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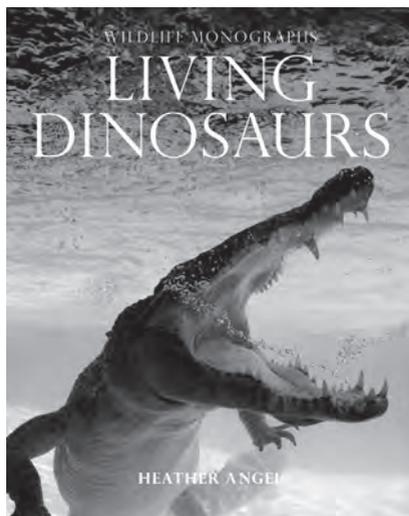
## BOOK REVIEW

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### *Wildlife Monographs: Living Dinosaurs & Other Reptiles*

Heather Angel

2009, Evans Mitchell Books,  
Hertfordshire, 95 pp.



This book is richly endowed with a collection of wonderfully shot and beautifully clear photographs. From the outset, it reads as a good educational resource, providing a broad scope of information on its subjects ranging from distribution, anatomy and behavioural adaptations, in an informal but clear manner. Throughout, the author avoids overtly technical or scientific language and sticks to more fluid terminology. This makes the book easily accessible to a wide variety of audiences. With the title conceived by a nine-year-old boy, and the chapter titles following suit, it is probably correct to assume that the author intended this to be a book that anyone can enjoy.

The introduction provides a brief evolutionary synopsis, touching on the demise of the dinosaurs and leading up to the radiation of reptiles in modern ecosystems. The book does not cover all major groups in any depth, but by the author's own admission, focuses on those species or groups of species that have particularly remarkable behavioural traits.

The first chapter, 'Aquatic Snappers', centres

on Crocodylia. It correctly defines the three major families, Crocodylidae, Alligatoridae and Gavialidae and notes the number of species contained in each. Its brief discussion on classification also highlights the False Gharial (*Tomistoma schlegelii*) and the current uncertainty as to which family it belongs.

The history of crocodylians, both anthropocentric and evolutionary is outlined. Reference is also made to the recent discovery of *Isisfordia duncani*, although it refers only to genus. Key morphological differences between Crocodylidae and Alligatoridae are noted before the chapter moves on to discuss the biology of crocodylians, referring to their digestion, both behavioural and enzymatic, thermoregulation, reproductive biology, behaviour and dietary ontogeny, using a variety of well chosen examples. The book focuses on two species, the Saltwater Crocodile (*Crocodylus porosus*) and the Gharial (*Gavialis gangeticus*), and neatly highlights their decline as a consequence of anthropogenic impact.

Chapter 2, 'An Ancient Lineage', describes the Tuatara (*Sphenodon* spp.) and begins by detailing the causes of its declines. The chapter progresses to describe the evolutionary uniqueness of these creatures, detailing the history of their lineage and the features that distinguish them from modern Squamate reptiles. Taxonomy of the extant species of Tuatara is touched on, as is the current translocation conservation programme. The author also gives a good anecdotal account of her experiences on Stephens Island, one of the few Tuatara strongholds. The habitat, diet and reproductive cycle of the Tuatara are outlined with several photographs. Their prey and natural habitat are also detailed. The reference to the Tuatara's extraordinarily fast molecular evolutionary rate, faster than any other animal studied, illustrates the author's use of recent scientific literature in research for this book.

Chapter 3, 'Mobile Homes', delves into the world of the Chelonians. As in previous chapters, their evolutionary history is skimmed over, with the mention of an appropriate prehistoric relative, *Archeleon ischyros*, which is unfortunately misspelt. Along with a brief account of their evolution,

the text also outlines theories on shell evolution, utilising appropriate anatomical terminology and discussing the extent of radiation in the shells of modern chelonians.

The theme of anatomy is continued with a discussion of head withdrawal. Chelonia are classified into two distinct groups depending on the mechanism that they utilise to withdraw their head, hidden neck and side neck (*Cryptodira* and *Pleurodira*, respectively). The anatomical variance is displayed well noting shell adaptations of Box Turtles (*Cuora*, *Terrapene* or *Pyxidea* sp.) as well cutaneous adaptations utilised by some species to attract, or conceal, themselves from prey. It moves on to discuss chelonian decline and highlights marine turtles and the giant land tortoises of island archipelagos.

Chapter 4, 'Dragons & Monitors' covers varanids, (*Varanus* spp.). The wide distribution and morphological features common amongst varanids are noted briefly in the introduction to the section. The author then, rather boldly, states that, "They are the only lizards with a long, forked tongue", possibly overlooking the two extant members of the family Helodermatidae, the Gila Monster (*Heloderma suspectum*) and the Beaded Lizard (*Heloderma horridum*) which are discussed in the subsequent chapter. Nevertheless, it proceeds to explain the use of the forked tongue and the Jacobson's organ in chemoreception. In addition to this, it also observes other behavioural traits affiliated to this group, including tripodding. As with many popular texts on varanids, much attention is paid to the large and popular Komodo Dragon (*Varanus komodoensis*). The author briefly explains the process behind parthenogenesis (the growth and development of an embryo or seed without fertilisation by a male), a recently discovered phenomenon in Komodos. Her account of the process is explained well and avoids unnecessary jargon. A great inclusion in this chapter is a small piece on the Desert Monitor (*Varanus griseus*), a species rarely covered in similar publications. Two colour plates, depicting its natural habitat and beautifully striking markings, accompany notes on its distribution and life cycle. Concurrent with the previous chapter, the final paragraph of 'Dragons & Monitors' notes the species' vulnerability to human disturbance.

The fifth chapter, 'Notable Lizards', looks at species carefully selected for their physiological and behavioural traits such as the Texan Horned Lizard (*Phrynosoma cornutum*) with its ability to squirt a high pressured stream of blood from its eyes as a predator deterrent. The chapter discusses the unique herpetofauna of the Galapagos archipelago and the various species of Iguana, both marine (*Amblyrhynchus cristatus*, which incidentally was missed in the text) and terrestrial (*Conolophus* spp.). The author demonstrates further use of recent scientific material when noting the discovery of a new species of Galapagos terrestrial iguana, the Pink Iguana or Rosada, which has since been named *Conolophus marthae* (Gentile & Snell, 2009). It has also been noted to represent the earliest divergence of land animals on the Galapagos archipelago.

Many of the major groups of lizards are noted here, including the aforementioned Iguanidae along with Teiidae, Scincidae, Gekkonidae and Chamaeleonidae. The chapter then moves on to discuss the Helodermatidae, noting its two extant species "the only venomous lizards". The author exhibited some unfamiliarity with recent work which has revealed complex venom glands possessed by Komodo Dragons (Fry et al., 2009), although this work may not have been available prior to the book achieving press. Another discrepancy is that "Geckos have no eyelids", there are however the Eublepharidae, a subfamily of Gekkonidae whose name literally means 'true eyelid'. The penultimate section is entitled "Conservation", which rather than having continuous prose, has several photographic plates with detailed captions. The captions each explain the vulnerability of the species depicted. The final section has hints and tips for photographing reptiles, with a useful focus on aquatic specimens

Whilst this book contains beautiful photographic plates and macro shots, its textual content sometimes misses finer points. Some of the sentences do not always flow as smoothly as they could, giving some paragraphs a coarser read. Another inconsistency is the inclusion of scientific names. In most instances, a species is referred to by its common name, followed by its scientific name in brackets. There are a few occasions where the scientific name is omitted. Moreover, there is

an erroneous length conversion in chapter 1, “5m (three feet)” in reference to the American Crocodile (*Crocodylus acutus*).

In summary, few academics and advanced students of herpetology would derive advanced knowledge from this text, however, the book is not solely intended for such an audience. The book would adequately provide many hobbyists and young herpetologists with an interest in the natural world with a wide variety of interesting examples of non serpentine reptiles. What is special about this book is the aesthetic, high quality of the photographic plates, a feature which pleasingly dominates this publication. Such good use of photographic compliment may alone merit the purchase of this book.

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