

Science Under Siege: zoology under threat

Banks, P., Lunney, D. and Dickman, C., (Eds). 2012.
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THE authors and editors of this book are scientists — disgruntled ones. They are dismayed at attacks on their science and science in general; attacks that come from outside scientific circles and from outside evidence and reason. The critics are widespread and include: those attending rallies where books are burnt, shock jocks who vilify the science of climate change, politicians who ignore the conclusions and recommendations of good science to see their name against another headline, and anonymous others who make death threats against climate researchers. The scientists involved in the production of this book are drawn predominately from zoological backgrounds — writing and communicating are not skills new to them.

The book presents the ideas expressed in talks and posters put forward at a forum in 2008. These talks were subsequently written up, polished and peer-reviewed before being published in November 2012. The book offers the thoughts and experiences of the authors relating to the book's title *Science under siege: zoology under threat*. The forward tells us that the title was coined by Dr Paul Willis, Director of the Royal Institution of Australia (RiAus), yet he maintains he merely gave a name to a thought that evolved through the ruminations of others preparing the forum. The aim of the book is to mount a defence against the attackers, to communicate the real science and expose the shallowness of the attackers' reasoning.

The book appears as a book-of-abstracts might, but with full papers, which have their own abstract and references — and the occasional picture. The contributions are written by those who presumably presented the talks at the forum, but now with presumably written input from their co-authoring colleagues. Some papers were based on posters presented at the forum, but they are not obvious to pick out. One paper has been added to the mix, which critiques misrepresentations on kangaroo harvesting. The papers cover many themes cogent to the subject of *zoology under threat* by many significant zoologists. The papers are heralded by a Forward from Paul Willis and a Preface by the editors Peter Banks, Dan Lunney and Chris Dickman. The editors lastly provide a well thought out essay to conclude the book. Papers are generally 3–10 pages in length with mean of ~6 pages, plus a notable exception by Daniel Lunney on *Climate Science and Climate*

Journalism at 22 pages. The Plenaries were spread across the day at meal breaks and they are now presented that way in the book, breaking it into four parts. The plenaries were recorded and are now set out in print. Speakers give their name and affiliation before proposing a thought or a question.

Science under siege was the original theme for the 2008 annual forum of the Royal Zoological Society of New South Wales (RZSNSW). The audience then were zoologists and they remain the primary reading audience of this book now, although the same concepts apply to all biological and conservation disciplines. Any critique, including mine, must then be approached from this viewpoint.

The strength of this volume lies within the depth of professionals drawn on to write it and the breadth of the points discussed. At this juncture in a book review I would normally outline any weaknesses in the book, for example a lack of references or essays that had been put together under haste, but these appear not to apply in this case. Any weakness must be a pedantic one that I have overlooked.

No doubt this book will be an important aid to zoologists and conservation professionals in understanding the attacks on science and reason. I have already recommended that one editor (of another journal) read-up on the article by Crowther *et al.*, "Are Journal Impact Factors another key threatening process for Australian fauna?" The book also provides enough information for the readers to get a grasp on why the attacks on science eventuate. Most importantly, readers will become armed with enough information to fight back against these attacks. According to a quote in the book, Barry Jones, a former Science Minister, said, scientists are the wimpiest bunch of lobbyists he has ever seen. This book will go part of the way to correct this flaw in our characters. We will argue as informed lobbyists, better understanding the enemy.

One of the most important uses that I can see this volume fulfilling is to educate researchers and students so that they are better equipped to educate others. Since the chapters of this volume are freely available electronically it can be easily accessed when specific background is required before a meeting or to research a point. It will give important background for students as they too must understand what they will be up against when they do battle with irrationality. Because the text is broad the audience that will gain the most will be a broad one of researchers, administrators and managers and their students. It will arm the scientist with the base knowledge to better inform decision makers.

The organization of the book into self-contained papers allows readers to select the topic most current and relevant to their existing needs. This utility is further enhanced by the papers/chapters being freely downloadable from the RZSNSW website. The

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abstracts allow a quick understanding of the papers. The papers are available as .pdfs, which can be searched quickly using your own keywords.

The level of research varies by article. The number of references generally correlates to length with most articles. Some articles are based on talks that were not the authors' primary area of investigation and as such they may lack references not related to their primary research. Nevertheless, authors write about areas of concern that overlap with their work. A few authors, for example Mike Calver and Kate Bryant, are writing on their own research, which they have published elsewhere. One article by Menna Jones *et al.* used a case study on Tasmanian Devils *Sarcophilus harrisii* with facial tumour disease in which their research was halted by misdirected emotion in an ethics committee. Their references focused predominately on literature of the marsupial and the disease, but lacked references on publications that similarly questioned ethics applied to field research and conservation (e.g., Fulton and Ford 2001). In general, the level of research supports what the authors are saying and the references will provide good starters to get deeper research underway if desired.

Supplementary material is scant. The plenary sessions generated a variety of opinions and thoughts, they provide some easy reading, some of it useful and some otherwise. There are a handful of colour pictures from a smaller handful of authors

that are descriptive and useful. Scattered graphs and tables are presented albeit uncommonly. A contents page, a preface and a forward are given.

I would recommend this book and its chapters/papers to all conservation professionals (researchers, managers and administrators) as important reading to keep your minds abreast of the extent of the attacks on science. Yet even so it is limited. It provides the starters to bring you up to speed on: the siege on science and reason, the abuse of evidence, the tricks of spin used to make religion and economics seem scientific and more. I would also recommend this book to politicians so that they might begin to understand science and reason. I recommend reading another book to complement this one, *The Geek Manifesto: Why Science Matters* by Mark Henderson (Henderson 2012), which I have reviewed for *Pacific Conservation Biology* (Fulton In Press).

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