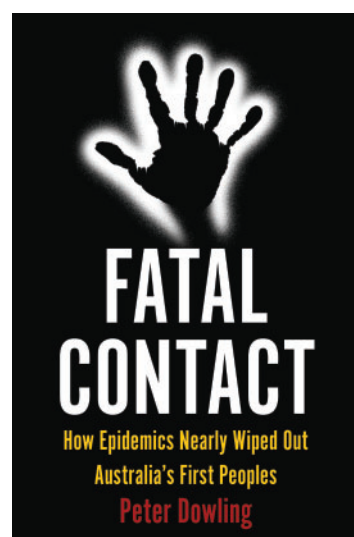


Reviews

Compiled by Martin Bush

School of Historical and Philosophical Studies, University of Melbourne, Vic. 3010, Australia.

Email: martin.bush@unimelb.edu.au



Peter Dowling:

Fatal Contact:

How Epidemics Nearly Wiped Out Australia's First Peoples. Monash University Publishing: Clayton, 2021.

306 + xxx pp.,

ISBN: 9781922464460

(PB), \$34.95.

In 1789, David Collins, Lieutenant-Governor of the new colony of New South Wales, observed an outbreak of venereal disease among local Indigenous Australian people and commented 'I fear our people have to answer for that'. He was perhaps the first to acknowledge the importation of infectious diseases as a deadly corollary to Australian colonisation.

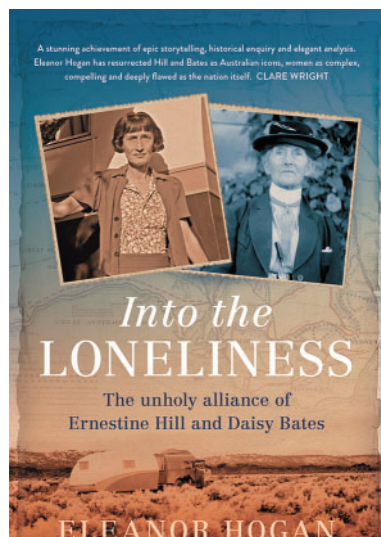
Over the ensuing decades, the records of European doctors, missionaries and explorers, as well as Indigenous witnesses, continued to chronicle the devastation wrought by these pathogenic invaders. While major studies on frontier violence have proliferated, those on disease, its more insidious companion, remained in the margins of modern scholarship until Peter Dowling took up the task in his doctoral thesis and this book upon which it is based.

The first chapter, entitled 'Concepts and consequences of disease', introduces readers to historical understandings of illness through both Western and Indigenous perspectives. Those already versed in this topic might find aspects of this chapter a little basic, but, thereafter, the new research and analysis is presented with incisive discussion. Dowling continues to lay down the fundamentals as he begins each chapter, which is excellent as this vital subject deserves both a general and more scientifically literate readership. Chapters two to seven separately investigate epidemics of the following diseases through Indigenous communities over Australia's post-contact history: smallpox; measles; syphilis and other sexually transmitted diseases; tuberculosis and influenza. Apart from a section on the 1918–19 influenza pandemic, the timeframe does not stretch beyond the late nineteenth century. Chapters eight

and nine focus on case studies, the former on Aboriginal settlements in south-east Australia and the latter on the figure of Tasmanian Indigenous woman, Truganini. These two chapters benefit from rich source information, permitting a deeper understanding of the social context in which illness was acquired, its effects and how it was dealt with. Truganini's affliction with influenza is positioned, not as a discrete ailment, but as part of an overall trauma bequeathed from colonisation, along with physical assault, tobacco and alcohol. And, yet, as the author noted, she survived for longer than might be expected. We are asked to consider her life story as representative of the many undocumented Indigenous lives. The final chapter moves forward to the twenty-first century to explore responses by some Indigenous communities to the COVID-19 pandemic. Here Dowling discusses the legacy of the colonial past for the status of Indigenous health.

Dowling, a biological anthropologist, has not been deterred by the incompleteness or unreliability of sources hampering this field of research. He has found many dependable accounts of disease outbreaks by medically qualified witnesses and statistical records from Aboriginal missions and settlements. Where possible, less reliable historical diagnoses have been confirmed or refuted by applying current knowledge of pathology and epidemiology together with logical deduction. Imported diseases struck rapidly and voraciously; some raced ahead of colonial frontiers, infecting Indigenous communities, before first-contact Europeans came across their marked bodies and sparse numbers. Like the First Nations' peoples of the Americas, lack of previous exposure and acquired immunity to these diseases, together with sedentary or semi-sedentary living, made Indigenous Australians highly susceptible. Dowling's study leaves us in no doubt that imported diseases afflicted large numbers of people, resulting in their deaths, debility and sterility, ultimately leading to population depletion. He goes further to state that such a decrease, as occurred with the 1789 smallpox epidemic of Sydney Cove, facilitated European settlement, even if unintended (a point upon which he will not be drawn, given insufficient evidence). This long-awaited book makes an extremely important contribution to the field of history, either of medicine, race relations or both. It is also highly recommended to social scientists and others interested in explanations for present-day disparities in the health and welfare status between Indigenous and non-Indigenous people in Australia.

Charmaine Robson
University of NSW



Eleanor Hogan:
Into the Loneliness: the Unholy Alliance of Ernestine Hill and Daisy Bates.

NewSouth Books:
 Sydney, 2021.
 426 + xviii pp, illus.,
 ISBN: 9781742236599
 (PB), 9781742245058
 (EBK), and
 9781742249575 (ePDF),
 AUD \$34.99.

Eleanor Hogan introduces her exploration of the friendship between peripatetic journalist, Ernestine Hill (1899–1972), and self-taught

ethnologist, Daisy Bates (1859–1951) with a vividly realised vignette. Clad androgynously for camouflage and comfort, Hill travels by train from Perth in 1932 to Ooldea siding on the Nullarbor's western edge. There she first sights Bates who 'shimmered into view ... in the midday heat haze, an apparition from another era'. Inside Bates' rough shelter, Hill gathers material for two newspaper articles, one of which would popularise Bates' unfounded allegations of cannibalism among Aboriginal people. Thus began the 'unholy alliance'.

Into the Loneliness contains intersecting biographies of two adventurous women: Bates, resolutely Victorian, and Hill, a twentieth-century 'new woman'. Both embraced life outside the urbanised coastal fringe and both chose lifestyles and occupations that challenged contemporary gender stereotypes. Each created their own back story, Bates' invention being more audacious because she had so much more to hide.

Threaded through this dual biography is Hogan's account of her own solo travels in the wake of Bates and Hill, through isolated country north of the Great Australian Bight. Ultimately, Hogan succeeds in visiting Ooldea, accompanied by its Anangu custodians, and hears their stories about Bates. Weaving three narratives complicates the book's structure but its discussion is enhanced by Hogan's experience in Indigenous policy research and her perspective as a traveller and resident in the country's 'vast open spaces'. Hogan frames her endeavour as a quest to discover how Hill and Bates 'sustained themselves' in their respective lifestyles. But a central concern of the book is the influence these women and their friendship had on public perceptions of Aboriginal people.

Both Hill and Bates published work that was very widely read. Along with her feature articles, Hill's oeuvre included, *The Great Australian Loneliness* (1937), *The Territory* (1951), and her popular novel on the life of Matthew Flinders, *My Love Must Wait* (1941). She also contributed substantially to Bates' popular *Adelaide*

Advertiser series, 'My Natives and I', and thus to Bates' international best-seller, based largely on those articles, *The Passing of the Aborigines* (1938). Although Bates denied Hill due credit for her work, Hill maintained their connection, visiting Bates again in the late 1940s and agreeing to work on another Bates' manuscript. Later, an apparently demented Bates accused her of stealing this, but Hill remained loyal, memorialising her old friend in a posthumously published memoir, *Kabbarli* (1973).

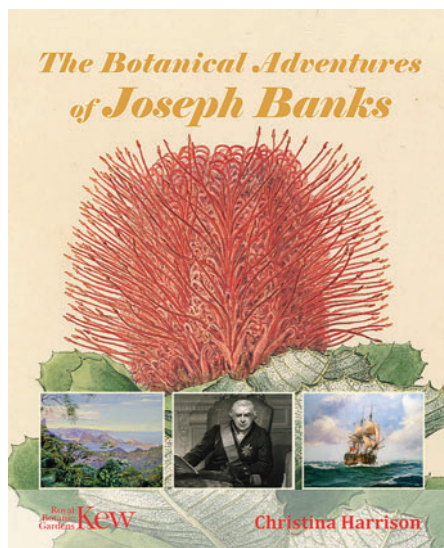
Bates' ethnographic work was underpinned by the erroneous contemporary assumption that Aboriginal people were destined to disappear, necessitating their control and protection, and the urgent recording of their culture. Through her publications about Aboriginal people Bates sought recognition for undertaking these tasks, portraying herself as the benefactor of a people whose culture was too 'brutal and primitive' to survive. In doing so, says Hogan, Bates gave the public and policymakers what they wanted to hear—justification for Indigenous dispossession.

As Hogan shows, Hill's portrayal of Aboriginal people was somewhat more nuanced, but similarly influential. *The Great Australian Loneliness*, for example, which devoted a whole chapter to Indigenous Australians, belonged to a popular 1930s genre of travel writing about remote Australia that helped shape discussion of national identity and race. Whereas Bates disparaged individuals of mixed descent, Hill's north Queensland childhood had instilled an appreciation of ethnic diversity. She also highlighted the invaluable assistance Aboriginal women had provided the colonisers of remote Australia. Yet Hill also fostered negative Indigenous stereotypes by belittling these Indigenous women as essentially child-like and amoral. Moreover, as Hogan argues persuasively, by promoting Bates and assisting her to publish, Hill also shared the blame for Bates' detrimental influence on public perceptions of Aboriginal people.

But Hogan concludes on a positive note by acknowledging the present-day value of Bates' linguistic and cultural records. From Hill's portrayal of Indigenous agency in cross-cultural relations, and the mutuality revealed by Anangu accounts of Bates' ethnographic work, Hogan also perceives a way forward for cross-cultural relations—'friendship and interdependence'.

Thoroughly researched, *Into the Loneliness* draws on the personal archives of Bates and Hill, commentary by their contemporaries, oral history, and numerous published and unpublished secondary sources. Seventeen well-chosen photographs and a welcome map enhance the text. This new study of Ernestine Hill's life and work, with its comprehensive bibliography, will be welcomed by literary scholars, while Hogan's insightful analysis of Bates' relationship with Hill, adds an intriguing dimension to existing scholarship on this controversial ethnologist. The life stories of two such unusual women should interest general readers, as will Hogan's discussion of historical attitudes and policies towards Aboriginal people, the consequences of which reverberate in Australia today.

Anne Coote
 University of New England



Christina Harrison:

The Botanical Adventures of Joseph Banks.
Kew Publishing:
Kew, 2020.
128 pp., illus.,
ISBN:
9781842467152
(HB), \$35.00.

Christina Harrison is a former editor of *Kew Magazine*, having trained as an ecologist and botanical horticulturalist, has an MA in garden

history for which she specialised in the trees at the Royal Botanic Gardens, Kew. Her significant publications include *Kew's Big Trees* (Harrison, 2020), *Remarkable Trees* (Harrison & Kirkham, 2019) and *Treasured Trees* (Masumi, Harrison & Rix, 2015). Her deep interest in the history of Kew and especially its trees is exemplary, and her experience in distilling that history is presented in this book.

This small book is a succinct history of the work of Joseph Banks in respect to the development of botany, horticulture and agriculture within a global context during the late eighteenth and early nineteenth centuries. It is firmly framed in the establishment and progress of the Royal Botanic Gardens, Kew, and the influences of Banks and Kew within the British Empire.

Although Banks was not the first European to make botanical collections in Australia (an honour that goes to William Dampier), his systematic and focussed collections made during *Endeavour's* voyage of 1770 established him as the founder of botanical research in Australia. *Endeavour's* voyage, though a significant event in Australian history, was one of a series of equally important episodes in a life that was creative, influential and productive.

The book is divided into ten diverse chapters, most of which have one to six subchapters that focus on a single theme under the main heading of the chapter. For example, the fourth chapter, 'Plant hunting for Kew', has a number of subchapters that can be best described as instantly digestible snippets of one or two pages of text. In this chapter, the subtitles include 'Francis Masson heads south', 'Menziess and the monkey puzzle', 'Allan Cunningham in Australia', 'His Majesty's botanical painter' and 'Bligh and the

breadfruit'. All chapters are generously accompanied by well-chosen figures that relate directly to the text, and indeed the text can be seen as an extended caption to many of the associated images. Most of the images are from Kew's own collections, whilst others are from relevant journals and periodicals of the time, such as *Curtis's Botanical Magazine* and *Edwards's Botanical Register* among others. There are nine works by Marianne North, whose gallery at Kew holds about 800 of her works on permanent display. One noticeable absence is any illustrations by Sydney Parkinson, illustrator on *Endeavour's* voyage. Parkinson was personally employed by Banks for the voyage.

From a purely botanical perspective, the most interesting chapter is 'Banks's plants'. In this, Harrison presents brief sketches of ten species or genera for which there is a direct connection with botanical collections made personally by Banks (mainly on *Endeavour's* voyage) or that he was instrumental in introducing to horticulture either by himself or through Kew's network of collectors. Most have a living specimen at Kew and the locations within the gardens are noted at the end of each species.

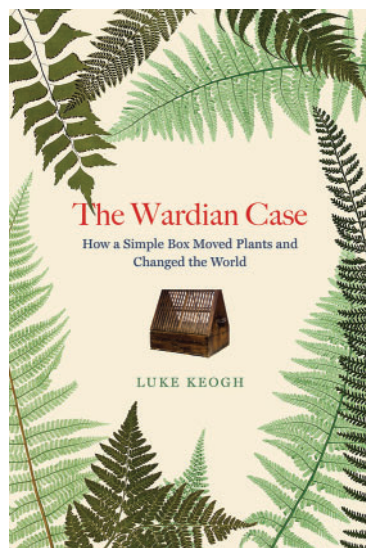
The writing is no-nonsense reportage of facts and events, almost devoid of references or sources (although a list of 'Sources and further reading' includes nineteen items). Indeed, each chapter, because of the brevity of words, can be interpreted as an introduction to a much larger work, but does contain enough detail and information to explain at least the skeleton of Banks's achievements and projects.

Although the work is focussed on Banks and British colonial influence and power, it fails to mention the contributions of the French and Germans and other Europeans that were also active in colonial development of botany and horticulture. To this end, the work is Kew-centric, and one would not be forgiven for thinking that the British were the only ones active in such endeavours.

I was not able to find any significant errors, although Harrison gives the distribution of *Melaleuca viminalis* as 'temperate Australia', whereas this species is most common in tropical and subtropical Australia but with very few records for temperate Australia.

The audience for this book is a little uncertain. Some complex issues are very broadly examined but otherwise fall short of academic or critical analysis. The simplicity and brevity of the chapters make it suitable for a general audience and, because of the small size and inexpensive price, it would make an interesting souvenir of one's visit to the Royal Botanic Gardens, Kew, able to be read on the train trip back to London. I would recommend this book for those who want a brief introduction to the many aspects of Banks' life and his contribution to botany and horticulture or those who have an interest in botanical art.

John Leslie Dowe
James Cook University

**Luke Keogh:**

The Wardian Case: How a Simple Box Changed the World. The University of Chicago Press, Kew Publishing: Kew, 2020. 288 pp., 19 colour plates, 40 half-tones, ISBN: 9780226713618 (cloth) US\$35.00. ISBN: 9780226713755 (e-book) US\$34.99. <https://doi.org/10.7208/chicago/9780226713755.001.0001>

The Wardian case is a reasonably well-known object in the history of colonial-era plant-

exchanges. Named after one of its main promulgators, the Englishman Nathaniel Ward, the case was a partially enclosed and glazed wooden box that could be filled with seedlings planted in moist soil. When placed on a sheltered but sunny part of a ship's deck, the case improved the chances of living plants surviving long ocean-voyages with relatively little care.

In this book, Luke Keogh argues that the Wardian case was more than merely an instrument of empire and promises to tell its 'full story'. While it is difficult to see exactly what that might mean, Keogh does identify a number of different historical lenses through which the case can be viewed: colonial, technological, horticultural, global and environmental. Moreover, his extensive research in museums and archives around world has enabled him to move beyond the reasonably well-studied British colonies, to examine those of other northern hemisphere countries such as France, the Netherlands and the United States of America.

As a British colony, Australia falls squarely within the remit of Keogh's book, and it also has the honour of being the site of Ward's first experiment with the case. In 1833, he successfully shipped 'two cases filled with a selection of ferns, mosses, and grasses' from London to Sydney, and received in return living specimens of a delicate coral fern *Gleichenia microphylla*—a plant not until then seen in Britain. Australia continues to be mentioned throughout the book but is by no means a dominant subject.

Keogh's case for the case is that it was a more viable option to move plants than the pots it replaced, and also that it was the only way to transport tropical plants whose seeds die if they dry out or become mouldy if kept damp. Over the course of the nineteenth century, it was key to the successful establishment of valuable plantation-crops such as bananas, cacao, coffee, cinchona, mangoes, rubber and tea, and the introduction into Europe of ornamental garden-plants such as daphnes, fuchsias, ferns, ixoras, magnolias, and rhododendrons.

Keogh tends to downplay the importance of seeds in plant translocation. Nevertheless, in a chapter on the Kew botanic gardens in England, he reveals that Wardian cases accounted for only ten per cent of packages received, with one in four arriving full of dead plants. Assistant director, Joseph Hooker, called them 'Ward's Coffins'. The rest of Kew's packages were packets of seeds. Seeds were also the preferred method for translocating many temperate species, such as eucalypts and acacias from Australia that were also highly regarded in European colonies.

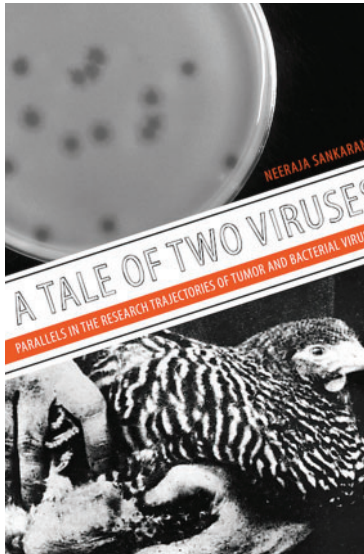
It is a strength of the book that Keogh attempts to recover the contribution of Indigenous peoples to the collection of living plants, and to the care of plantations in India, Indonesia, Malaysia and other south Asian countries. His illustrations include a number of striking photographs of unnamed male Indigenous labourers. Other images suggest that women also contributed to the history of the case as labourers, gardeners and in domestic scenes. In a caption below a photograph of female students at Melbourne's Burnley School of Horticulture in 1934, Keogh comments that 'women played important roles in many aspects of the garden trade' although this point is not developed in the text.

The hey-day of the Wardian case was the second half of the nineteenth century, after which its use became problematic due to its association with increasing numbers of invasive species threatening the viability of crops and disrupting the natural environment. Keogh implicates the case in the spread of a number of pest plants such as Japanese honeysuckle, Japanese knotweed, and of a range of insects, fungi and bacteria that travelled uninvited in the cases such as phyloxera, chestnut blight, the European gypsy moth, and so on.

The reputation of the case in the twentieth century, however, was not just one of steady decline. In a chapter called 'Wardian cages', Keogh includes a story about the case being deliberately used to transport the American moth, *Cactoblastis cactorum* to Australia in the 1920s. The moth successfully controlled the spread of another introduced species, prickly pear (*Opuntia* sp.), which had become such an agricultural pest that it caused farmers in northern Australia to walk off their land. The case was also used in other experiments with biological control.

Keogh was not able to find many Wardian cases in his research, presuming that most were burned to enforce quarantine restrictions. A few have survived in museum collections, where they give mute testimony to the changing significance of the case across a century of use. Keogh's subtitle is 'how a simple box moved plants and changed the world' but his book firmly places most of the agency, and therefore responsibility, for international plant translocation and its outcomes, in the hands of colonisers. This book will appeal to readers who know nothing of the Wardian case, as well as those who think they know it all too well.

Sara Maroske
Royal Botanic Gardens Victoria
Australian Academy of Science



Neeraja Sankaran:

A Tale of Two Viruses: Parallels in the Research Trajectories of Tumor and Bacterial Viruses.

University of Pittsburgh Press, 2021. 296 + xvi pp., illus., ISBN: 9780822946304 (HB), \$55.00. <https://doi.org/10.2307/j.ctv1ghv4rm>

Neeraja Sankaran's latest book is a scientific biography, in which the main subjects are not humans, but two types of viruses: tumour viruses, exemplified by Rous Sarcoma Virus; and bacteriophage, the viruses

that use bacteria as hosts.

Pioneer virologists faced challenges, because unlike other microbes, viruses were so small they passed through filters that blocked bacteria, they were invisible even under the best available microscopes, and they were difficult to maintain in the lab, as they relied on a host cell in order to reproduce.

However, unlike other viruses, the tumour viruses and bacteriophage that are the subject of this book share an important feature: both can insert their genetic code into the genome of the host cell, so that when the cell divides, the viral sequences are replicated, just like the rest of the host cell's genes. An animal cell carrying a pro-viral copy of a tumour virus will replicate the viral sequences when it copies its DNA prior to dividing. A bacterium whose genome carries the inserted sequences of a bacteriophage will copy them before it divides. In addition, these integrated bacteriophage sequences can be triggered to replicate on their own, producing many bacteriophage that rupture (lyse) the host bacterium, and the released phage are liberated so they are free to infect other bacteria. These bacteriophage thus have two life cycles: the intracellular lysogenic phase, and the bactericidal lytic phase. Tumour viruses, which infect vertebrate cells, also have these two life cycles. They can exist in the host's genome, under the radar, but they can also be replicated by transcription into RNA, and then the RNA viral genomes are packaged into viral particles that are shed by the infected cell, and can then infect other cells.

The two alternative life cycles used by these otherwise very different types of viruses is one of the key reasons Sankaran chose

these particular viruses on which to frame her narrative. The other is due to fact that science progresses most rapidly when new technologies become available, often led by those who first developed the new techniques. Study of both tumour viruses and bacteriophage enabled many fundamental breakthroughs in biomedical science. The ability to culture bacteriophage allowed Max Delbrück and the phage group to uncover the fundamentals of DNA replication, and the study of tumour viruses led to the discovery of cancer genes (oncogenes), as well as the cause of AIDS. As Sankaran describes, both types of virus provided some of the first solid evidence of what genes are, and that viruses can be considered to be packages of escaped genes.

Sankaran takes what she refers to as an 'internalist' approach, and conducts a forensic analysis of research publications, meeting reports, and interviews, to focus on the scientific questions and puzzles, showing how key experiments, observations and insights revealed the underlying mechanisms used by the viruses.

The two stories begin with the discovery of Rous Sarcoma Virus by Peyton Rous in 1911, and the discovery of bacteriophage by Frederick William Twort in 1915, and its naming by Félix d'Herelle in 1917.

Rous was studying an apparently contagious muscle cancer in hens, and found that extracts from the tumours that could pass through filters fine enough to block bacteria were still able to cause new cancers to develop when they were injected into new chickens. Because few other virus-induced cancers were found in the years that followed, many remained sceptical that viruses could cause cancer, and Rous had to wait 55 years before he received the 1966 Nobel Prize for his discovery. Of course, we now know that there are multiple causes of cancer, but the understanding of the mechanisms that we learned from the tumour viruses also helped explain other ways cancers develop.

Like Rous, Twort and d'Herelle also had their doubters and critics, not least being each other. Sankaran describes the earliest experiments and observations, and the researchers' attempts to come up with explanations. Each scientist had to construct a model from an incomplete picture, often using a different set of pieces, and account for (or dismiss) the parts that did not fit. As more pieces of the puzzle were found, and a more coherent mechanism emerged, the battle for credit began.

Sankaran's book illuminates pioneering discoveries of viruses, genes, and the nature of cancer, from the perspective of both the volatile and dogged researchers. *A Tale of Two Viruses* will delight biologists, sociologists, historians, and all others who wonder how scientific progress is made.

David Vaux
Walter and Eliza Hall Institute

**Benjamin Gray:**

Extinct: Artistic Impressions of Our Lost Wildlife. CSIRO

Publishing: Melbourne, 2021. 136 pp., illus., ISBN: 978148633716 (HB), \$59.99.

<https://doi.org/10.1071/9781486313723>

Most Australians can name the thylacine as an example of extinction, for its loss is emblematic. The extinctions of other Australian species have been far less well recognised and mourned.

This beautiful and poignant book seeks to remedy that oversight—to portray the spirit of many of these extinct species, to give us all a better idea of what life we have now irretrievably lost.

There is much to portray. Far more mammal species—34—have become extinct in Australia over the last 200-odd years than is the case for any other country. A total of 100 Australian plant and animal species are formally and validly listed as extinct since 1788, although the actual number of extinctions is undoubtedly much higher. The rate of loss is not diminishing: two of the species included in this book were still living up to 2009.

Collectively, we should have made more effort to save these species, to treat our nature not with diffidence or disdain, but with respect and care. This is the message in this book's heart: 'If this book aims to demonstrate anything, it is that extinction is not an inevitability. To understand and appreciate the importance of each of these animals, their beauty, complexity and history is to understand the significance of losing them, and thus the true consequences of our actions'.

That aim is achieved. The book includes 39 extinct Australian animals (from a tally of about 62 recognised extinctions of Australian animals). Notably, the cast represents not only the better known and more charismatic mammals and birds, but also some of our now forever lost invertebrates and frogs. Every species is given about a page of narrative, that gives a sense of the species and the likely timing and causes of its loss. In some cases (such as the desert bettong, Darling Downs hopping-mouse and the snail *Tornelasmias capricorni*), this is challenging as almost nothing was ever recorded of the now lost species. But Gray does a good job describing each

species, weaving in insightful anecdotes that give some sense of its character.

Nonetheless, the text would have benefitted from a tighter scrutiny, as there are some errors. For example, it claims 'potoroos are ... in the same family as kangaroos (*Macropodidae*)': they are not, rather being in the family *Potoroidae*. Gray appropriately recognises that introduced cats and foxes have been a major cause of extinctions, but claims that their 'populations continue to increase rapidly into the modern day', whereas there is no such evidence for an ongoing rapid rise in fox and cat populations in Australia. There are five extant monotreme species rather than two as claimed. Foxes probably contributed to the extinction of the eastern hare-wallaby, rather than arriving after the loss. Also, it would also have been helpful to reference better the quotes included in the species' accounts.

The book counterpoints 39 obituaries with a concluding account of the conservation challenges of the now imperilled mountain pygmy possum and Bogong moth. This example highlights the myriad ways we have subverted the nature of our country, but also the care and actions taken by many people and organisations to try to repair that damage. The message is compelling—if we don't better care for country, many other species will further fill the graveyard. The book ends with this pithy message 'Extinction is irreversible, but avoidable'. Another notable feature of the book is the Indigenous perspective given in the Foreword by Brook Garru Andrew, that reminds us of the intimate interconnections of the natural world, and how we are all part of that network, and have an enduring responsibility for it.

Notwithstanding the eloquence and insightfulness of the words, it is the artworks that give this book its power, pathos and beauty; its ability to move us. Each of the 39 extinct species is portrayed in a manner that gives some sense of its essence. The 41 artists provide notably different perspectives and styles, across contrasting media. Some, such as Sally Robinson's desert rat-kangaroo, are almost photographic likenesses; others such as Lottie Consalvo's Tasman starlings, are enigmatic. All provide fascinating and individualistic perspectives of what these animals may have been; all tug at the heart of what we have lost. I liked most Reg Mombassa's haunted Bramble Cay melomys and Bruce Goold's fantastical whimsical Lord Howe (White) Gallinule.

In this beautifully produced book, we can see, better appreciate and pay respect to what we have lost. And the collective weight of such loss should inspire us to strive to better look after what we still have but may otherwise lose.

John Woinarski
Charles Darwin University