

Book review

RECOVERING AUSTRALIAN THREATENED SPECIES: A BOOK OF HOPE

By Stephen Garnett, Peter Latch, David Lindenmayer and John Woinarski (Eds)

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As we approach the end of the second decade of the 21st Century, it is becoming more and more apparent that our planet is bearing witness to an unprecedented loss of biodiversity, exceeding by many times the background rate of extinction (Barnosky *et al.* 2011). Nowhere else is this trend more apparent than in Australia (ACF 2018).

The statistics are sobering. As of October 2017, 1717 native species of plant and animal were listed as being threatened with extinction with nearly 100 more already lost for eternity, a loss that bestows Australia with the unenviable title of the planet's worst rate of plant and mammal extinctions in historical times.

For those that value and take an interest in the fortunes of our most imperilled fauna and flora, it can often be hard to maintain an optimistic outlook. Whether it is the continued destruction wrought by invasive species (Bellard *et al.* 2016; Doherty *et al.* 2016), the political hot potatoes of habitat clearing (Wintle and Bekessy 2017) and anthropogenic climate change (Mackey *et al.* 2008) or indeed the unintended failures of recovery actions, it appears at times that biodiversity loss in Australia is an inexorable tide that may not be stemmed. Worse still, as the editors of 'A Book of Hope' point out, this discouragement is often reflected in the view of those that can help make a difference (policy makers and the voting public whom they serve); that saving threatened species from extinction is a lost cause. Should conservation managers and scientists continue to seek to turn back this tide, or rather should we embrace the ensuing 'Anthropocene' and accept that it is merely the cost of 'progress'?

This is where the importance of 'A Book of Hope' is most apparent, because it provides a resounding rebuttal to this delusion. This book is not meant to be an exhaustive volume, detailing every success story Australia's conservation movement has enjoyed. Rather, it demonstrates a diverse cross-section; a reminder to the reader that, among all the doom and gloom, there is a small but burgeoning group of passionate and dedicated practitioners, researchers and community members that are making a difference for our continent's embattled flora and fauna. Outwardly, as well, this book holds promise with striking images of just a few of the protagonists on the cover and contains pages filled with more images, maps and tables to break up the otherwise lengthy prose in each chapter. However, the formidable editorial team of Stephen Garnett (Charles Darwin University), Peter Latch (Department of Environment and Energy), David Lindenmayer (Australian National University) and John Woinarski (Charles Darwin University) tells us more about what to expect within the pages of this book than any glossy cover.

In the opening chapter, the editors provide a précis of how the conservation movement has progressed over time and the cross-roads at which we now find ourselves. This in itself is important, as, although the present situation may appear dire, we are better equipped to execute recoveries for threatened species now than at any time in the past. They also define seven broad questions that the following case studies have been assembled to seek answers to.

These case studies take up the bulk of the book and it is in the abundant diversity of these stories that most readers will derive their interest, curiosity and, ultimately, hope. While the editors acknowledge there was no real rhyme or reason to the selection of these examples, they provide a broad but coherent collection of success stories that will inspire academics and ardent activists alike.

The first three case studies focus on three stories that owe their success largely to the implementation of legislative policies or, in the case of the recovery of Macquarie Island, the awesome task of eradicating pests from an island for a broader biodiversity-focused outcome (Chapter 3). However, the astonishing statistics of the recovery of humpback whales (*Megaptera novaeangliae*) in Australian waters (~3.5–5% of pre-whaling numbers in the 1960s to 90% now) (Chapter 2) and the reprieve that our seabirds received after mitigation strategies for long-line fisheries drastically reduced the level of by-catch (Chapter 4), are no less impressive.

The next 22 examples mostly focus on single or small groups of species and some will be familiar to many, with the recoveries of the noisy scrub-bird (*Atrichornis clamosus*) (Chapter 11), mountain pygmy-possum (*Burramys parvus*) (Chapter 16) and Lord Howe phasmid (*Dryococelus australis*) (Chapter 20) etched into Australian conservation folklore. However, even these chapters do not fail to leave the reader spellbound at the extraordinarily serendipitous nature of their salvation.

Other case studies will be less well known, particularly to those from outside their home state, but there is joy to found in discovering the innovative methods to monitor and assist the colonisation of pygmy bluetongues (*Tiliqua adelaidensis*) in South Australia (Chapter 7), inspiration in the way that the power of community has been harnessed for red-tailed black-cockatoos (*Calyptorhynchus banksii graptogyne*) in Victoria (Chapter 10) and captivation by Tasmania's tiny forty-spotted pardalote (*Pardalotus quadragintus*), a bird that has defied the odds in spite of an apparent army of foes (Chapter 14). Animals predictably dominate the proceedings but the stories of successful recoveries of threatened flora (Chapters 6, 17, 18 and 19) are no less fascinating or stirring.

Many readers of this book will be familiar with the meteoric success of the Arid Recovery project at Roxby Downs (Chapter 27) and the Australian Wildlife Conservancy's network of sanctuaries (Chapter 28), largely due to how well publicised these have been. Nevertheless, these chapters provide an insight into the visions that these projects have pursued over more than two decades and what aspects have been critical to their success. What is particularly refreshing is the way Moseby *et al.* acknowledge and discuss what *hasn't* worked at Arid Recovery and how they have learned and adapted accordingly.

This is a book about conservation wins and many authors are naturally reticent to discuss the failures along the way, but in reality the road to success will always have bumps and potholes to negotiate.

Chapter 29 provides a brief history of the important role that zoos have had in species recovery and again there is acknowledgement that success here is hard-won, with some programs such as the release of captive-bred orange-bellied parrots (*Neophema chrysogaster*) and helmeted honeyeaters (*Lichenostomus melanops cassidix*) failing to succeed after 10 and 12 years respectively. However, the value of zoos goes beyond breeding programs, and it is fair to say that the rate of species extinctions in Australia would be even worse without the insurance of captive colonies. Additionally, the list of species that have had captive programs is lengthy and impressive and puts the reader in no doubt that zoos play a crucial role in 'stemming the tide'.

Chapter 30 sits somewhat awkwardly between these case studies and the two final chapters that have more of a national policy context. This chapter briefly presents three more case studies of ostensibly successful programs that demonstrate the ways in which different resources can be mobilised for threatened species conservation. However, this chapter is possibly one of the most important in the book. Almost every case study in this book cites a lack of reliable funding as the greatest threat to maintaining and consolidating the achievements so far. In a climate of increasing numbers of threatened species programs, vying for ever decreasing pots of funding, this chapter demonstrates how other resources can be obtained and effectively allocated for the best possible outcome.

In Chapter 31, Peter Latch uses his experience within the federal Department of Environment and Energy to lay out the importance of effective reporting frameworks to capture the success of threatened species programs. Latch discusses an asset that many case studies have not acknowledged, that of the power of policy and legislation and, in particular, emphasising the value of the new approaches to measuring and reporting success under the Threatened Species Strategy.

In the final chapter, in a wide-ranging summary, the editors (plus the University of Western Australia's David Pannell) revisit the questions they mooted in Chapter 1. For those that endeavour to read this book cover-to-cover, this will provide a useful review of the myriad ways in which success has been achieved in the diverse array of case studies presented here. For others that prefer to dip in and out, ironically this final synopsis is a good place to start, as the authors draw out key points from the case studies, without giving away any of the inspiration and optimism that these stories emanate. In essence, there are apparently infinite ways to 'skin a cat' but there are some common themes. Effective recovery teams, with a history of stability and a motivated and expert membership, are virtually ubiquitous. Concurrently, a comprehensive recovery plan is another important ingredient. Money is a universal requirement and while there is never enough to go around, some programs

have shown that harnessing the power of local communities can be a vital offset and has been pivotal in their success. Scientific research, either through collaborations with other institutions or 'in-house' has been key in the adaptive management of these programs. Strong governance, policy and legislation have been powerful but silent allies in many recovery efforts but are not generally acknowledged by many authors in this book, something that Garnett *et al.* are keen to point out.

As the editors note in the title of the final chapter, the success of threatened species programs in Australia has not relied on hope alone. And the hope that may be derived from this book is not simply that some threatened species recovery actions may have successful outcomes; there is hope to be taken from the fact that these case studies were not simply the lucky ones, but that there are identifiable features of these projects that can be recognised and emulated. In many ways, this book represents a conservation practitioner's toolbox, a roadmap if you will, that points to those factors that most influence the probability of a positive outcome. The answers to how we can halt the ongoing loss of our biological heritage aren't all necessarily contained within its pages, but it at least provides proof that we are capable of drawing a line in the sand and saying 'enough!'. This, and the many other messages that this book conveys, are ones that conservationists, politicians and the general public alike would do well to heed.

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