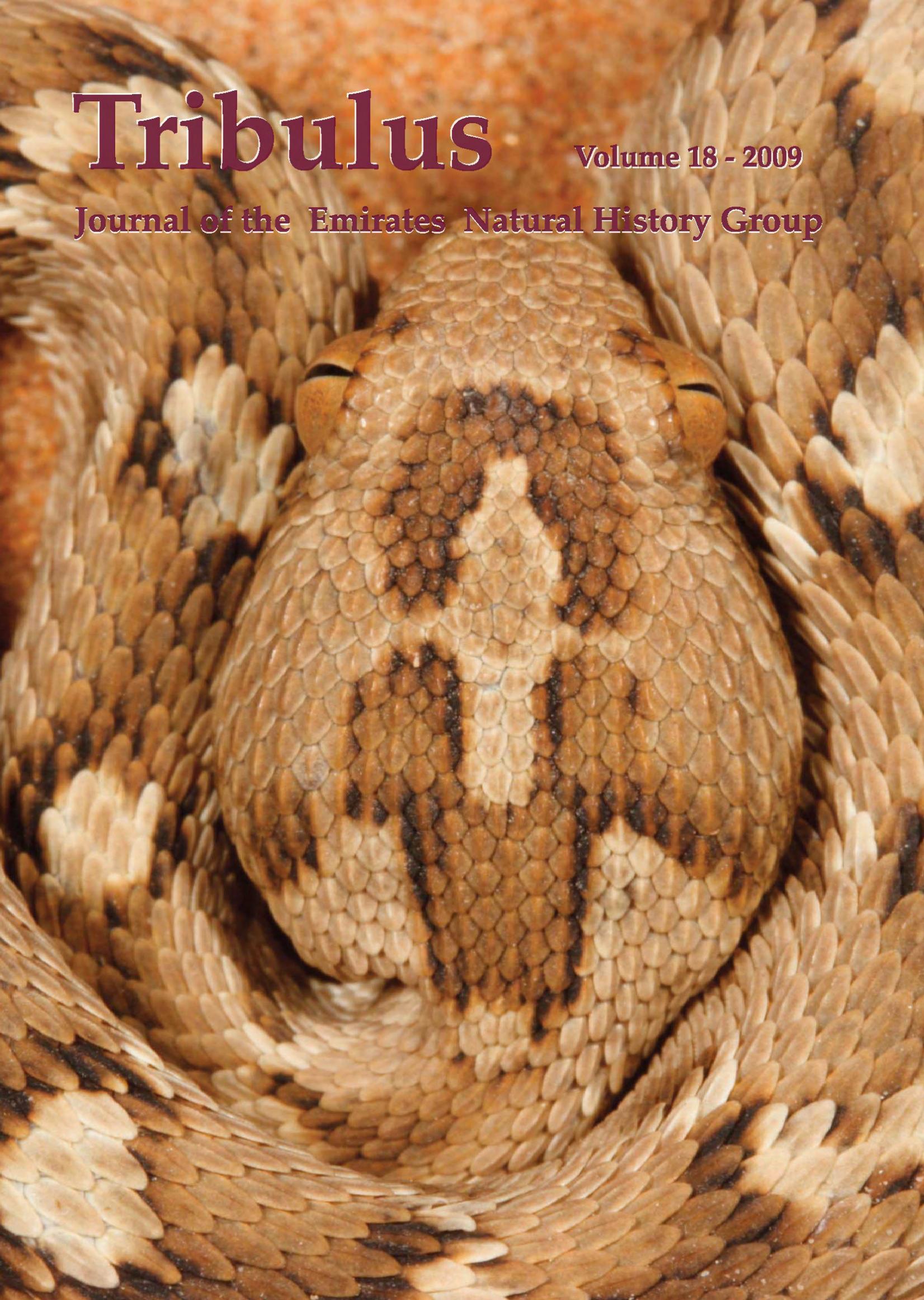


Tribulus

Volume 18 - 2009

Journal of the Emirates Natural History Group



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Cover Illustrations

Front: A juvenile Sind Saw-scaled Viper, *Echis carinatus sochureki*, photographed at Qarn Nazwa, Sharjah on 18 April 2009. Picture: Drew Gardner.

Back: A Naked-bellied Tomb Bat, *Taphozous nudiventris*, photographed at Qarn Nazwa, Sharjah on 18 April 2009. Picture: Drew Gardner.

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Editorial

One perennial feature of research into the natural history and environment of any country is that there are always new discoveries to be made – the identification of species not previously recorded in a country, or the extension of known range or even if one is especially dedicated and fortunate, the discovery of a species that is not just new for a country, but new for science. That is part of the fascination and challenge. In a country like the United Arab Emirates, where research only really got under way less than fifty years ago, this is particularly true. Several of the papers in this issue of *Tribulus* document discoveries of new species for the Emirates, including two geckoes, a snake, a damselfly, a grass and a moth – sufficient evidence, if any was needed, that there is still scope for new finds. Another paper documents a previously-unrecorded feature of animal behaviour – the attraction of caterpillars to mercury vapour lights at night, something that is of international scientific significance. It's worth pointing out, too, that while some of the discoveries were made by professional scientists, others have been made by dedicated and well-informed amateurs, even if they have been helped in the process of identification by professionals.

It is always the case, moreover, that the current state of knowledge is open to amendment, as a result of such new discoveries and that it is possible to supplement previously-published data. It is a pleasure, therefore, to be able to include an updated checklist of the country's damselflies, not merely adding a new species but also other new information.

Since it was launched in 1991, nearly twenty years ago, *Tribulus* has sought to become a place where such discoveries may be reported and it is pleasing to note the presence of so many papers of this type in the current issue.

While the papers mentioned above deal with individual species or groups of species of flora and fauna, it is also important, of course, to study the habitats in which they are found, not simply as a backdrop, but in themselves. While there is now a considerable amount of information about the UAE's habitats in general, little has been published, as far as we are aware, on specific locations. This issue attempts to make a start on that process with studies of the geology of two of our important, but privately-owned, offshore islands. Further studies will follow as well as, we hope, broader papers or groups of papers looking at particular habitats and at the flora and fauna to be found within them. There is much available only in 'grey', unpublished reports produced as a result of commissioned consultancy

surveys devoted to particular areas that is worthy of publication. As the picture of the country's natural and biological diversity as a whole becomes better known, there is, increasingly, a need for such locally-based studies to appear.

When *Tribulus* commenced publication, the UAE appeared only rarely in international scientific journals and there was little being done in terms of original research into natural history, at least, even if topics such as archaeology were being extensively examined. As is evident from the lengthy bibliography in this issue of recently-published books and papers, there is now a wide variety of research being undertaken, both by professionals and by enthusiastic and informed amateurs. As is also evident, much of this is now being undertaken by official organisations that simply did not exist a couple of decades ago.

It is disappointing that, in some cases at least – as is clear from some of the book reviews in this issue – that insufficient recognition is given to the previous and current work of those researchers outside the official or officially-sponsored bodies. Nor are publications from official bodies automatically subjected to a peer review process, as a result of which the academic quality of published material is not always as high as it might be. For these problems to be addressed effectively, there is a need for greater collaboration and exchange of information between the official bodies, other professional scientists, in the local academic community for example, as well as for short-term visitors from academic institutions overseas, and the informed and dedicated amateur researcher. We are pleased to note that this failing is now being addressed, the Memorandum of Understanding between the voluntary Emirates Bird Records Committee and the official Environment Agency – Abu Dhabi, EAD, being one particularly good example, but there is scope for much more collaboration of this kind. The creation of some kind of national scientific research council, perhaps under the sponsorship of the federal Ministry of Higher Education and Scientific Research or the Ministry of Environment and Water, with which the whole range of researchers could be involved, might be one way of proceeding at a national level.

Finally, an apology is due for the late appearance of this issue, both to our readers and to those contributors who have been waiting many months for their papers to be published. Work on the next issue is already well under way!

Peter Hellyer

Marine Environment and Resources of Abu Dhabi. Edited by Thabit Zahran Al Abdessalaam, with contributions by Thabit Zahran Al Abdessalaam, Himansu Das, Edwin Grandcourt and Anbiah Rajan. 2007. Environment Agency - Abu Dhabi. 255 pages. ISBN 978 1 86063 240 2. Price: UAE dirhams 150.

As it says on the inner front dust jacket of this publication... "*The sea has always had a special place in the lives of the people of Abu Dhabi and the United Arab Emirates, yet there have been few publications about the marine environment of the area*". This book provides a description of the marine environment of the Emirate of Abu Dhabi, bringing together the latest research findings and information about the marine resources and environment of the Emirate. Following the introduction, there is a description of the geography, geology, climate and oceanography, and phytoplankton of the Emirate's waters. The next section describes the coastal and marine habitats covering intertidal habitats, coastal wetlands and marine flora. The section on marine invertebrates covers sponges, jellyfishes and echinoderms, molluscs and corals and coral reefs, while the part on marine vertebrates describes marine reptiles and mammals (mainly dugongs) and fish and fisheries. The final part discusses the ongoing efforts for the conservation and management of the coastal and marine environment.

This publication provides one of the first comprehensive compilations of the major aspects of the marine environment of the Emirate of Abu Dhabi, and was compiled by the staff of the Marine Research Centre of the Environment Agency – Abu Dhabi, EAD. It mostly represents the product of research and studies undertaken by staff at the Agency over the course of the past seven years.

In his foreword, Sheikh Hamdan bin Zayed Al Nahyan, Chairman of EAD, stresses that the importance of the marine environment cannot and should not be underestimated. The passing of new federal laws to protect the marine environment and fisheries highlights the importance attached to this valuable natural resource.

This book makes a valuable contribution towards increasing the general public's awareness and knowledge of their local marine environment. It is only currently available directly from EAD, which is a pity. Such books need to be made more widely available throughout the UAE to inform the general public. Perhaps, also, EAD could make electronic versions of some of its publications available online.

On a more academic note, I would make the following comments.

No mention is made of the archaeological and historical evidence for the presence of *Rhizophora*-type mangroves within the Gulf. Research by a Swedish archaeobotanist, Dr Margareta Tengberg, has confirmed their presence at a number of locations throughout the Gulf. Its presence in the past may have been as a result of the fact that water temperatures and salinity levels were not so high as they are today, enabling it to survive. The sole surviving mangrove species, *Avicennia marina*, is highly tolerant to high temperatures and salinity.

Today's marine environment may therefore not have precisely the same conditions as during the past.

Chapter 7 was for me the most disappointing chapter in the book. Marine molluscs are only given a total of 8 pages, which does not allow justice to be done to this important category of marine organisms. Only a total of 14 species (7 gastropods and 7 bivalves) are discussed in the chapter, whereas earlier a total of 15 species (9 gastropods and 6 bivalves) are mentioned in Table 5.2 as being common fauna found in mangrove habitats off Abu Dhabi. The most comprehensive so far published book on marine molluscs in the region '*Seashells of Eastern Arabia*' by Donald T. Bosch, S. Peter Dance, Robert G. Moolenbeek and P. Graham Oliver (1995, Motivate Publishing: Dubai) document 1,273 species in Eastern Arabia, of which many occur within the Gulf.

The 14 types of marine mollusc which are discussed in the chapter were "... collected randomly from the shoreline off Abu Dhabi". It is a pity that no systematic survey was carried out at different sampling points throughout the Emirate. It is just not true to say that published information on the topic is non-existent. I know of at least five publications on Gulf molluscs, published between 1973 and 1989, besides the large Bosch *et al.* 1995 volume already mentioned, along with the results of the intertidal survey done by ENHG member Richard Hornby (**Tribulus 7:2**, 1997; pp. 12-17).

There is no mention in the section on 'Man and Molluscs' of the fact that marine molluscs have provided an invaluable food source for Man since earliest prehistoric times, as shown by the shell middens, waste piles of shells, found along the coastline of Abu Dhabi.

On the island of Abu al-Abyadh, for example, a shell midden almost 4km in length was discovered. Pearl oysters provided food as well as the valuable pearls within them.

Although the shell chapter mentions that many people "... derive great enjoyment from shell collecting" and that "...in some instances, the aesthetic and recreational values of marine molluscs also translates into huge economic value" no warning is given of the dire consequences of the shell collecting market. From the marine conservation point of view all efforts should be made to discourage the sale of such material which is leading directly to the destruction of coral reefs and other habitats. People should only collect dead and not living shells, otherwise they may seriously harm the survival and habitat of some species.

The chapter on corals and coral reefs provides an excellent summary of our current state of knowledge, although it is a pity that no more detailed mapping of the distribution of coral types specifically for Abu Dhabi was included from the recent coral reef mapping project undertaken by EAD, with support from Dolphin Energy, which has been separately published. There is also no mention of artificial reefs and their benefits and/or disadvantages.

The chapters on sea turtles and dugong provide valuable new data on their distribution and biology within Abu Dhabi Emirate and points out the dangers from future coastal development and its likely impact on these species. These animals were both exploited by the early prehistoric populations inhabiting the coast and islands

of Abu Dhabi as long ago as 7,500 years ago, as shown by the presence of their bones within the excavations carried out by the author at Site MR11 on Marawah Island.

The excellent fish and fisheries chapter provides really for the first time a detailed overview of the status of the Abu Dhabi fisheries. It makes depressing reading to hear that the Arabian Gulf waters of the UAE have shown major declines in fish abundance with current biomass estimates at around 19% of the 1978 levels. The research presented also demonstrates how many of the common fish species are being heavily over-exploited, fish being caught which are small and haven't yet reached sexual maturity. In the case of the orange-spotted grouper (*Epinephelus coioides*), known locally as 'hamoor', this is being fished at six times the sustainable level!

The book concludes with a chapter by the main editor concerning coastal and marine conservation. This summarises the main threats to the coastal region which include tourism and industrial development. It is suggested that the way forward is Integrated Coastal Zone Management (ICZM). This is a multi-disciplinary process that combines levels of government, science and management and sectoral and public interests in preparing and implementing programmes for the conservation and sustainable development of coastal and marine resources and habitats.

Minor gripes are as follows: Tables with species names should generally be arranged in taxonomic and not alphabetical order (see e.g. Table 4.1). Some of the photographs have incorrect captions, e.g. Figure 2.5... "An example of a volcanic salt dome island off Abu Dhabi." It is not strictly speaking correct to call this a volcanic island. Salt domes simply push up to the surface material originating from deep under the earth.

Although the book has an extensive bibliography it is littered with errors such as incomplete and missing references. Thus Bramwell 1987 and Satyamurty 1956 are quoted in the text but do not appear in the bibliography. No page numbers are given in some of the references, e.g. Shepherd-Popescu 2003. There are also a number of irritating typographical errors. Overall the book is an excellent contribution and will provide many readers with an excellent introduction to marine issues in Abu Dhabi emirate.

Mark Beech

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Terrestrial Environment of Abu Dhabi Emirate. Edited by Richard Perry. 2007. ISBN 978-9948-408-33-8. 464 pp. Published by Environment Agency – Abu Dhabi. Price: UAE dirhams 250.

Any work which covers the terrestrial environment of Abu Dhabi must be compared to what has gone before. In particular, *The Emirates - A Natural History* (Hellyer & Aspinall [eds.] 2005), which although wider in scope (covering both the marine and terrestrial environments) and also wider in geographical area (covering the entire UAE, not just Abu Dhabi Emirate) is a serious body of work and any subsequent publications must add to our

knowledge of the natural environment and be compared to this scholarly body of work.

So, how does this present work match up? First impressions are very good. This is a large coffee-table type publication, with a stunning cover design, depicting both habitats and examples of the fauna and flora found in them. The back cover contains a brief summary of each of the book's chapters. These range from an introductory chapter, which sets the terrestrial scene, to specialised chapters on geology; soils; climate; water; flora; birds; reptiles; mammals and arthropods to be found in the terrestrial environment of Abu Dhabi Emirate. Each chapter is authored by a subject specialist and the overall publication is edited by Dr. Richard J. Perry. However, each of these very short summaries are written in a far from objective manner! Any informed reader, (rather than a casual one), will find this as irritating as I did.

The layout is large format. On a superficial level, this at first is quite attractive, but as the reader progresses from page to page and chapter by chapter, one realises that the book design is not as good as it should be. I found the text to be slightly too large and the choice of font does not compare well with previous publications. There are also large areas of white space present on each page, around the edges, as well as the top and bottom of many pages. The photographs used in this volume are on the whole very good: indeed, some are stunning. I particularly enjoyed photographs depicting certain types of typical behaviour and animals in their natural habitats. The quality of photographs in the bird and reptile chapters was especially high.

Each chapter opens with a virtual double page spread photograph of the subject being discussed. Most are very pleasing indeed, but a few reveal the imperfections of the photograph, when enlarged to such a scale. Some lack captions, leaving the reader to wonder which species is shown.

Modern publishing technology has been used in this work, but not always to the best effect. I found some of the montages to be clumsy. For example, the full page picture found on page 231 (full page photographs do not have page numbers on them) depicts two bird species found in mountain habitats. Both pictures are quite good, but have been greatly over-enlarged and the scale of the two species, as depicted here, is very misleading. The layout of this and other pictures could also have been improved.

Not all the chapters conform to a set standard. I refer in particular to the chapter on mammals, which for the most part, is set out in a Field Guide-like manner. Although informative, it seems out of place in a work of this sort. Photographers are briefly acknowledged at the beginning, but there is no acknowledgement for individual photographs found in the book. Some of the photographs are also taken of animals in captivity, or in a nearly captive state. Most publications clearly state when a photograph is of a captive animal.

The Environmental Agency - Abu Dhabi, EAD, the publisher, which also commissioned the work, looms large, and, although not explicitly stated, there is a strong implication that the book is the entire work of the Agency's staff. This is far from the case. The editor