison asks the more scientifically meaningful questions: how do snakes function, why have they evolved particular adaptations, and how do they interact with their environments? This organization places the book closer in spirit to *Snakes: The Evolution of Mystery in Nature* (Greene 1997). Greene's work remains one of the most influential popular scientific accounts of snake biology because it combined evolutionary interpretation with personal observations and philosophical reflection. Greene presented snakes not merely as animals to be catalogued but as examples of evolutionary creativity. Mattison follows a similar philosophy but updates the presentation for a 21st-century audience, incorporating contemporary conservation concerns and a more visually driven approach.

Whereas Greene's book is an argument about the intellectual fascination of snakes, Mattison's is more a celebration of their biological diversity. The difference is significant. Greene writes as an evolutionary biologist seeking to explain why snakes matter scientifically; Mattison writes as a natural historian seeking to help readers appreciate why snakes matter ecologically and aesthetically. The strongest sections of *The Lives of Snakes* are those dealing with adaptation. Snakes are evolutionary specialists, and Mattison effectively demonstrates how their apparently unusual anatomy represents refinement rather than deficiency. Limblessness, highly mobile skulls, specialized scales, chemical sensing through the tongue and vomeronasal system, and diverse locomotor strategies are presented as solutions to ecological challenges.

This emphasis on adaptation links the book with *How Snakes Work* (Lillywhite 2014), which provided a more detailed examination of snake physiology. Lillywhite's volume is substantially more technical, focusing on biomechanics, respiratory adaptations, feeding mechanisms, and functional morphology. It is aimed primarily at students and researchers, whereas Mattison's work is intended for a wider audience such as natural history enthusiasts and curious young minds. The two books are therefore complementary rather than competitive. Lillywhite explained mechanisms in greater physiological depth; Mattison explains why those mechanisms are fascinating.

For example, the snake skull is one of the most remarkable structures in vertebrate biology. A technical treatment might focus on cranial kinesis and biomechanics, whereas Mattison uses the skull to explain the evolutionary relationship between form and ecological opportunity. The result is less detailed scientifically but arguably more successful pedagogically. This difference reflects a broader trend in modern natural history publications, a movement away from simple descriptions to interpretation. Contemporary readers increas-

ingly expect natural history books not only to tell them what animals are, but why they matter.

A notable strength of Mattison's treatment is that snakes are presented as active ecological participants rather than passive examples of adaptation. Popular representations frequently portray snakes primarily as predators, especially venomous species. Mattison provides a more balanced account, emphasizing their roles as components of food webs, regulators of prey populations, and indicators of environmental change. The treatment of feeding ecology is particularly successful. Snakes demonstrate extraordinary diversity in prey capture, including constriction and venoms, ambush predation and active searching, and specialized diets such as egg consumption. Rather than presenting these behaviors as curiosities, Mattison explains them as evolutionary responses to ecological circumstances.

Similarly, the discussion of reproduction highlights the diversity of snake life histories. Species vary enormously in reproductive strategies, including egg laying, live birth, parental investment, and seasonal breeding patterns. The dedicated treatment of reproduction reflects the book's broader aim of showing that snakes are biologically complex animals rather than simplistic representations of reptilian life.

Nevertheless, readers familiar with specialist literature are likely to find some behavioral topics treated in a rather cursory fashion. Snake cognition, social behavior, and communication remain active areas of research, and these could have provided opportunities for deeper engagement with recent scientific debates. This limitation is understandable given the book's intended audience but represents an area into which future editions might expand.

Perhaps the most important contribution of *The Lives of Snakes* is its conservation message. Snakes remain among the most persecuted vertebrates because of cultural fear and misunderstanding. Mattison's discussion of human attitudes addresses one of the central challenges facing snake conservation: protecting species that many people dislike. This conservation emphasis distinguishes this book from earlier general snake works. Greene (1997) included conservation as a major theme, but the urgency of biodiversity loss has intensified considerably since then. Habitat destruction, climate change, road mortality, illegal collection, and deliberate killing now represent increasingly significant threats to snake populations. The book's conservation perspective also aligns with current trends in biodiversity communication, in which changing public attitudes is recognized as an essential component of species protection. A technically accurate account of snakes is valuable, but a book that encourages readers to reconsider their emotional responses likely will have a wider impact. In this respect, Mattison's work complements the more specialized conservation literature. It does not provide the quantitative population analyses or threat assessments found in studies

of conservation biology, but it addresses the equally important challenges involved in engaging the public.

The visual component of *The Lives of Snakes* is one of its defining characteristics. The combination of photography, illustrations, and explanatory graphics renders the book particularly accessible. Mattison's photographic background is evident in the selection of images, which frequently emphasize behavior, habitat, and ecological context rather than simply illustrating individual snakes. This distinguishes the book from the earlier books in that Mattison's volume reflects the modern natural history publishing environment, in which high-quality images have become an important tool for communicating science. The visual approach also supports the book's conservation objectives. Animals that are commonly perceived as threatening are presented in contexts that encourage observation and appreciation. The book also contains a comprehensive glossary and additional resources in the form of both books and websites, should readers wish to further explore a particular topic.

Despite its many strengths, *The Lives of Snakes* has some limitations. The greatest is inevitably one of scope. A global treatment of snake biology cannot provide extensive coverage of every evolutionary lineage, geographic region, or current research question. Readers seeking detailed taxonomy, identification keys, or advanced physiological analyses will need to consult more specialized sources. The book also is somewhat conservative in its scientific ambition. Unlike other works, which have explicitly explored philosophical questions about evolution and the human fascination with nature, Mattison generally avoids extended theoretical discussion. The result is an excellent introduction but not a major conceptual reinterpretation of snake biology. Similarly, while the book discusses conservation effectively, it could have engaged more exten-

sively with emerging issues such as genetic diversity, rewilding, invasive snake populations, and the role of snakes in ecosystem services. These criticisms, however, relate more to expectations than shortcomings. Mattison's goal is synthesis and communication, not the production of a specialized monograph.

The Lives of Snakes is a valuable addition to the modern natural history literature. It successfully combines scientific accuracy, visual appeal, and conservation awareness to present snakes as complex and ecologically important animals. Compared with Greene's evolutionary classic, it is less philosophical and more accessible; compared with Lillywhite's physiological analysis, it is less technical but far broader in appeal; compared with encyclopedic treatments of snakes, it is more interpretive and engaging.

However, its greatest achievement is cultural as much as scientific. Mattison demonstrates that snakes deserve to be understood on their own terms — not as symbols of danger or fear, but as highly evolved organisms that represent some of the most remarkable products of natural selection. For professional herpetologists, the book provides a useful synthesis and an attractive reference. For students, educators, and general readers, it offers an authoritative introduction to snake biology. Most importantly, it contributes to the ongoing effort to transform public perceptions of snakes from fear and avoidance toward curiosity and conservation.

Literature Cited

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