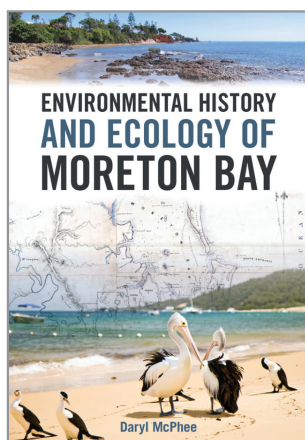


Book Reviews

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Daryl McPhee:

Environmental History and Ecology of Moreton Bay.

CSIRO Publishing: Clayton, 2017.
208 + vii pp., illus. ISBN:
9781486307210 (PB), \$69.95.

This book is the culmination of 25 years of research by Daryl McPhee on a region he clearly loves. Organized thematically, *Environmental History and Ecology of Moreton Bay* follows a chronological thread as the reader is led from the Quaternary Period and

the formation of Moreton Bay to Aboriginal use and understanding of the region and its resources. The main content carefully analyses human impacts since European settlement—including dredging, urban development, mining and fishing—and their effect on the marine ecology. Much of the text focuses on the marine life of Moreton Bay, outlining details of habitat, breeding patterns and life cycles of various species, offering an insight into this diverse ecosystem. Finally, the book deals with issues facing the Bay, most notably the introduction of anthropogenic pollutants and the threat of climate change.

McPhee's book is not all gloom, citing the end of coral dredging and whaling as examples of the potential for rejuvenation. With the goal of protection firmly in mind, he advocates a six-point plan for the restoration and conservation of Moreton Bay. While some suggestions are ambitious and costly, they offer practical guidance for local policymakers to sustain the region's ecology.

Much has been written on Moreton Bay, and McPhee duly acknowledges the contributions of his predecessors throughout the text. This book offers a synthesis of many existing works to provide a detailed account of the Bay's marine environment. Its chapters describe the flora and fauna of the Bay, its coastal inter-tidal regions and the land masses of Moreton Bay's islands, providing a useful reference for the region's ecology. It draws widely on multi-disciplinary secondary sources including geology, history, archaeology and especially marine biology. Its strength lies in the

spread of information rather than an in-depth analysis. The bibliographies at the end of each chapter provide an extensive compilation of work published on Moreton Bay.

Environmental History and Ecology of Moreton Bay, however, is more than merely a source book. McPhee offers the reader a detailed and engaging account of the history, ecology and challenges facing Moreton Bay. He places the region in its wider geographical context, acknowledging that the waterways flowing into the Bay extend as far as the Nerang River, west to the Gold Coast, the D'Aguilar Range and the upper Brisbane River, and north to Caloundra. The Bay's history is entwined with the ecology and history of this wider region. Several examples highlight how the varied activities within these catchments directly affect the condition of Moreton Bay. A vivid example is the silt and pesticides that reach the Bay from upstream vegetation clearance and agriculture in the Lockyer Valley.

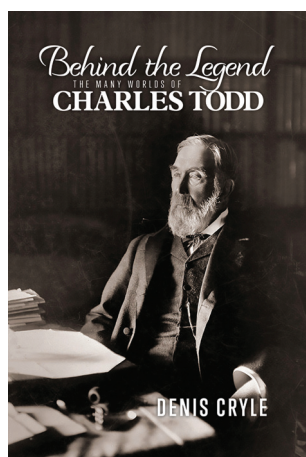
Although most of the book deals with ecology rather than history, McPhee does explore the entangled relations between humans and a specific non-human environment. In doing so he engages with environmental history, recognizing that the marine ecosystem of Moreton Bay cannot be separated from human activity. Since the arrival of the Aborigines, the Bay has increasingly become a hybrid of natural and human environments. Substantial anthropogenic impacts are discussed, with mining, commercial fishing, pollution and urbanization listed high in the major causes of change. Other instances of human-induced impact are less obvious. For instance, dam construction alters the balance of salt and fresh water in riverine systems, reducing mangrove habitats downstream. Such examples reveal the interconnections of humans and nature within and beyond Moreton Bay.

McPhee describes the Bay as a dynamic environment. Not all change is human induced; nature is an active participant in its own history. Floods and rough weather can deposit sand, covering oyster reefs and denuding sand dunes. Disease has reduced marine populations. The Bay's marine life is resilient, adapting to human intervention, as exemplified by dolphins that now feed from fishing trawlers.

The book's readable style makes science accessible to the non-specialist. Its photographs are both explanatory and add interest, while the tables add data without disrupting the text. *Environmental*

History and Ecology of Moreton Bay would make a worthy addition to the bookshelves of anyone with an interest in northern Australia's dynamic natural environment.

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Denis Cryle:

Behind the Legend: the Many Worlds of Charles Todd.

Australian Scholarly Publishing:
North Melbourne, 2017.

313 + xiv pp., illus., ISBN:

9781925588095 (PB), \$49.95.

The late Ron Gibbs, a prominent South Australian historian, wrote, 'the story of the development of South Australia is often forgotten or misunderstood ... Yet it has an interesting and at times exciting history, differing from that of its

eastern neighbours'. One of its key historical figures in the nineteenth century was Sir Charles Todd FRS (1826–1910), a state public servant with pivotal influence throughout Australia, although to date there has been no adequate biographical study of his long and successful career. The current volume is designed to fill this gap.

The author, Denis Cryle, has published widely in Australian colonial history and commonwealth communications, and has dedicated himself to this retirement project over a long period. As a biographer of Todd's son-in-law and grandson (W. H. and W. L. Bragg), I have been consulted by Cryle from time to time and have provided encouragement, but this book is very much Cryle's own.

Todd has long been known as the instigator of the Overland Telegraph Line, built from Darwin to Adelaide during the 1870s, thus putting Australia in timely contact with the rest of the world. Only very recently, however, has the full extent of Todd's many and varied accomplishments been recognized. Born into a humble London family, Todd influenced the science and technology of colonial Australia for more than 50 years, setting the foundations of modern communications, astronomy, surveying, meteorology, the postal system, electrical engineering, seismology, and the standardization of time. He also bore a considerable public service load in the position of Postmaster-General of South Australia from 1870.

The book is divided into three sections: Todd's early life in the British civil service and his Adelaide appointment (1841–55); his many and varied activities in mid-career (1856–86), including the Overland Line, transits of Venus and other astronomical activities, plus mapping the local climate; and finally his twilight years (1887–1910), including Todd's pursuit of Standard Time, 'weather wars' with Clement Wragge, and the emerging problems of Federation and the decline of the state observatories.

Trained by Sir George Airy at Greenwich, and James Challis at the Cambridge Observatory, in 1854 Todd accepted the appointment of 'superintendent of electric telegraphs, with desirable experience in astronomical and meteorological observation', in the colony of South Australia. Here his training proved of immediate and long-term benefit.

There were two transits of Venus to which astronomers in Australia contributed, in 1874 and 1882. For the first, Todd's request for a new astronomical observatory was approved by the local government, although cloudy conditions hampered observations. Nevertheless, useful information was obtained, and the observatory was later used to document many other astronomical phenomena and for public evenings. Accurate determination of longitude was another problem, and Todd took a second telescope to Wentworth, on the State's eastern boundary, to find that the border was really two-and-one-quarter miles further east. Fifteen years later, when the skies in the eastern states and Adelaide were cloudy for another transit, Todd found Wentworth's sky clear and was able to obtain good ingress and egress data and to confirm his earlier determination.

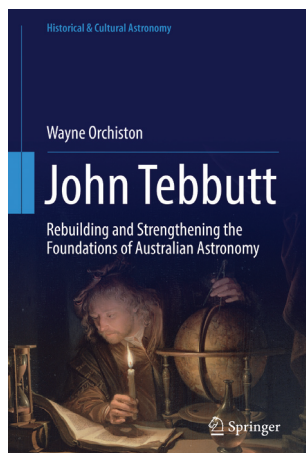
'By the mid-1870s', notes Cryle, 'Todd turned his new communications network [telegraph stations and local post offices] to scientific advantage by training his scattered observers ... to record and collect regular rainfall, temperature and barometric data across greater South Australia'. This information, encompassing 250 stations by 1883, was gathered at the Adelaide central post office, leading to daily weather reports and charts 'over a land mass as great as Europe'. Todd was thus a principal contributor to the early science of meteorology, not only around Australia but also in Britain, Europe, India and elsewhere.

As to personal style, Todd 'chose not to emulate his Victorian superiors ... preferring more liberal management techniques in order to gain the loyalty of his workforce [and injecting] several distinctive personal traits ... among them kindly courtesy and good humour'. Over time, he became very widely admired and loved.

At the political level, Todd knew when to accept instructions from his superiors, although at mid-career he moved from being 'Telegraph Todd' to a still more senior position, exercising considerable power, a role that only the most formidable civil servant would assay. Across Australia, Todd figured prominently in regular postal and telegraph conferences and collaborated (mostly warmly) with colleagues in the other Australian states.

This book covers Todd's life in all its many facets, comprehensively and with extensive endnotes that show a deep acquaintance with its sources and literature. It is easy to read and full of good science and good history. But the book also illustrates current publishing difficulties, particularly of cost and quality. This is an important book, worthy of a hardcover edition, and the resolution of the illustrations leaves much to be desired, especially of the maps. The punctuation throughout is disconcerting, and the index is inadequate. Nevertheless, overall this book provides an important addition to the history of science in Australia, filling a yawning gap that has existed for too long.

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Wayne Orchiston:
John Tebbutt: Rebuilding and Strengthening the Foundations of Australian Astronomy.
 Springer International Publishing, Switzerland, 2017.
 555 pp, illus., ISBN: 9783319445205 (HB), 149.99 €.

John Tebbutt (1834–1916) was perhaps Australia's most highly regarded nineteenth-century astronomer. Remarkably, he was entirely self-taught and remained an independent scientist throughout his long career. His main claim

to fame was the discovery of two great comets in 1861 and 1881, and the meticulous observational programmes he conducted from his home-built observatory near Windsor in New South Wales.

Tebbutt became a member of the Philosophical (Royal) Society of New South Wales in 1862 and was awarded a silver medal at the 1867 Paris Universal Exhibition for a paper on the progress of astronomy in the colony. He was elected a fellow of the Royal Astronomical Society in 1895 and was the first president of the New South Wales branch of the British Astronomical Association. He published over three hundred papers in various academic journals including *Monthly Notices of the Royal Astronomical Society* and *Astronomische Nachrichten*. On his retirement, Tebbutt was awarded the Jackson-Gwilt Medal by the Royal Astronomical Society in recognition of his achievements throughout his career. In more recent times, the International Astronomy Union named a crater on the Moon after him in 1973, and in March 1984 he appeared on the Australian \$100 bank note.

While this is not the first book to be published on Tebbutt, Wayne Orchiston has provided a scholarly and comprehensive review of the subject's life and his contribution to science. Much of the material in the book has previously appeared in papers published by Orchiston, over the five decades since he first visited Tebbutt's observatory in 1959. Orchiston has now synthesized this material in a single volume, as well as incorporating some new and revised research. While this new book is certainly the most comprehensive publication to date on Tebbutt, Orchiston does not see it as a definitive biography, but an 'introduction to what I feel are some of the interesting aspects of his astronomical career'.

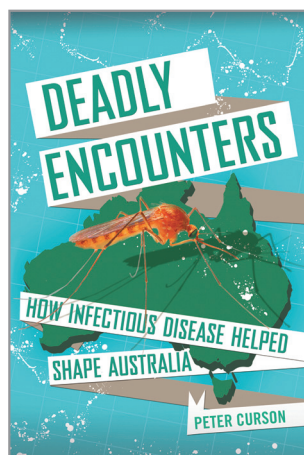
The book is organized in three parts. The first provides an overview of Tebbutt and his career, plus a very useful description of the source material held by the Mitchell Library, Sydney. The second part covers the context of nineteenth-century astronomy in Australia and its place in the wider international astronomical community. It also addresses the role of both professional and independent astronomers and their interrelationships. Part three provides a series of detailed case studies of 'interesting' aspects of Tebbutt's career. They cover his comet discoveries, the instruments he used, professional relationships and the later development of a museum at the site of his original observatory. These comprehensive case studies are presented in a standalone format similar to independent papers and can be read with or without the context provided by parts one and two. This arrangement leads to a little repetition between

chapters, but certainly makes the volume easier to dip in and out of as a research reference.

There are over 250 photographs and illustrations included in the book, helping to bring the text to life. While many of these have appeared before individually, this is by far the most comprehensive published collection. One of the particularly useful aspects of the book are the short biographical notes (including portraits) that appear in 'bio-boxes' for nearly all of the main characters mentioned in the text. This is incredibly useful in keeping track of the different characters, the evolving politics and relationships. Perhaps the outstanding feature of the text is the comprehensive referencing of source material that provides a very valuable resource for future researchers.

The year 2016 marked the 150th anniversary of the death of John Tebbutt. Orchiston's book provides a fitting tribute to the achievements of this remarkable man and I would highly commend it to anyone interested in furthering their detailed understanding of nineteenth-century astronomy in Australia.

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Peter Curson: *Deadly Encounters: How Infectious Disease Helped Shape Australia.*
 Arena Books: Bury St Edmunds, 2015. 232 pp., illus., ISBN: 9781909421547 (PB), £15.99.

From the 1980s, Peter Curson has helped shape our understanding of the spatial and cultural history of infectious disease in Australia. Often working in collaboration with fellow geographer Kevin McCracken, his books, such as *Times of Crisis* (1985) and *Plague in Syd-*

ney (1989), paid unprecedented attention to hitherto untapped documentary sources, and enumerated and mapped the incidence, prevalence, patterns and prejudices characterizing local epidemics. Informed by cultural theory—particularly regarding discourses of blame and panic—Curson argues that fear can prove as contagious as any pathogen in driving human beliefs and behaviours.

In this recent addition to his oeuvre, Curson continues his mission, focusing primarily on epidemics afflicting Australia since Federation. The subtitle of *Deadly Encounters* is something of a misnomer, however, rather than *How Infectious Disease Helped Shape Australia*, it might better be rendered as *Episodes in Epidemiology*. Although drawn together via an introduction and conclusion, the book reads more as a series of discrete case studies than a sustained argument. As such it remains a valuable resource for investigating and contrasting the natural, cultural and political history of infectious diseases, particularly in regards to policy development.

Indeed, Curson's own evaluation of this past is blunt. With the exception of HIV/AIDS, he suggests, since 1901 'State and Federal governments [have] struggled to understand the origin and means of spread of most epidemics, fought with each other, and often produced control and containment plans which did little but heighten

human fear and anxiety'. A primary cause, he proposes, is that governments and medical authorities have consistently failed to 'fully recognise the dissonance that exists between how "experts" and ordinary people perceive risk, infection, and contagion'.

Facilitating such comparisons, most of the book's chapters follow a similar format, outlining the disease biology, clinical presentation, time course, spatial distribution and social impact of its epidemic case studies. These include smallpox, 1913–17; Australian 'X' disease, 1917–18; pneumonic influenza in 1919; dengue fever, 1925–6; and polio up to 1962, albeit focusing primarily on the 1930s.

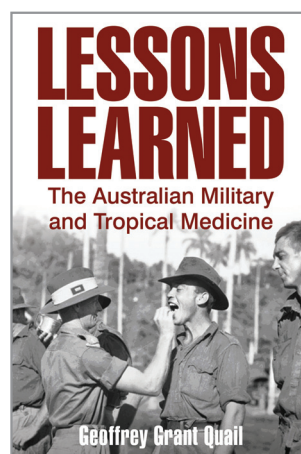
The bald data remain shocking. Approximately 25% of the New South Wales population was infected by 'Spanish' flu in 1919, while up to 500,000 Australians suffered from mosquito-borne dengue fever over 1925–6. Tasmania's polio epidemic of 1937–8 was extraordinary not only for its high incidence of infection—41 cases per 10,000 residents—but its enduring consequences. Case mortality was ~12% over the following five years, with another 25% of victims left permanently physically disabled. Even without the poignant personal stories and images that animate social history accounts of this epidemic, including Anne Killalea's *The Great Scourge* and Kerry Highley's *Dancing in My Dreams*, the human impact remains profound.

The final three chapters adopt a somewhat different structure. They address in turn HIV/AIDS in the 1980s and 1990s, acute respiratory infections in the twenty-first century, and the media-fuelled 'plague of fear' that drives contemporary discourse. This section of the book takes a more qualitative than quantitative approach, and expands its geographic remit to include the global emergence and communication of diseases—along with their accompanying narratives. One hears the voice of personal experience and reflection in these chapters, relatively little of it flattering to public health authorities and media outlets. As a result, however, the chapters lack some of the local focus and analytical impact of the first section.

The episodic nature of the book also, it seems, echoes its creation. There is a sense that the initial chapters were written some time ago and refreshed for inclusion here. This does not diminish the utility of their information, but it does mean that important scholars of infectious disease in Australian context—including Alison Bashford, Deborah Lupton and Warwick Anderson—are not cited. The chapters addressing more recent events are linked to contemporary literature, but the underlying interpretive constructs remain largely grounded in the territory that Curson treads in prior works. As such, *Deadly Encounters* works well as a companion piece to *Times of Crisis*.

The book would certainly have benefited from more attentive editing and production. The layout is relatively basic and there is no index, which is always a frustration. The bibliography is erratically formatted, while too many typographical errors have crept in to the text. Such problems are unfortunate distractions from the value of the contents; as the author remarks, a 'full and comprehensive history of infectious disease in Australia remains to be written'. In the interim, *Deadly Encounters* contributes to our interpretation of the historic intersections between pathogens, vectors, humans and our shared Australian environments.

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Geoffrey Grant Quail:

Lessons Learned: the Australian Military and Tropical Medicine. Big Sky Publishing: Newport, 2017. 254 pp., illus., ISBN: 9781925520224 (HB), \$34.99.

In *Lessons Learned*, Geoffrey Grant Quail examines how the Australian Army Medical Corps (AAMC) both practised and engaged with tropical medicine, from before its formal establishment in 1901 to the present day. As the title outlines, Quail questions the medical corps' ability to

reflect on past problems and to anticipate future challenges. Its central message impresses the imperative of learning from the past and the importance of medical education in the Australian armed forces.

The work opens with a broader history of tropical medicine, and highlights how tropical diseases have influenced military campaigns from the time of Herodotus onwards. Quail provides clear and technically specific aetiologies for tropical diseases that were historically 'unfamiliar to Western society', and outlines how the influence of the British Royal Army Medical Corps shaped Australian military medical responses to tropical diseases.

In the second part of the book, the author turns his attention towards the antipodes. He examines how the AAMC practised tropical medicine from the Second Anglo-Boer War to present-day medical ethics. The book is strong from Chapter Five onwards, beginning with the post-war era. Quail's expertise in tropical medicine during this period is clear, particularly in his in-depth account of malaria prevention and intervention. His handling of drug-based regimens by the Australian Army Malaria Unit is particularly adroit and detailed.

Lessons Learned provides a valuable 'top down' overview history. As a chronological, longitudinal study it highlights patterns and themes across time and place, including the importance of preventive medicine, the impact of inadequate research funding and—most importantly—the consequences of forgetting past medical dilemmas. Quail's discussion of the book's central theme, 'lessons learned', is particularly valuable. His scholarship is clearly underpinned by a strong archival base and a lifetime of knowledge from working as a specialist in tropical medicine with the Royal Australian Air Force. Spelling and punctuation errors are minimal, but image quality could be improved. It is an informative read for those interested in the history of tropical medicine and the Australian military.

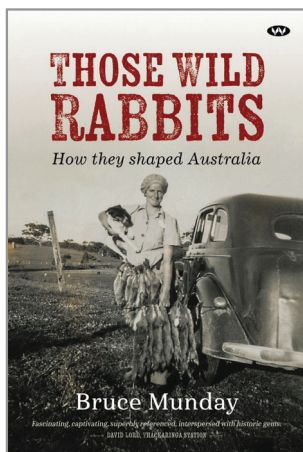
While the book's structure sustains its central contribution to historical scholarship, it also creates issues. The breadth of the study, both in relation to context and geography, often leaves the reader feeling confused by the lack of research parameters and constraints. Indeed, parts of several chapters drift away from Quail's stated focus. This issue is prominent in the lengthy scene-setting history of tropical medicine; likewise the section exploring foreign military medicine. These digressions interrupt the otherwise strong narrative flow and leave the reader questioning the purpose of such information—especially how it relates to the 'lessons learned' by the AAMC.

The final chapter, 'The Ethics of Clinical Trials in the Military', seems a slightly odd addition. As medical ethics introduces its own literature and concerns, this chapter raises questions and further avenues of inquiry that are outside the book's core focus. It would be beneficial to see these issues unpacked and given further treatment in a separate piece.

One omitted 'lesson' is the link between tropical medicine and colonialism. Further exploration of the central themes in the literature would have highlighted this oversight. In particular, the work would benefit from reflecting on the centrality of context in determining the roles performed by the medical corps. Officially, the focus of military medical personnel lies in maximizing the number of personnel fit for (active) service. In the field, as Quail acknowledges, their remit has often proved much wider. Therefore, the work ought to place impetus on the role of colonial armies in both policing and pathologizing race in the establishment of tropical medicine. Indeed, *Lessons Learned* does not acknowledge the adverse effects of either colonial tropical medicine, or the army, on local populations in occupied areas. This lacuna is particularly concerning, given the number of studies spanning multiple disciplines that highlight the enduring impact of tropical medicine in former colonial arenas.

The work's most poignant and pressing message lies in the dire consequences of over-dependence on drug treatments. Quail's work highlights the historical shift from sanitation-based prevention to drug-based intervention. He links this shift to the increasing number of multi-drug resistant diseases, and therefore the ambiguous outcomes of future drug interventions. Instead of advocating for new and improved drug treatments, perhaps the book inadvertently underscores the need for further research into new solutions that place a reliance on 'lessons learned' from the past.

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Bruce Munday:
Those Wild Rabbits: How They Shaped Australia. Wakefield Press, Mile End, 2017. 273 + xiv pp, illus., ISBN: 978743054574 (PB), \$39.95.

When asked to review another book on the rabbit invasion of Australia, I mused what more could be said about the national pest? Bruce Munday has in this book told a story of Australasian responses to the highs and lows of rabbit numbers from the 1860s. The book comprises a montage of scripts and quotations from sources spanning Western Australia to the highlands of New Zealand, and from Queensland to Tasmania. Its numerous text boxes also explain key people and schemes that were intended to 'exterminate' the rabbit.

Despite the best plans of governments and idealists—and the millions of skins and carcasses eaten and exported each year—rabbit numbers were only really subject to the variation of seasonal conditions. Can you believe that rabbit-proof fences were being built when populations had already passed the proposed barrier? Governments fumbled and bumbled in their responses to rabbits reaching plague proportions, trapped between the interests of pastoralists and farmers, the beneficiaries of the rabbit industry, and a lack of realistic strategies.

Munday highlights the repeated introduction of non-indigenous animals by a rampant Acclimatisation Society. Regular attempts were made to control rabbit numbers by the release of yet more non-indigenous animals to control them, having reduced Australia's apex predator to near extinction by 1860. What might have been if dingoes had been present at the source of rabbit populations?

It was reasoned as early as the 1880s that a lethal infectious agent was necessary to 'exterminate' rabbits. There were proposals to use pathogens before 1950 that were not pursued. When rabbit numbers were high, actions proposed were not carried out and when seasonal numbers were low, Australians sank back into a malaise in dealing with the problem, while waiting for a silver bullet. The introduction of the non-indigenous disease myxomatosis was due to the concerted efforts of a determined woman—Jean Macnamara—who would not give in to the inertia of Australia's scientific bureaucracy in trialling the virus as a biological control agent. When rabbit numbers went up again, calici virus provided only partial relief. In addition to exploring post-epidemic responses to the release of these viruses, Munday outlines the pipeline for future strategies. For instance, there has been experimentation to manufacture an infectious agent effecting infertility in rabbits—albeit without success to date.

The rabbits have won hands down. They breed around the inconsistencies of personal, industry and government interests, thereby overcoming the impact of infectious agents and seasonal conditions. Sadly it is only of late that we have come to count the cost of the environmental impact on Australia, especially in terms of indigenous flora and fauna.

Munday's account of the feral rabbit brings home to the reader how past generations of rural and urban Australians viewed the impact of rabbits. Seen by some as warm and cuddly, and others as an implacable pest, he outlines the complex politics of controlling this introduced creature. Munday finally poses a fundamental question: will Australia rise to the challenge of initiating serious control and/or eradication programs?

Those Wild Rabbits is a pleasant and easy read, recommended both for those seeking an account of the past, and those keen to be part of solving the rabbit problem. Australia may even be able to learn lessons from the past—should some enlightened politicians read, understand and build upon those lessons.

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