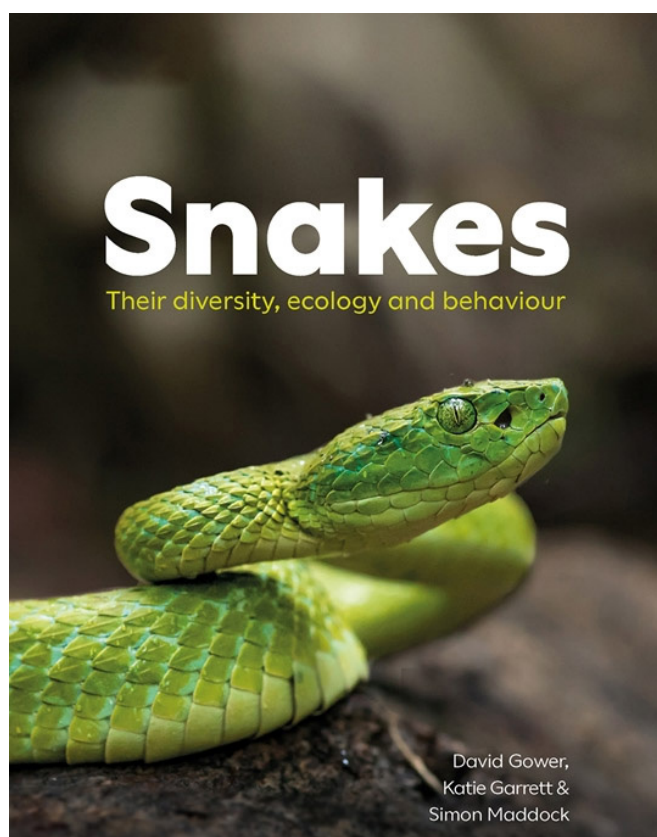


Snakes: Their diversity, ecology and behaviour

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The Natural History Museum has a rich history of publishing books on all topics of life on Earth, both past and present. Some subjects are easier to write about than others, with snakes (ophidians) presenting a challenge when it comes to writing a text for the general reader that is engaging, well informed, and matching the quality of well-established authors. The first of many such publications produced by the Natural History Museum was by Parker (1965) titled 'Natural History of Snakes', which was quite technical – perhaps a sign of the time. This was then revised in the mid-1970s to include a number of new diagrams, with changes to the text to make it less technical (Parker & Grandison, 1977). From the new millennium onwards, the Museum has published a new lineage of books focused on snakes that with each updated issue has been more accessible to the general reader (as detailed below).

The first book in this new lineage, was 'Snakes' authored by Stafford (2000), a former Editor of The Herpetological Bulletin. This book demonstrates a change of pace from its predecessors with plentiful colour photos, illustrations, information boxes, and information that is not too technical,

making it easy for the general reader to understand. Two additional resources were provided to give readers more information - a glossary of terms used throughout and a list of relevant internet websites. Following Stafford's untimely death in 2009, an updated edition of 'Snakes' was published posthumously in 2012, building on the themes that made the original so successful (Stafford et al., 2012). Fast-forward to current times, and the authors have produced a modern synthesis of our understanding of ophidians, which is also reflected in the updated title. Since Parker's original publication, we are aware of a much larger number of snake species due to advances in systematics, technological advances have revolutionised our understanding of snake ecology, and advances in analytical methodology mean that we now know much more about snake venom. This growing base of knowledge is evident by the increased page count of subsequent iterations and the content within, with the most recent being more than twice the length of the original.

Chapter 1 focuses on the structure of snakes and their lifestyle, with various sub-sections on topics ranging to their anatomy, evolution, and senses. All of these are important for helping to set the scene and build a picture of snake ecology and behaviour. This information, whilst complex at times, is laid out in an easy-to-follow manner and copiously illustrated with relevant photographs. It is very clear that each of the images used throughout the book was carefully chosen to ensure that they helped to convey the correct message, and reinforced or highlighted what is mentioned in the text.

Chapter 2 is a lot shorter than the previous one, only four pages long, but it has the complicated task of trying to provide an accessible explanation of snake classification while also providing a detailed evolutionary tree. The authors also inform the reader that the current understanding of snake evolution is likely to change as new evidence is presented. I am impressed by the way that the authors have tackled this task, and also guide the reader so that they are able to read a cladogram and understand evolutionary relationships for themselves. This is no easy feat and it will certainly be a part of the book that I refer back to in the future, as long as snake systematics does not change too drastically over the coming years.

Chapter 3 constitutes the majority of the book, with a family-by-family breakdown of snakes, following the order of the cladogram introduced in the previous chapter. This is an ingenious way of providing such information, and reinforces the facts that have already been presented. There are also additional info boxes that provide the reader with more details on the ecology and behaviour of ophidians

REFERENCES

in the relevant sections, such as egg-eating snakes and convergent evolution, with relevant information in the main text too. Depending on the family or subfamily, there are multiple examples of species within, including a number of photographs and skull diagrams. Twinned with informative text, this chapter displays the authors' knowledge and writing abilities, which leaves the reader wanting to know more about each of the snake species featured.

At the back of the book is a comprehensive glossary that makes this book more accessible to the general reader. There are also further reading recommendations covering many aspects of snake biology, some of which were not covered within. Finally, there are a handful of key internet resources for intrepid readers who may be looking for something slightly more advanced.

To my mind, there should have been a fourth chapter, dedicated to the threats and conservation of snakes globally. There are small amounts of information throughout relating to snake harvesting and emerging infectious diseases within appropriate info boxes, but there is a lack of information related to threats such as climate change or habitat loss, at the broader scale, with information only relating to specific examples such as the Round Island boa *Casarea dussumieri* and Antigua racer *Alsophis antiguae*. Given that the Natural History Museum prides itself on education, they missed a great opportunity to highlight the current conservation status of snakes globally and what is being done by various researchers and conservation organisations to prevent their extinction.

While this book may be aimed at the more general reader, there is information within that will be useful for most herpetologists. At a retail price of £14.99 for a paperback (23 x 17.3 cm in size), it is a quality publication with an affordable price.

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